

# *Catalog* *2020-2021*

LARAMIE COUNTY COMMUNITY COLLEGE



# **Laramie County Community College**

## *Catalog 2020-2021*

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### **Serving Southeast Wyoming**

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# LCCC Academic Calendar 2020-2021

## Fall Semester 2020

Aug. 3 . . . . . *Fall tuition payments due*  
*(after this date, payment is due upon registration)*  
 Aug. 17-21 . . . . . Faculty Planning and College In-Service  
 Aug. 21 . . . . . The Kickoff – Fall Event  
**Aug. 23** . . . . . Last Day to Register **A Block (A16, A8)**  
**Aug. 24** . . . . . Fall Semester **A Block (A16, A8)** week) Classes Begin  
**Aug. 28** . . . . . Last Day to Drop Without Receiving a W on  
 Transcripts and to receive a 100% refund (**A8**)  
 Sept. 5-6 . . . . . Saturday and Sunday Classes Do Not Meet This  
 Weekend Prior to Labor Day  
 Sept. 7 . . . . . Labor Day, College closed  
**Sept. 4** . . . . . Last Day to Drop Without Receiving a W on  
 Transcripts and to receive a 100% refund (**A16**)  
**Sept. 4** . . . . . End of 50% Refund Period (**A8**)  
 Sept. 8 . . . . . First Financial Aid Disbursement  
**Sept. 11** . . . . . End of 50% Refund Period (**A16**)  
 Sept. 11 . . . . . First Financial Aid Refunds Issued by Accounting  
**Sept. 18** . . . . . Midterm (**A8**)  
**Sept. 20** . . . . . Last Day to Register **B Block (B12)**  
**Sept. 21** . . . . . First Day of Classes (**B12**)  
 Sept. 25 . . . . . Fall 2018 Graduation Applications Due  
**Sept. 28** . . . . . Last Day to Withdraw (**A8**)  
**Sept. 29** . . . . . Last Day to Drop Without Receiving a W on  
 Transcripts and to receive a 100% refund (**B12**)  
**Oct. 3** . . . . . End of 50% Refund Period (**B12**)  
**Oct. 15** . . . . . Midterm (**A16**)  
**Oct. 15** . . . . . Last Day of Classes (**A8**)  
 Oct. 16 . . . . . Fall Break, College closed  
**Oct. 18** . . . . . Last Day to Register **B Block (B8)**  
**Oct. 19** . . . . . First Day of Classes (**B8**)  
**Oct. 23** . . . . . Last Day to Drop Without Receiving a W on  
 Transcripts and to receive a 100% refund (**B8**)  
**Oct. 29** . . . . . Midterm (**B12**)  
**Oct. 29** . . . . . End of 50% Refund Period (**B8**)  
**Nov. 3** . . . . . Last Day to Withdraw (**A16**)  
 Nov. 3 . . . . . Spring Registration Begins for Currently Enrolled  
 Students  
 Nov. 10 . . . . . Spring Registration Open for All Students  
**Nov. 13** . . . . . Midterm (**B8**)  
**Nov. 15** . . . . . Last Day to Withdraw (**B12**)  
**Nov. 25** . . . . . Last Day to Withdraw (**B8**)  
 Nov. 23-24 . . . . . Thanksgiving Break, No Classes  
 (college services available)  
 Nov. 25-27 . . . . . Thanksgiving Holiday, College closed  
 Nov. 30 . . . . . Classes Resume  
 Dec. 4 . . . . . *Spring Tuition Payments Due*  
**Dec. 18** . . . . . Last Day of Fall Semester (**A16, B12, B8**)  
 Dec. 21 . . . . . Grading Day (Grades Due noon)  
 Dec. 24-Jan. 1 . . . . . Winter Break, College closed

## Spring Semester 2021

Dec. 4 . . . . . *Spring Tuition Payments Due*  
 Jan. 12-15 . . . . . Faculty Planning and College In-Service  
 Jan. 15 . . . . . The Kickoff – Spring Event  
 Jan. 18 . . . . . Martin Luther King/Equality Day, College closed  
**Jan. 18** . . . . . Last Day to Register **A Block (A16, A8)**  
**Jan. 19** . . . . . Spring Semester **A Block (A16, A8)** Classes Begin  
**Jan. 25** . . . . . Last Day to Drop Without Receiving a W on  
 Transcripts and to receive a 100% refund (**A8**)  
**Feb. 1** . . . . . Last Day to Drop Without Receiving a W on  
 Transcripts and to receive a 100% refund (**A16**)  
**Feb. 1** . . . . . End of 50% Refund Period (**A8**)  
 Feb. 2 . . . . . First Financial Aid Disbursement  
 Feb. 5 . . . . . First Financial Aid Refunds Issued by Accounting  
**Feb. 8** . . . . . End of 50% Refund Period (**A16**)  
 Feb. 12 . . . . . 2019 Spring Graduation Applications Due  
**Feb. 12** . . . . . Midterm (**A8**)  
 Feb. 15 . . . . . President's Day, College closed  
**Feb. 15** . . . . . Last Day to Register **B Block (B12)**  
**Feb. 16** . . . . . First Day of Classes (**B12**)  
**Feb. 22** . . . . . Last Day to Withdraw (**A8**)  
**Feb. 24** . . . . . Last Day to Drop Without Receiving a W on  
 Transcripts and to receive a 100% refund (**B12**)  
**March 4** . . . . . End of 50% Refund Period (**B12**)  
**March 12** . . . . . Midterm (**A16**)  
**March 12** . . . . . Last Day of Classes (**A8**)  
 March 13-14 . . . . . Saturday and Sunday Classes Meet this Weekend  
 March 15-19 . . . . . Spring Break No Classes (college services available  
 Monday through Thursday)  
 March 19 . . . . . College Closed  
**March 21** . . . . . Last Day to Register **B Block (B8)**  
 March 22 . . . . . Classes Resume  
**March 22** . . . . . First Day of Classes (**B8**)  
**March 26** . . . . . Last Day to Drop Without Receiving a W on  
 Transcripts and to receive a 100% refund (**B8**)  
**March 26** . . . . . Midterm (**B12**)  
**April 2** . . . . . End of 50% Refund Period (**B8**)  
**April 5** . . . . . Last Day to Withdraw (**A16**)  
 April 6 . . . . . Summer and Fall Registration Begins for Currently  
 Enrolled Students  
 April 13 . . . . . Summer and Fall Registration Open for All Students  
**April 16** . . . . . Last Day to Withdraw (**B12**)  
**April 16** . . . . . Midterm (**B8**)  
**April 26** . . . . . Last Day to Withdraw (**B8**)  
**May 14** . . . . . Last Day for Spring Semester (**A16, B12, B8**)  
 May 15 . . . . . Commencement  
 May 17 . . . . . Grading Day (Grades Due at noon)

*\*Every effort will be made to cancel classes at least one week prior to the start date of each block.\**

## **Summer Semester 2021**

April 1 . . . . .	Summer Financial Aid Applications Available
May 7 . . . . .	Summer Tuition Payments Due (after this date, payment is due upon registration)
May 31 . . . . .	Memorial Day, College closed
<b>May 31 . . . . .</b>	<b>Last Day to Register for A Block (A8, A5)</b>
<b>June 1 . . . . .</b>	<b>Summer Semester A Block (A8, A5) Classes Begin</b>
June 4 . . . . .	2019 Summer Graduation Applications Due
<b>June 4 . . . . .</b>	<b>Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (A5)</b>
<b>June 7 . . . . .</b>	<b>Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (A8)</b>
June 8 . . . . .	First Financial Aid Disbursement
<b>June 11 . . . . .</b>	<b>End of 50% Refund Period (A5)</b>
June 11 . . . . .	First Financial Aid Refunds Issued by Accounting
June 11 . . . . .	College Closed at Noon/No Classes, afternoon only
<b>June 14 . . . . .</b>	<b>End of 50% Refund Period (A8)</b>
<b>June 16 . . . . .</b>	<b>Midterm (A5)</b>
<b>June 20 . . . . .</b>	<b>Last Day to Register B Block (B5)</b>
<b>June 21 . . . . .</b>	<b>First Day of Classes (B5)</b>
<b>June 22 . . . . .</b>	<b>Last day to Withdraw (A5)</b>
<b>June 24 . . . . .</b>	<b>Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (B5)</b>
<b>June 25 . . . . .</b>	<b>Midterm (A8)</b>
<b>July 2 . . . . .</b>	<b>Last day to Withdraw (A8)</b>
<b>July 2 . . . . .</b>	<b>End of 50% Refund Period (B5)</b>
<b>July 2 . . . . .</b>	<b>Last day of Classes (A5)</b>
July 5 . . . . .	Independence Day, College closed
<b>July 7 . . . . .</b>	<b>Midterm (B5)</b>
July 9 . . . . .	Laramie Jubilee Day (no classes/Albany County Campus Closed)
<b>July 12 . . . . .</b>	<b>Last Day to Withdraw (B5)</b>
<b>July 23 . . . . .</b>	<b>Last Day of Summer Classes (A8, B5)</b>
July 26 . . . . .	Grades Due at 12 Noon
July 28 . . . . .	Cheyenne Day (no classes/Cheyenne Campus Closed)

*\*Every effort will be made to cancel classes at least one week prior to the start date of each block.\**

## Calendar Blocks — Fall 2020

### A16 – August 24 to December 18

Aug. 3 . . . . . *Fall tuition payments due*  
(after this date, payment is due upon registration)

Aug. 21 . . . . . The Kickoff – Fall Event

**Aug. 23** . . . . . Last Day to Register **A Block (A16)**

**Aug. 24** . . . . . Fall Semester **A Block (A16)** week) Classes Begin

Sept. 5-6 . . . . . Saturday and Sunday Classes Do Not Meet This Weekend Prior to Labor Day

Sept. 7 . . . . . Labor Day, College closed

**Sept. 4** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**A16**)

Sept. 8 . . . . . First Financial Aid Disbursement

**Sept. 11** . . . . . End of 50% Refund Period (**A16**)

Sept. 11 . . . . . First Financial Aid Refunds Issued by Accounting

Sept. 25 . . . . . Fall 2018 Graduation Applications Due

**Oct. 15** . . . . . Midterm (**A16**)

Oct. 16 . . . . . Fall Break, College closed

**Nov. 3** . . . . . Last Day to Withdraw (**A16**)

Nov. 3 . . . . . Spring Registration Begins for Currently Enrolled Students

Nov. 10 . . . . . Spring Registration Open for All Students

Nov. 23-24 . . . . . Thanksgiving Break, No Classes (college services available)

Nov. 25-27 . . . . . Thanksgiving Holiday, College closed

Nov. 30 . . . . . Classes Resume

Dec. 4 . . . . . *Spring Tuition Payments Due*

**Dec. 18** . . . . . Last Day of Fall Semester (**A16**)

Dec. 21 . . . . . Grading Day (Grades Due noon)

### B12 – September 21 to December 18

Aug. 3 . . . . . *Fall tuition payments due*  
(after this date, payment is due upon registration)

Aug. 21 . . . . . The Kickoff – Fall Event

Sept. 8 . . . . . First Financial Aid Disbursement

Sept. 11 . . . . . First Financial Aid Refunds Issued by Accounting

**Sept. 20** . . . . . Last Day to Register **B Block (B12)**

**Sept. 21** . . . . . First Day of Classes (**B12**)

Sept. 25 . . . . . Fall 2018 Graduation Applications Due

**Sept. 29** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**B12**)

**Oct. 3** . . . . . End of 50% Refund Period (**B12**)

Oct. 16 . . . . . Fall Break, College closed

**Oct. 29** . . . . . Midterm (**B12**)

Nov. 3 . . . . . Spring Registration Begins for Currently Enrolled Students

Nov. 10 . . . . . Spring Registration Open for All Students

**Nov. 15** . . . . . Last Day to Withdraw (**B12**)

Nov. 23-24 . . . . . Thanksgiving Break, No Classes (college services available)

Nov. 25-27 . . . . . Thanksgiving Holiday, College closed

Nov. 30 . . . . . Classes Resume

Dec. 4 . . . . . *Spring Tuition Payments Due*

**Dec. 18** . . . . . Last Day of Fall Semester (**B12**)

Dec. 21 . . . . . Grading Day (Grades Due noon)

### A8 – August 24 to October 15

Aug. 3 . . . . . *Fall tuition payments due*  
(after this date, payment is due upon registration)

Aug. 21 . . . . . The Kickoff – Fall Event

**Aug. 23** . . . . . Last Day to Register **A Block (A8)**

**Aug. 24** . . . . . Fall Semester **A Block (A8)** week) Classes Begin

**Aug. 28** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**A8**)

Sept. 5-6 . . . . . Saturday and Sunday Classes Do Not Meet This Weekend Prior to Labor Day

Sept. 7 . . . . . Labor Day, College closed

**Sept. 4** . . . . . End of 50% Refund Period (**A8**)

Sept. 8 . . . . . First Financial Aid Disbursement

Sept. 11 . . . . . First Financial Aid Refunds Issued by Accounting

**Sept. 18** . . . . . Midterm (**A8**)

Sept. 25 . . . . . Fall 2018 Graduation Applications Due

**Sept. 28** . . . . . Last Day to Withdraw (**A8**)

**Oct. 15** . . . . . Last Day of Classes (**A8**)

Nov. 3 . . . . . Spring Registration Begins for Currently Enrolled Students

Nov. 10 . . . . . Spring Registration Open for All Students

Dec. 4 . . . . . *Spring Tuition Payments Due*

### B8 – October 19 to December 18

Aug. 3 . . . . . *Fall tuition payments due*  
(after this date, payment is due upon registration)

Aug. 21 . . . . . The Kickoff – Fall Event

Sept. 8 . . . . . First Financial Aid Disbursement

Sept. 11 . . . . . First Financial Aid Refunds Issued by Accounting

Sept. 25 . . . . . Fall 2018 Graduation Applications Due

Oct. 16 . . . . . Fall Break, College closed

**Oct. 18** . . . . . Last Day to Register **B Block (B8)**

**Oct. 19** . . . . . First Day of Classes (**B8**)

**Oct. 23** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**B8**)

**Oct. 29** . . . . . End of 50% Refund Period (**B8**)

Nov. 3 . . . . . Spring Registration Begins for Currently Enrolled Students

Nov. 10 . . . . . Spring Registration Open for All Students

**Nov. 13** . . . . . Midterm (**B8**)

**Nov. 25** . . . . . Last Day to Withdraw (**B8**)

Nov. 23-24 . . . . . Thanksgiving Break, No Classes (college services available)

Nov. 25-27 . . . . . Thanksgiving Holiday, College closed

Nov. 30 . . . . . Classes Resume

Dec. 4 . . . . . *Spring Tuition Payments Due*

**Dec. 18** . . . . . Last Day of Fall Semester (**B8**)

Dec. 21 . . . . . Grading Day (Grades Due noon)



## Calendar Blocks — Spring 2021

### A16 – January 19 to May 14

Dec. 4 . . . . . Spring Tuition Payments Due  
 Jan. 15 . . . . . The Kickoff – Spring Event  
 Jan. 18 . . . . . Martin Luther King/Equality Day, College closed  
**Jan. 18 . . . . . Last Day to Register A Block (A16)**  
**Jan. 19 . . . . . Spring Semester A Block (A16) Classes Begin**  
**Feb. 1 . . . . . Last Day to Drop Without Receiving a W on**  
**Transcripts and to receive a 100% refund (A16)**  
 Feb. 2 . . . . . First Financial Aid Disbursement  
 Feb. 5 . . . . . First Financial Aid Refunds Issued by Accounting  
**Feb. 8 . . . . . End of 50% Refund Period (A16)**  
 Feb. 12 . . . . . 2019 Spring Graduation Applications Due  
 Feb. 15 . . . . . President's Day, College closed  
**March 12 . . . . . Midterm (A16)**  
 March 13-14. . . . Saturday and Sunday Classes Meet this Weekend  
 March 15-19. . . . Spring Break No Classes (college services available  
 Monday through Thursday)  
 March 19 . . . . . College Closed  
 March 22 . . . . . Classes Resume  
**April 5 . . . . . Last Day to Withdraw (A16)**  
 April 6 . . . . . Summer and Fall Registration Begins for Currently  
 Enrolled Students  
 April 13 . . . . . Summer and Fall Registration Open for All  
 Students  
**May 14 . . . . . Last Day for Spring Semester (A16)**  
 May 15 . . . . . Commencement  
 May 17 . . . . . Grading Day (Grades Due at noon)

### B12 – February 16 to May 14

Dec. 4 . . . . . Spring Tuition Payments Due  
 Jan. 15 . . . . . The Kickoff – Spring Event  
 Jan. 18 . . . . . Martin Luther King/Equality Day, College closed  
 Feb. 2 . . . . . First Financial Aid Disbursement  
 Feb. 5 . . . . . First Financial Aid Refunds Issued by Accounting  
 Feb. 12 . . . . . 2019 Spring Graduation Applications Due  
 Feb. 15 . . . . . President's Day, College closed  
**Feb. 15 . . . . . Last Day to Register B Block (B12)**  
**Feb. 16 . . . . . First Day of Classes (B12)**  
**Feb. 24 . . . . . Last Day to Drop Without Receiving a W on**  
**Transcripts and to receive a 100% refund (B12)**  
**March 4 . . . . . End of 50% Refund Period (B12)**  
 March 13-14. . . . Saturday and Sunday Classes Meet this Weekend  
 March 15-19. . . . Spring Break No Classes (college services available  
 Monday through Thursday)  
 March 19 . . . . . College Closed  
 March 22 . . . . . Classes Resume  
**March 26 . . . . . Midterm (B12)**  
 April 6 . . . . . Summer and Fall Registration Begins for Currently  
 Enrolled Students  
 April 13 . . . . . Summer and Fall Registration Open for All  
 Students  
**April 16 . . . . . Last Day to Withdraw (B12)**  
**May 14 . . . . . Last Day for Spring Semester (B12)**  
 May 15 . . . . . Commencement  
 May 17 . . . . . Grading Day (Grades Due at noon)

### A8 – January 19 to March 12

Dec. 4 . . . . . Spring Tuition Payments Due  
 Jan. 15 . . . . . The Kickoff – Spring Event  
 Jan. 18 . . . . . Martin Luther King/Equality Day, College closed  
**Jan. 18 . . . . . Last Day to Register A Block (A8)**  
**Jan. 19 . . . . . Spring Semester A Block (A8) Classes Begin**  
**Jan. 25 . . . . . Last Day to Drop Without Receiving a W on**  
**Transcripts and to receive a 100% refund (A8)**  
**Feb. 1 . . . . . End of 50% Refund Period (A8)**  
 Feb. 2 . . . . . First Financial Aid Disbursement  
 Feb. 5 . . . . . First Financial Aid Refunds Issued by Accounting  
 Feb. 12 . . . . . 2019 Spring Graduation Applications Due  
**Feb. 12 . . . . . Midterm (A8)**  
 Feb. 15 . . . . . President's Day, College closed  
**Feb. 22 . . . . . Last Day to Withdraw (A8)**  
**March 12 . . . . . Last Day of Classes (A8)**  
 April 6 . . . . . Summer and Fall Registration Begins for Currently  
 Enrolled Students  
 April 13 . . . . . Summer and Fall Registration Open for All  
 Students  
 May 15 . . . . . Commencement

### B8 – March 22 to May 14

Dec. 4 . . . . . Spring Tuition Payments Due  
 Jan. 15 . . . . . The Kickoff – Spring Event  
 Jan. 18 . . . . . Martin Luther King/Equality Day, College closed  
 Feb. 2 . . . . . First Financial Aid Disbursement  
 Feb. 5 . . . . . First Financial Aid Refunds Issued by Accounting  
 Feb. 12 . . . . . 2019 Spring Graduation Applications Due  
 Feb. 15 . . . . . President's Day, College closed  
 March 19 . . . . . College Closed  
**March 21 . . . . . Last Day to Register B Block (B8)**  
 March 22 . . . . . Classes Resume  
**March 22 . . . . . First Day of Classes (B8)**  
**March 26 . . . . . Last Day to Drop Without Receiving a W on**  
**Transcripts and to receive a 100% refund (B8)**  
**April 2 . . . . . End of 50% Refund Period (B8)**  
 April 6 . . . . . Summer and Fall Registration Begins for Currently  
 Enrolled Students  
 April 13 . . . . . Summer and Fall Registration Open for All  
 Students  
**April 16 . . . . . Midterm (B8)**  
**April 26 . . . . . Last Day to Withdraw (B8)**  
**May 14 . . . . . Last Day for Spring Semester (B8)**  
 May 15 . . . . . Commencement  
 May 17 . . . . . Grading Day (Grades Due at noon)

## Calendar Blocks — Summer 2021 (June 1-July 23)

### A5 – June 1 to July 2

April 1 . . . . . Summer Financial Aid Applications Available  
 May 7 . . . . . Summer Tuition Payments Due (after this date,  
 payment is due upon registration)  
 May 31 . . . . . Memorial Day, College closed  
**May 31** . . . . . Last Day to Register for **A Block (A5)**  
**June 1** . . . . . Summer Semester **A Block (A5)** Classes Begin  
 June 4 . . . . . 2019 Summer Graduation Applications Due  
**June 4** . . . . . Last Day to Drop Without Receiving a W on  
 Transcripts and to receive a 100% refund (**A5**)  
 June 8 . . . . . First Financial Aid Disbursement  
**June 11** . . . . . End of 50% Refund Period (**A5**)  
 June 11 . . . . . First Financial Aid Refunds Issued by Accounting  
 June 11 . . . . . College Closed at Noon/  
 No Classes, afternoon only  
**June 16** . . . . . Midterm (**A5**)  
**June 22** . . . . . Last day to Withdraw (**A5**)  
**July 2** . . . . . Last day of Classes (**A5**)

### B5 – June 21 to July 23

April 1 . . . . . Summer Financial Aid Applications Available  
 May 7 . . . . . Summer Tuition Payments Due (after this date,  
 payment is due upon registration)  
 June 4 . . . . . 2019 Summer Graduation Applications Due  
 June 8 . . . . . First Financial Aid Disbursement  
 June 11 . . . . . First Financial Aid Refunds Issued by Accounting  
**June 20** . . . . . Last Day to Register **B Block (B5)**  
**June 21** . . . . . First Day of Classes (**B5**)  
**June 24** . . . . . Last Day to Drop Without Receiving a W on  
 Transcripts and to receive a 100% refund (**B5**)  
**July 2** . . . . . End of 50% Refund Period (**B5**)  
 July 5 . . . . . Independence Day, College closed  
**July 7** . . . . . Midterm (**B5**)  
 July 9 . . . . . Laramie Jubilee Day  
 (no classes/Albany County Campus Closed)  
**July 12** . . . . . Last Day to Withdraw (**B5**)  
**July 23** . . . . . Last Day of Summer Classes (**B5**)  
 July 26 . . . . . Grades Due at 12 Noon

### A8 – June 1 to July 23

April 1 . . . . . Summer Financial Aid Applications Available  
 May 7 . . . . . Summer Tuition Payments Due (after this date,  
 payment is due upon registration)  
**May 31** . . . . . Last Day to Register for **A Block (A8)**  
**June 1** . . . . . Summer Semester **A Block (A8)** Classes Begin  
 June 4 . . . . . 2019 Summer Graduation Applications Due  
**June 7** . . . . . Last Day to Drop Without Receiving a W on  
 Transcripts and to receive a 100% refund (**A8**)  
 June 8 . . . . . First Financial Aid Disbursement  
 June 11 . . . . . First Financial Aid Refunds Issued by Accounting  
 June 11 . . . . . College Closed at Noon/  
 No Classes, afternoon only  
**June 14** . . . . . End of 50% Refund Period (**A8**)  
**June 25** . . . . . Midterm (**A8**)  
**July 2** . . . . . Last day to Withdraw (**A8**)  
 July 5 . . . . . Independence Day, College closed  
 July 9 . . . . . Laramie Jubilee Day  
 (no classes/Albany County Campus Closed)  
**July 23** . . . . . Last Day of Summer Classes (**A8**)  
 July 26 . . . . . Grades Due at 12 Noon

# MESSAGE FROM DR. JOE SCHAFFER, PRESIDENT

## Welcome to LCCC!

Congratulations on taking your next step in your personal transformation through higher education. There is likely no better time, and no better place for you than right now, and right here at Laramie County Community College. LCCC has been recognized as a leader in innovation, quality programming, high-touch student services, and most importantly, helping students achieve their educational goals.

LCCC has been one of a few select colleges in the nation (just one of thirteen to be exact) who are a part of the American Association of Community Colleges Guided Pathways 2.0 initiative. Guided Pathways is all about changing everything we do at LCCC to transform and improve the entire student experience. We do this by focusing on four distinct goals – clarifying the paths to students' end goals, helping students get on a path, helping students stay on their path, and ensuring students are learning.

So, what does that mean for you? It means you will not likely find a college experience anywhere else that will match what LCCC can provide you. We do this through the following.

## Providing Clarity

LCCC has organized our programs into seven (7) distinct Pathways. These Pathways are explained later in this catalog and our programs are organized within each Pathway. Beginning Fall 2020, students will enter a Pathway, choose their courses according to clear program maps, and develop your own customized academic plan that maps out your path from start to graduation. You will be able to track their academic milestones and understand clearly what to do to advance within a Pathway or a program. You will never have to guess what you need to do to complete or when you will complete your program. Our new Program Maps outline next steps for students after their time at LCCC, preparing them to transfer to a university or to immediately start your career.

## Purposeful and Continual Exploration


We recognize that students don't always know exactly what they want to do when they come to college, for their program or for their career. At LCCC, we work with you from the very beginning on career and program exploration, and you will have numerous opportunities to dig deeper to help solidify your goals. LCCC has also completely restructured the way our programs are organized and courses are scheduled, so students can explore early within a Pathway before choosing a specific program, without losing time or credits. The common coursework within a Pathway helps students explore options in that area without losing time, credits, or money. If you remain undecided, or even change your mind, we will work with you to do all we can to ensure you graduate on schedule.

## Being Part of a Community

One of the most fundamental changes, and most unique parts of the student experience at LCCC is our Pathway Communities. When you enter a Pathway, you aren't simply choosing an academic path, you will become part of a special community. Each Pathway builds a community of interest where you will have the opportunity to learn with other students who have similar interests and goals, build deep and lasting relationships with others, and get connected to industry and/or university partners who will help you successfully transition to your next step after LCCC. Pathways is more than just the traditional classroom learning, it is about creating community where students will foster a sense of belonging, connect with peers, community resources, and industry stakeholders. As members of Pathways communities, students will have consistent support from dedicated faculty and staff from your very first day, when you graduate, and even beyond.

On behalf of the Board of Trustees, the faculty and staff, it is our privilege and honor to have you as a LCCC Golden Eagle. We all believe in transforming our student's lives through the power of inspired learning, and we want to help transform yours as well. I promise, you won't find a more unique or student-centered college experience than what you will find right here at Laramie County Community College. I look forward to seeing you on campus.

Sincerely,



Dr. Joe Schaffer  
President



# Laramie County Community College

## Mission Statement

*The Mission of Laramie County Community College is to transform our students' lives through the power of inspired learning.*

We are all bound by a basic understanding that our students, regardless of how they arrive at LCCC, yearn for a better life by engaging in the process of acquiring knowledge. Thus, we are compelled to aid this transformation by offering diverse educational experiences designed to be inspirational for all those involved in the learning process. While we recognize our work is diverse, the entirety of the work we do is grounded in the four foundational elements of the comprehensive community college mission:

1. To prepare people to succeed academically in college-level learning (academic preparation);
2. To engage our students in learning activities that will prepare and advance them through the pursuit of a baccalaureate degree (transfer preparation);
3. To develop individuals to enter or advance in productive, life-fulfilling occupations and professions (workforce development);
4. To enrich the communities we serve through activities that stimulate and sustain a healthy society and economy (community development).

## Our Values

**Core Values** – We believe these values are inherent in the cultural fabric of the College and could not be extracted in any way.

1. **Passion** – Our institution is wholly dedicated to engaging in our work, sharing our beliefs, and debating the merits of any course of action as we strive to transform our students' lives through inspired learning.
2. **Authenticity** – True to our Western heritage, we are genuine to a fault, without pretense, and steadfast in our dedication to delivering on a promise, product, or need.
3. **Desire to Make a Difference** – We engage in and pursue our goals for the opportunity to create better lives, better communities, and a better world for those who are here today and the generations that follow.

**Aspirational Values** – We readily admit to a mismatch between our desire for these values and their existence at the College. However, our strong commitment to these ideals will shape the actions we take to ensure their universal presence at LCCC into the future.

1. **Commitment to Quality** – Quality is found at the intersection of hard work and high standards that are consistently met. We are committed to promoting a

culture of evidence that compels us to continuously strive for greater competence and productivity while always seeking to transform students' lives through inspired learning.

2. **Entrepreneurship** – In an uncertain era, endless opportunities await those institutions willing to take risks. Grabbing these opportunities requires informed risk-taking and innovation fostered in a safe, yet demanding, environment.
3. **Tolerance** – As an institution, we must engage in wide-ranging, open-minded discourse with civility and objectivity grounded in what is best for our students as well as ourselves.

## A Vision for LCCC

### The Big Goal

Our over-arching goal is that our accomplishments as a community college will distinguish LCCC from others in the nation, in turn benefiting our communities and bringing pride to the Great State of Wyoming.

### Vision Statement

In the future we are individuals united for a single purpose – to transform our students' lives. Our nationally recognized, entrepreneurial, and innovative programs and services help students become the most sought after individuals. We develop world-class instructors. We are relentless in the use of evidence to make decisions that responsibly and efficiently allocate resources, drive instruction, and create an environment of adaptability and productivity. Every individual has the freedom to innovate and take informed risks based on promising practices and creative ideas. We fail fast, and learn from that failure as much as from our success. Clear academic pathways, high-touch services, and engaged employees are the bedrock of our students' success. We drive collaboration throughout the community to ensure the success of all students who come to LCCC. We are changing the world of higher education facing seemingly impossible challenges head on.

## Academic Freedom Statement

One of the most fundamental values at Laramie County Community College is academic freedom, which may be defined as the freedom to learn, teach, speak, research, and publish, subject to the norms and standards of scholarly inquiry, without interference or penalty, wherever the search for truth and understanding may lead. (Adapted from Oxford University)

## **Board of Trustees**

Formulation of the policies for Laramie County Community College is entrusted, by Wyoming law, to a seven-member Board of Trustees. The trustees are elected for terms of four years. The board usually holds its regular business meeting on the third Wednesday of each month. Meeting notices are published in the local paper. The expiration year for the term of office of each trustee is shown in parentheses. The Board of Trustees maintains membership in the Association of Community College Trustees and the American Association of Community Colleges.

Mr. Jess E. Ketcham, Chairman (Term Expires 2020)  
Ms. Wendy J. Soto, Vice Chair (Term Expires 2020)  
Mr. Bob Salazar, Secretary (Term Expires 2020)  
Mr. Don Erickson, Treasurer (Term Expires 2020)  
Mrs. Brenda Lyttle, Trustee (Term Expires 2022)  
Mrs. Carol Merrell, Trustee (Term Expires 2022)  
Mrs. Janine Thompson, Trustee (Term Expires 2022)

## **President of the College**

Joe Schaffer

## **Laramie County Community College Foundation**

### **Mission**

The Foundation was established in 1968 to develop and sustain support for Laramie County Community College through solicitation, management, and recognition of donations. The Foundation is dedicated to providing services and assistance to students, faculty, staff and the community, thereby enhancing a sense of tradition and pride that will assist in advancing the college.

### **2020 LCCC Foundation Board of Directors**

Jeff Collins, President  
Billie Addleman, Vice President  
Wynema Engstrom, Treasurer  
Cindy Pomeroy, Secretary  
Stig Hallingbye, Past President  
Joe Schaffer, LCCC President  
Dershie Barber  
Kari Brown-Herbst  
JJ Chen  
John Clay  
Dan Furphy  
Melissa Gallant  
Jeri Griego  
Anna Marie Hales  
Don Heiduck  
Jess Ketcham, Trustee  
Kathy Mawford  
Scott Meier  
Carol Merrell, Trustee  
Barry Sims  
Sandra Surbrugg  
Janine Thompson, Trustee  
Larry Walters  
Sam Weinstein  
Bob Womack

### **LCCC Foundation Staff**

Lisa Trimble, Associate VP of Institutional Advancement  
Trista Wood, Director, Accounting LCCC Foundation  
Kimberly Freimuth, Executive Administrative Assistant  
Scott VanHorn, Development Officer, Major Gifts  
Justin Gorman, Development Officer, Scholarships & Annual Giving  
Amber Holen, Development Officer, Event Coordinator

Inquiries concerning the Foundation should be directed to:

LCCC Foundation  
1400 East College Drive  
Cheyenne, Wyoming 82007  
307.778.1285  
lcccfoundation.edu

# General Information

## **The College**

Laramie County Community College was created by the voters on May 21, 1968, to help fill the need for academic, career and community service/continuing education in the county. Courses are offered that reflect the skills and knowledge required to function in a world that makes ever increasing demands upon the individual. The college is dedicated to helping individuals prepare for careers, enjoy community life, and enrich leisure time by providing continuing educational experiences.

To achieve these ends, Laramie County Community College provides programs in the following instructional areas: academic, preparing students for transfer to four-year institutions; career education, training students in programs up to two years in length to enter the world of work; and community education, consisting of noncredit courses and offering courses of general information, cultural opportunities, and professional and personal growth.

Laramie County Community College strives to be an educational institution for all people—whether they want to gain personal enrichment through a program of general education, to obtain a certificate of high school equivalency, to develop skills in a technical program, or to begin a college career leading to a bachelor's or higher degree.

## **Accreditation and Professional Associations**

Laramie County Community College and its programs are accredited or approved by the following organizations:

- The Higher Learning Commission, 230 South LaSalle Street, Suite 7-500, Chicago, IL 60604-1411, 800.621.7440, [info@hlcommission.org](mailto:info@hlcommission.org).
- American Bar Association (ABA), Standing Committee on Paralegals, 321 N. Clark Street, 17th Floor, Chicago, IL 60654-7598, 312.988.5757.
- American Dental Association Commission on Dental Accreditation, 211 East Chicago Avenue, Chicago, IL 60611 2678, 312.440.4653.
- The Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 2850, Chicago, IL 60606-3182, 312.704.5300, [www.jrcert.org](http://www.jrcert.org).
- National Institute for Automotive Service Excellence (ASE), 13505 Dulles Technology Drive, Herndon, VA 22071-3415, 703.742.3800.
- Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326, 404.975.5000.
- Wyoming State Board of Nursing, 130 Hobbs Avenue, Suite B, Cheyenne, WY 82007, 307.777.7601.
- Commission on Accreditation of Allied Health Education Programs (CAAHEP), 25400 U.S. Highway 19 North, Ste 158, Clearwater, FL 33763, 727.210.2350 (Diagnostic Medical Sonography, Emergency Medical Services—Paramedics, Physical Therapist Assistant, and Surgical Technology).
- Committee on Accreditation for the EMS Professions, 8301 Lakeview Parkway, Suite 111-312, Rowlett TX, 75088, 214-703-8445, [www.coaemsp.org](http://www.coaemsp.org)
- Commission on Accreditation in Physical Therapy Education (CAPTE), 111 North Fairfax Street, Alexandria, VA 22314-1488, 703.706.3245.
- Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS), 6021 University Boulevard, Suite 500 Ellicott City, MD 21043, 443.973.3251, [www.jrcdms.org](http://www.jrcdms.org).
- National Alliance of Concurrent Enrollment Partnerships (NACEP), PO Box 578, Chapel Hill, NC 27514, 919.593.5205.
- The National Certified Public Manager® Consortium, 2516 Wertherson Lane, Raleigh, NC 27613-1700, 919.306.1787.

Laramie County Community College is a Cisco Academy as well as an Asymetrix Authorized Training Center. In order to provide complete services for students, the college also is a member of the following:

- American Association of College and University Housing Officers,
- American Association of Collegiate Registrars and Admissions Officers,
- American Association of Community Colleges,
- American Health Information Management Association (AHIMA)
- American Wind Energy Association,
- Association for Student Conduct Administration,
- Association of College Unions—International,
- Association for Orientation, Transition and Retention (NODA)
- Association of Title IX Administrators,
- Higher Learning Commission,
- Mountain States Association of Community Colleges,
- National Academic Advising Association,
- National Association for Campus Activities,
- National Association for Student Personnel Administrators,
- National Association of Colleges and Employers,
- National Association of Student Financial Aid Administrators,
- National Behavior Intervention Team Association,
- National College Testing Association,
- National Council on Marketing and Public Relations,
- National Institute for Staff and Organizational Development
- National Junior College Athletics Association (NJCAA),
- Rocky Mountain Association of Collegiate Registrars and Admissions Officers,
- Rocky Mountain Association of Student Financial Aid Administrators,
- Western Interstate Commission for Higher Education (WICHE)
- Wyoming Admissions Officers, (WAO)
- Wyoming Association of Student Financial Aid Administrators.



## **College Facilities and Resources**

### **Cheyenne Campus**

1400 East College Drive, Cheyenne, WY 82007  
307.778.5222 or 800.522.2993 (toll free)

The main campus of Laramie County Community College occupies facilities situated on 271-acres. The site is immediately southeast of Cheyenne on College Drive. The main campus consists of 25 buildings. The Cheyenne campus is a residential campus with a residence hall capacity of 276 students currently, with an additional hall under construction to come on line for spring 2021 adding approximately 352 additional beds. To support residential students, the College has a full-service dining hall and a coffee shop that is open for extended hours access.

The campus is proud to be able to boast of a state-of-the-art Flex Tech building, opened in 2016 that currently houses the Welding and Diesel Mechanics programs in large high bays, and other technical programming in more traditional classroom areas. Facilities for the College's other academic programs comprise some of the older buildings of various ages, with a dedicated Health Sciences building, Business, Agriculture, Sciences, and Automotive program areas.

The Clay Pathfinder Building, opened in January of 2017, houses Student Services, the Book Store, ANB Bank Leadership Center, a coffee shop, and more state-of-the-art science labs as well as a dedicated floor for the University of Wyoming. Facilities for athletics and campus recreation as well as for rodeo and agriculture programming are also on this campus, with the agriculture indoor arena and facilities being some of the best in the state.

Newly remodeled student areas include the Crossroads Building that is home to specific student activities of clubs and organizations, the Help Desk, Veterans' Lounge, and open study and engagement areas. This building received its updating partially through student fees the Student Government Association voted to dedicate to student space.

Opened in February of 2019, the newly remodeled and expanded Ludden Library and Learning Commons brought LCCC's library facilities well into the 21st century. One of the highlight areas is an Innovation Lab that is specially designed to fuel a variety of creative and collaborative student work.

The most recently renovated building is Fine Arts, which now includes a new Esther & John Clay Fine Arts Gallery and updated instructional space for Music, Art, Theatre, and Education. The renovation also includes the addition of the Surbrugg Prentice Auditorium (SPA), which seats 400, and will be use used for theater and music productions. The SPA is scheduled to open during the Spring 2021 semester.

### **Albany County Campus**

1125 Boulder Drive, Laramie, Wyoming  
307.721.5138 or 800.522.2993, Ext. 5138 (toll free)

The Albany County Campus of LCCC, located in Laramie, Wyoming, is a branch campus – extending the lifelong educational opportunities of a community college to the residents of Albany County. Though the campus is one building, located on the east side of Laramie, classes are taught through this branch, on the campus of the University of Wyoming, and also at the new Laramie High School that is located nearby.

The Albany County Campus provides students with face-to-face support services similar to those available to the Cheyenne campus students, as well as access to all LCCC services through online resources. Academic advising, career guidance, adult re-entry assistance, financial aid information, and Library and tutoring services are available. On-site High School Equivalency Certification and testing services are provided, along with Adult Education programming, non-credit community life enrichment courses, English language assistance, and much more.

The Laramie campus has expanded its classroom space with two new larger classrooms and one renovated classroom, adding 931 square feet to the building. One of the new classrooms serves as a wet lab/art room, and the other is a large classroom that accommodates up to 50 students. The renovated classroom includes a new science lab to better serve science education needs.

The Laramie campus holds classes at Laramie High School for Automotive Technology and Computer Science available to high school students doing dual enrollment with the College. On the campus of the University of Wyoming, LCCC teaches some lower division engineering classes and developmental math.

### **F. E. Warren Air Force Base Outreach Center** Building 841, 307.773.2113

The presence of Laramie County Community College on F.E. Warren Air Force Base provides a small, staffed location to specifically serve the needs of active military and their families on the base, though classes are open to other LCCC students as well. This partnership is designed to provide all Department of Defense personnel (active, reserve, Guard, and civilian), along with their family members, the opportunity to attain educational objectives and enhance their job skills training. The WAFB National Military Test Center provides testing for eCLEP and eDSST exams.

The Outreach Office in Base Education Services is located at 1205 Ziemann Blvd., and Bldg #841, Office #2, and is staffed with two full-time LCCC staff.

### **Eastern Laramie County Outreach Center**

607 Elm Street, P. O. Box 580, Pine Bluffs, WY  
307.245.3595

LCCC serves Eastern Laramie County residents with classes and programs from the beautiful Historic Pine Bluffs High School building. Course offerings vary from semester to semester. The facility supports offerings of credit, continuing education, personal and professional improvement, life enrichment courses, and ESL, AE, and HSEC preparation.

### **Eagle Village – Residence Hall Complex**

1340 East College Drive, Cheyenne, WY 82007  
307.637.2498

Living on campus can be one of the most rewarding and enjoyable aspects of a student's college experience. It provides the best opportunity to get to know the campus, get involved in campus events and organizations, meet new people, and make new friends. There are many fun and rewarding activities in the residence halls, plus the convenience of being close to classes and other campus resources.

LCCC's residence halls offer four-person suites; two- and four-person private bedroom suites; one-person, private, super-single rooms and two person doubles in our new residence hall with wet core bathrooms. These halls have an overall capacity of 632 students.

The four-person suites in the east and north halls are similar to the west residence hall, with two bedrooms in each suite as well as a shared common area. Each bedroom houses two students and includes a private bathroom. Private bedroom suites are available in two-person and four-person units. Each student has a private bedroom with closet, desk and dresser, and shares a bathroom with one suitemate. Private bedroom suites also have a shared common area with a living room and kitchenette. The newest hall offers two-person double rooms with a wet core bathrooms and community kitchen and living space in each wing.

A few private, super-single rooms are available in the east residence halls. These rooms have all the amenities of the larger suites, including single bed, desk, dresser, and seating area, as well as a kitchenette area and private bathroom. All rooms in these halls are air conditioned.

Direct internet access and streaming cable TV access are included in all residence hall bedrooms. If students would like telephone lines set up in the rooms, they need to contact the Director of Residential Living & Learning.

The commons, serving students living on campus, is a gathering place for residents of all halls to enjoy. The commons offers a computer lab, TV lounge, study areas, fireplace, lounge, laundry facilities, serving room, classroom, vending machines, and mail delivery services.

The LCCC Residential Living & Learning Office is located in the community center, serving all halls.

## LCCC Libraries

**Ludden Library**, Cheyenne: 307.778.1206, [libref@lccc.wy.edu](mailto:libref@lccc.wy.edu)

**ACC Library**, Laramie: 307.772.4263, [acclibrary@lccc.wy.edu](mailto:acclibrary@lccc.wy.edu)

**Ask a Librarian** (chat via [lccc.wy.edu/library](https://lccc.wy.edu/library))

The LCCC libraries integrate print and electronic resources, technology, services and a knowledgeable staff to support student learning and meet the research needs of LCCC students. Use the online catalog to search for books and media in the campus collections and throughout the state. Search for immediate access to full-text articles, e-books, and streaming video and music from our electronic subscriptions to over 150 research databases, available for on-campus and remote users. Start your search at [lccc.wy.edu/library](https://lccc.wy.edu/library) or through the Library Resources folder in myLCCC.

The newly renovated Ludden Library at the Cheyenne campus houses additional study rooms, quiet study pods, a family room where students and their children can learn together, and an Innovation Lab where students can collaborate and explore new technologies. The Albany County Campus Library in Laramie offers an inviting atmosphere including computer workstations, printers, and 3D printing services. Both campuses have anatomy models for on-campus study, calculators and laptops for checkout, copying, scanning, faxing, and laminating services. Librarians provide formal library instruction in classes, and knowledgeable and welcoming library staff members are always ready to offer one-on-one assistance to students. Feel free to contact the staff with any questions regarding how to access materials

remotely, how to find quality research sources, and how to correctly cite and use those resources in assignments.

## Recreation and Athletics Complex (RAC)

Recreation & Athletics Complex, 307.778.1385

The College has a recreation facility that is equipped to provide a variety of fitness options for LCCC students, LCCC employees, and the greater Cheyenne area. This facility is multi use and houses the Golden Eagle Athletic Teams as well as the Exercise Science program. The RAC houses an indoor climbing wall, weight room, aerobic center, swimming pool, two-lane indoor running track, indoor tennis courts, racquetball courts, and basketball and volleyball courts. The Men's and Women's Basketball and Volleyball competitions occur in the RAC. Outdoor facilities include a disc golf course, sand volleyball court, access to the Greater Cheyenne Greenway for bicycling, running, and walking. There are two outdoor soccer fields for the Golden Eagle Men's and Women's Soccer teams.

Albany County Campus students have access to the recreational center in Laramie. For information, call 307.721.5138.

## Student Computer Center

Crossroads Building 307.778.HELP (4357)

[itstech@lccc.wy.edu](mailto:itstech@lccc.wy.edu)

The Student Computer Center offers computer stations, color and black and white printing capabilities (using the semester printing allowance), as well user support for our technology solution for our students. There are opportunities to have group and team work areas to enhance group learning. The Student Computer Center is open daily during the Spring and Fall semesters and has reduced hours during the Summer semester. Student Computer Center hours are available at [lccc.wy.edu/services/technology](https://lccc.wy.edu/services/technology).

## COMPUTER COPYRIGHT

LCCC owns the computer software used in all college-wide computer activities. Unauthorized copying of this software violates LCCC policy as well as state and federal copyright laws.

Unauthorized access to college accounts, passwords, or other computer resources is illegal.

Not only may violators face college disciplinary action, including possible expulsion, but they may also be subject to misdemeanor or felony punishment, which includes imprisonment.

## Disability Support Services

Clay Pathfinder Building, Suite 207

Disability Support Services (DSS) provides services and resources intended to facilitate equal access for students with disabilities to participate in courses, programs, activities, and services. The DSS office provides accommodations on a case-by-case basis for students who have documented disabilities.

Students who have questions or want to set up accommodations should call 307.778.1359 or email [DSS@lccc.wy.edu](mailto:DSS@lccc.wy.edu) for an appointment with a DSS staff member. For students who are deaf or hard of hearing, the TTY number is 307.778.1266.

Albany County Campus students who have questions or need an appointment should call 307.772.4299.

## Admission

Laramie County Community College maintains an open admission policy and serves as an equal-access institution to all those who are high school graduates, High School Equivalency Certification (HSEC) recipients, or are over the age of 18 and who can demonstrate the ability to benefit from instruction provided. Others may be admitted as non-degree-seeking students at the discretion of the College. Admission to the College is required for students taking courses offered for credit.

Laramie County Community College is committed to providing a safe and nondiscriminatory educational and employment environment. The college does not discriminate on the basis of race, color, national origin, sex, disability, religion, age, veteran status, political affiliation, pregnancy, sexual orientation, gender identity, or other status protected by law. Sexual harassment, including sexual violence, is a form of sex discrimination prohibited by Title IX of the Education Amendments of 1972. The college does not discriminate on the basis of sex in its educational, extracurricular, athletic or other programs or in the context of employment.

The college has a designated person to monitor compliance and to answer any questions regarding the college's nondiscrimination policies. Please contact: Title IX and ADA Coordinator, Suite 205, Clay Pathfinder Building, 1400 E College Drive, Cheyenne, WY 82007, 307.778.1144, [NDS@lccc.wy.edu](mailto:NDS@lccc.wy.edu). Contact information for the regional Office for Civil Rights is: Office for Civil Rights, Denver Office, U.S. Department of Education, Cesar E. Chavez Memorial Building, 1244 Speer Boulevard, Suite 310, Denver, CO 80204-3582, 303.844.5695, [OCR.Denver@ed.gov](mailto:OCR.Denver@ed.gov). More information is available at [lccc.wy.edu/NondiscriminationStatement.aspx](http://lccc.wy.edu/NondiscriminationStatement.aspx).

## Admissions Definitions

- A. Ability-to-Benefit – A federal financial aid provision for students who can demonstrate sufficient competency to benefit from post-secondary education in a career and technical program, but who do not have a high school diploma or its equivalent.
- B. Accredited – Accredited by one of the regional accrediting bodies.
- C. Admission – A status that indicates that a student has submitted all necessary documentation and meets the LCCC admission requirements.
- D. Admissions Review Committee – LCCC employees designated by the Vice President of Student Services to review application materials and related documentation regarding applicants who self-disclose or are found through the enrollment process to have a pending or prior dismissal or expulsion from another institution for non-academic reasons. The Committee should include the Director of Admissions, the Director of Campus Safety, an Academic Advisor, and a full-time faculty member. The Dean of Students acts as an Ex-Officio member of the committee.
- E. Degree-seeking Student – A student who intends to complete a degree or certificate at Laramie County Community College.
- F. Eligible Career Pathway Program – a career or technical program that combines rigorous and high-quality education, training, and other support services as defined under section 484(d)(2) of the Higher Education Act.
- G. New Students – Individuals who have never attended a postsecondary institution following high school completion.
- H. Open Admission – A type of unselective and noncompetitive college admissions process in which the only criterion for entrance is a high school diploma or high school equivalency.
- I. Provisional Admission – An admission status that provides for the applicant to be admitted to the College, and as long as any conditions set for the student for behavior or performance are met, continues. Admission may be revoked if the conditions are not met or expectations are not fulfilled. Any conditions the student might be subject to will be provided for him/her in writing.
- J. Selective Program – A program that has additional requirement for admittance.
- K. Transfer Students – Individuals who have successfully completed college classes at another regionally accredited postsecondary institution and provided official transcripts as documentation.

## Admissions Procedure

- A. Students Seeking a Degree or Certificate
  - 1) Applicants who are new to Laramie County Community College or transferring from another college may be admitted as degree-seeking if they:
    - a. have graduated from an accredited high school, or
    - b. have graduated from a home school program, or
    - c. are high school equivalency recipients, or
    - d. have successfully completed an associate's degree (AA, AS, or AAS) or higher from a regionally accredited postsecondary institution or
    - e. have demonstrated the ability to benefit from college-level course work.
      - i. Students who do not meet criteria a-d above may still be permitted to enroll at LCCC under the Ability-to-Benefit provision. To enroll under this provision, the student must have demonstrated their ability to benefit by having successfully completed at least 6 college-level credit hours without financial aid (see 5.0 B). After successfully completing 6 credit hours of college-level coursework that are applicable toward a degree or certificate offered by LCCC, the student may request to be admitted as a degree-seeking student in an eligible career pathway program as defined by the U.S. Department of Education (see 5.0 D.3). If a student first enrolled in a federal financial aid eligible program from a regionally accredited post-secondary institution prior to July 1, 2012, the student may enroll in any federal financial aid eligible program after receipt and evaluation of an official transcript.
  - 2) Prospective students are required to apply for admission and self-certify on the application that they have met one of the criteria in 5.0 A.1).



- a. If transfer students wish to receive transfer credit for previous coursework, official transcripts from previous colleges attended must be submitted so that credits may be evaluated for transferability.
    - b. If LCCC or the U.S. Department of Education has reason to believe that the high school diploma or equivalent is not valid or was not obtained from an entity that provides secondary school education, the student will be required to provide requested documentation for LCCC to evaluate the validity of the high school completion.
  - B. Students Not Seeking a Degree or Certificate
    - 1) Prospective students are required to apply for admission to be admitted as non-degree seeking. Types of non-degree seeking students include:
      - a. individuals who are pursuing courses for personal enrichment or professional development, or
      - b. High school students who wish to enroll in credit classes concurrently at LCCC, or
      - c. individuals who do not meet the criteria in 5.0 A.1 who wish to demonstrate their ability to benefit
    - 2) Non-degree seeking students will be limited to six (6) credits of enrollment per semester unless they complete the full admissions requirements in 5.0 A. above.
  - C. LCCC Students Returning after an Absence
    - 1) Degree-seeking students who have attended LCCC in the past, but have been absent for one or more semesters, not including summer, must submit a new application for admission.
    - 2) Non-degree seeking students who have attended LCCC in the past, but have been absent for two or more years, must submit a new application for admission.
    - 3) Returning students may be asked to re-submit transcripts if they have been away from LCCC for five or more years or if they have taken classes at another post-secondary institution since their last enrollment at LCCC, if they wish to have their transfer credits evaluated for transferability.
  - D. Applicants and Students Changing Status
    - 1) Students who have been accepted as degree-seeking and would like to change their status to non-degree seeking will be required to complete a Change of Program Form.
    - 2) Students who determine that they would like to change their status from non-degree seeking to degree-seeking will be required to submit a Change of Program Form.
    - 3) If transfer students wish to receive transfer credit for previous coursework, official transcripts from previous colleges attended must be submitted so that credits may be evaluated for transferability.
    - 4) Students requesting admittance under the Ability-to-Benefit provision will be required to submit a Change of Program Form to indicate the desired eligible career pathway program once the student has successfully completed the minimum 6 credit hours of college level coursework.
  - E. Admissions Review Committee
    - 1) Applicants or admitted students who self-disclose or are found through the enrollment process to have been dismissed or expelled from another institution for non-academic reasons, or who are currently in violation of the LCCC Student Code of Conduct (Procedure 3.15P) will undergo review by the Admissions Review Committee.
  - 2) The Dean of Students or designee will gather and analyze information related to an applicant's prior or pending dismissal or expulsion from another institution.
  - 3) The Dean of Students will present his/her research to the Admissions Review Committee. The Committee may request additional information be obtained by the Dean of Students, or may request to interview the applicant or student. Following a thorough review of all relevant information, and in consideration of individual and campus safety, the Admissions Review Committee will make the admissions decision in one of following ways:
 

**Applicants**

    - a. Admit the applicant to LCCC with no restrictions.
    - b. Admit the applicant provisionally with conditions to be determined by the Admissions Review Committee.
    - c. Deny admission to the applicant.

**Admitted Students**

    - a. Continue at LCCC with no restrictions.
    - b. Provisionally admitted with a Dean of Students hold placed on his/her student account until their status is deemed no longer provisional.
    - c. Admission revoked per 5.0.G below.
  - 4) Applicants or admitted students will be notified in writing of the admissions decision and any possible conditions for admission when applicable.
  - F. Admission to Selective Programs
    - 1) All students must apply for admission to the College prior to applying to selective programs. See 5.0.A.1) and 5.0.A.2) above for procedure.
    - 2) Selective programs may require additional admission materials and have additional criteria for admission. Refer to the individual program website for specific admission requirements.
  - G. Revoking Admission
    - 1) Admission to the College may be revoked for LCCC Student Code of Conduct (Procedure 3.15P) violations prior to the start of class attendance at the discretion of the Dean of Students.
  - H. Appeals
    - 1) Admissions decisions are appealable to the Vice President of Student Services
    - 2) Appeals should be submitted in writing within ten (10) business days of notice, to:
      - a. Vice President of Student Services
      - b. Laramie County Community College
      - c. 1400 E College Drive
      - d. Cheyenne, WY 82007
    - 3) Appeals may take up to 30 days to be reviewed.
- Admission of International Students**
- All foreign nationals except Temporary Workers or Intracompany Transferees will be classified as nonresident students unless the United States Citizenship and Immigration Services changes their status to permanent resident or they earn United States citizenship, in which case the residence policies apply.

Individuals applying for admission under F-1 student visa status must also fulfill the following requirements:

- A. File a financial statement with the Office of the Registrar declaring means and source of support while attending school in the United States, as required by the United States Citizenship and Immigration Services.
- B. Individuals must complete one of the following assessments with the indicated minimum score/level and have the results sent to Laramie County Community College prior to admission:
  1. Test of English as a Foreign Language (TOEFL) with a minimum score of 500 on the paper version or 173 on the computer version.
  2. iBT (internet-based test of the TOEFL) with minimum score of 61.
  3. International English Language Testing System (IELTS) at level 6.0.

Forms are available at [lccc.wy.edu/admissions/international](http://lccc.wy.edu/admissions/international).

## Orientation

Orientation is required for all degree- and certificate-seeking students. Orientation promotes student success and allows students to:

- Explore on-campus and online resources available to them
- Be introduced to the advising system
- Gain understanding of important financial aid information
- Access and understand the student portal

Orientation is available online in correspondence with the various term and block start-dates.

For more information, visit: [lccc.wy.edu/admissions/orientation](http://lccc.wy.edu/admissions/orientation).

## Residence Classification

The following regulations govern the classification of students as resident or nonresident for the purpose of fee assessment at the seven Wyoming community colleges.

The following students are Wyoming residents:

- A. Residing in Wyoming primarily as a student will not support a claim for resident status.
  1. Individuals who are financial dependents or under the age of 24 with a parent, guardian or spouse who lives in the State of Wyoming.
  2. Graduates of a Wyoming high school who attend the University or a Wyoming community college within one year of graduation and maintain continuous enrollment.
  3. Recipients of a high school equivalency in Wyoming who also qualify for a Hathaway Scholarship.
  4. Active Wyoming National Guard members and U.S. Armed Forces members stationed in Wyoming, and their dependents.
  5. Individuals with a permanent home in Wyoming and who have resided in the State for at least six months. To determine if a permanent Wyoming home has been established, the following factors are considered:
    - Evidence that any former home has been abandoned
    - Full-time employment in Wyoming for a minimum of six continuous months prior to residency determination
- Ownership of home or property in Wyoming
- Six months of continual presence in Wyoming prior to residency determination
- Former Wyoming residency and maintaining state ties
- Reliance on Wyoming resources for full financial support
- Wyoming vehicle registration dated a minimum of six months prior to residence determination
- Wyoming address on most recent federal income tax return
- A valid Wyoming driver's license dated a minimum of six months prior to residence determination
- Wyoming voter registration
6. Wyoming residents temporarily absent from the State due to military service, attendance at an educational institution, or other type of documented temporary sojourn.
7. A resident student who is correctly classified as a resident by any Wyoming community college or by the University of Wyoming shall be classified a resident at all Wyoming community colleges.
8. The spouse or financial dependent of an individual who is determined to be a Wyoming resident pursuant to these Guidelines.
9. I am a legal dependent under the age of 24 of a Wyoming community college graduate.
10. Effective for the 2015 summer school session and each semester thereafter, an applicant for resident tuition who is a veteran or eligible individual, as described in 38 U.S.C. 3679(c)(2), shall qualify as a resident for purposes of tuition at a Wyoming Community College if the applicant enrolls at one of the Wyoming community colleges and provides:
  - a. A certificate or other evidence of the veteran's or uniformed service member's qualifying service in the uniformed services of the United States;
  - b. Documented evidence at the time of enrollment that:
    - i. The applicant for resident tuition intends to live in Wyoming during the term of enrollment;
    - ii. A veteran using educational assistance under either Chapter 30 (Montgomery G.I. Bill – Active Duty Program), Chapter 31 (Vocational Rehabilitation and Employment (VR&E)), or Chapter 33 (Post-9/11 G.I. Bill) as described in 38 U.S.C.
    - iii. The veteran was discharged or released from a qualifying period of service in the active military, naval or air service before the date of enrollment or the uniformed service member is currently on active duty;
    - iv. If the applicant is a spouse or a child of the veteran, the applicant is a transferee pursuant to 38 U.S.C. 3311(b)(9) or 3319 of the veteran's eligibility for educational benefits.
  - c. A person who has qualified for resident tuition pursuant to the above requirements of this section, shall remain qualified in subsequent years if the person pursues one or more courses of education while remaining continuously enrolled, other than during regularly scheduled breaks, lives in the state during the term of enrollment, and, if the person is eligible through a transfer of eligibility pursuant to 38 U.S.C. 3319, the transfer has not been validly revoked.



- B. The following students are non-residents:
1. Individuals who do not qualify under Section A above;
  2. Individuals who are not U.S. citizens or permanent residents except as provided by Section 1b. above.

No reclassification will be retroactive to previous terms; questions regarding residency reclassification should be directed to the Student Hub.

## Official School Catalog Addendum

The following individuals shall be charged a rate of tuition not to exceed the in-state rate for tuition and fees purposes:

- A Veteran using educational assistance under either chapter 30 (Montgomery G.I. Bill – Active Duty Program) or chapter 33 (Post-9/11 G.I. Bill), of title 38, United States Code, who lives in Wyoming while attending a school located in Wyoming (regardless of his/her formal State of residence) and enrolls in the school within three years of discharge or release from a period of active duty service of 90 days or more.
- Anyone using transferred Post-9/11 GI Bill benefits (38 U.S.C. § 3319) who lives in Wyoming while attending a school located in Wyoming (regardless of his/her formal State of residence) and enrolls in the school within three years of the transferor's discharge or release from a period of active duty service of 90 days or more.
- Anyone described above while he or she remains continuously enrolled (other than during regularly scheduled breaks between courses, semesters, or terms) at the same school. The person so described must have enrolled in the school prior to the expiration of the three year period following discharge or release as described above and must be using educational benefits under either chapter 30 or chapter 33, of title 38, United States Code.
- Anyone using benefits under the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b)(9)) who lives in Wyoming while attending a school located in Wyoming (regardless of his/her formal State of residence).
- Anyone using transferred Post-9/11 G.I. Bill benefits (38 U.S.C. § 3319) who lives in Wyoming while attending a school located in Wyoming (regardless of his/her formal state of residence) and the transferor is a member of the uniformed service who is serving on active duty.
- The policy shall be read to be amended as necessary to be compliant with the requirements of 38 U.S.C. 3679(c) as amended.

## Academic Skills Assessment and Placement

Academic skills assessment and subsequent placement for initial levels of Math and English courses assist students in making choices that will enable them to attain their educational goals. To assure appropriate advising, LCCC adheres to the following assessment and placement protocols:

- A. Students who have graduated from high school and whose high school cumulative GPA is 3.0 or higher OR students who have an acceptable ACT score are considered ready for initial college-level math and college-level English courses. Placement can be determined from high school transcripts and/or ACT scores submitted to LCCC.

- B. Students who hold a college degree from a regionally accredited college or university, as evidenced by provision of official transcripts to the Office of the Registrar, are considered ready for college-level math and college-level English courses; see Page 24 for information regarding transferability of courses from other institutions.

- D. Students auditing courses do not need to provide proof of academic eligibility (see Page 21).

- E. Students who doubt their own readiness for college-level courses, regardless of their high school GPA or ACT scores, should consult their advisor.

Additional information regarding placement for math and English are available at [lccc.wy.edu/placement](http://lccc.wy.edu/placement).

## Registration

Students register and pay for classes online through the campus portal. New degree-seeking students may register after completing Orientation and meeting with their assigned advisor.

## Course Load

Twelve credit hours constitute a minimum full-time course load, but the normal load for one semester is 15-18 credit hours. The maximum load is 19 hours. Students desiring to take more than 19 hours must receive permission from the dean of the school in which their declared program is housed. Students working more than 15 hours a week are strongly advised to reduce their course loads accordingly.

## Class Schedule Changes (Add/Drop) and Withdrawal Procedures

Students must complete the following steps to make a schedule change (add/drop):

1. Add/drop via the campus portal or
2. Obtain a drop/add form from the Student Hub.
3. On the form, list courses to be dropped and/or added. The instructor's and dean's signatures are required for adding a course after the first day of class. An advisor's signature may also be required.
4. Return the completed form to the Student Hub.

Students who withdraw from a course after the last day to drop receive a "W" grade on the transcript for the course. The "W" grade period is prorated for courses less than a full semester in length. Students may completely withdraw from the college in accordance with the published withdrawal dates with appropriate signatures and authorization. Students who completely withdraw from all courses are required to meet with an Academic Advisor and consult the Student Hub with regard to Financial Aid implications prior to withdrawing. A signature from an Advisor is required to process the withdrawal.

Students who wish to withdraw after the deadline are required to submit the request to the Office of the Registrar for consideration. Requests to withdraw after the deadline are reviewed by a committee of Academic Deans, Registrar, and Financial Aid Director. Failing grades are not an acceptable reason to request a withdrawal after the deadline.

Financial aid recipients should be aware that changes in enrollment may affect the financial aid awards for the

semester in which the change occurs and/or the student's future eligibility under the academic progress requirements. Students with questions regarding withdrawals and financial aid should contact the Student Hub prior to making these changes.

## Administrative Holds

Registration may be restricted due to the following conditions:

1. Unmet financial obligation with the college.
2. Unreturned college equipment or materials.
3. Disciplinary sanctions.
4. Failure to maintain good academic standing.
5. To enforce advising for students for whom it is mandatory.
6. To enforce orientation for students for whom it is mandatory.
7. To enforce submittal of official high school or HSEC transcripts for whom it is mandatory.

## Administrative Withdrawals

Laramie County Community College retains the right to administratively withdraw students from courses under circumstances related to financial obligation, academic standing, individual hardship, and discipline or campus safety. Administrative withdrawals may be initiated if the student:

1. Has a delinquent financial account at the college.
2. Registered for courses while under suspension or expulsion.
3. Is physically or emotionally unable to withdraw personally, and it is determined that the student would have withdrawn if given the opportunity.
4. Is required to withdraw due to a disciplinary action.
5. Fails to meet academic progress requirements in a selective admission program, the program coordinator may recommend an administrative withdrawal.

## Effect of Enrollment Changes on Financial Aid

Dropping or withdrawing from a course or courses during the semester may impact student financial aid eligibility. Students who drop or withdraw from courses while receiving financial assistance may have financial aid reduced or cancelled or may be subject to a Return to Title IV calculation. Title IV (federal) financial aid includes the following: Pell Grant, SEOG, Work Study, and student/parent Direct Loans. Before dropping or withdrawing from courses, contact the Student Hub. For more details, refer to the section titled "Return to Title IV Calculation for Federal Financial Aid Recipients."

## Tuition and Fees

Tuition and fees are charged for each credit hour a student enrolls in, up to 15 credit hours. There is no additional charge for taking more than 15 credits a semester. Tuition rates are determined by the Wyoming Community College Commission and vary based on a student's residency classification. Mandatory student fees are charged per credit hour for all students, regardless of residency classification. Included is a breakdown of the mandatory fees:

Student Fees .....	\$ 7.77 per credit hour/semester
Wellness.....	\$ 2.23 per credit hour/semester
Athletics .....	\$ 5.50 per credit hour/semester
Technology Infrastructure Fee.....	\$ 9.00 per credit hour/semester
Student Technology Fee.....	\$14.00 per credit hour/semester
Facilities Fee .....	\$10.25 per credit hour/semester
<b>Total ..</b>	<b>\$48.75 per credit hour/semester</b>

Tuition and student fees are for the academic year 2020-2021. Tuition and fees are subject to change. Please check the website for current rates:

[lccc.wy.edu/services/financialaid/TuitionFees.aspx](http://lccc.wy.edu/services/financialaid/TuitionFees.aspx)

### Wyoming Resident (15 or more hours)

Tuition .....	\$1,485.00 a semester
Student Fees .....	\$ 731.25 a semester
<b>Total .....</b>	<b>\$2,216.25 a semester</b>

### Out-of-State Student (15 or more hours)\*

Tuition .....	\$4,455.00 a semester
Student Fees .....	\$ 731.25 a semester
<b>Total .....</b>	<b>\$5,186.25 a semester</b>

### WUE (Western Undergraduate Exchange)

(15 or more hours)*	
Tuition .....	\$2,220.00 a semester
Student Fees .....	\$ 731.25 a semester
<b>Total .....</b>	<b>\$2,951.25 a semester</b>

For a student attending the college less than full-time, the following fees apply:

### Wyoming Resident (1-14 credit hours)

Tuition .....	\$ 99.00 a credit hour/semester
Student Fees .....	\$ 48.75 a credit hour/semester
<b>Total .....</b>	<b>\$ 147.75 a credit hour/semester</b>

### Out-of-State Student (1-14 credit hours)

Tuition .....	\$ 297.00 a credit hour/semester
Student Fees .....	\$ 48.75 a credit hour/semester
<b>Total .....</b>	<b>\$ 345.75 a credit hour/semester</b>

### WUE (Western Undergraduate Exchange) (1-14 credit hours)

Tuition .....	\$ 148.00 a credit hour/semester
Student Fees .....	\$ 48.75 a credit hour/semester
<b>Total .....</b>	<b>\$ 196.75 a credit hour/semester</b>

The following fees and expenses apply to all students:

### Credit by Examination Fee

CLEP Subject Examination Fee (subject to change) .....	\$85.00
plus administrative fee to LCCC .....	\$20.00
Departmental Examination Fee (per credit hour) .....	\$25.00
DSST Subject Examination Fee (subject to change) .....	\$85.00
plus administrative fee to LCCC .....	\$20.00
Initial Placement Test Fee .....	No charge
Retake Placement Test Fee .....	\$ 5.00
Non-LCCC Placement Test Fee (per subject) .....	\$ 5.00
Nursing Tests.....	\$35.00 ea.
Transcript Fee (official copy).....	\$ 5.00
Cap and Gown Fee, estimated .....	\$35.00
Course Fees .....	Vary according to course
Video Fee (for students at the remote receiving site).....	\$20.00
Books and Course Supplies, estimated .....	\$600.00 per semester

## Tuition and Fee Automatic Payment Plan

Students may elect to pay their tuition and fees through LCCC's Automatic Payment Plan. LCCC has contracted with Nelnet Business Solutions (NBS) to provide an automatic payment plan that is an easy, convenient, and interest-free alternative for payment of tuition and fees. A student must pay a nonrefundable \$25 processing fee to NBS and agree to automated withdrawal payments by NBS to participate in the plan. The automated withdrawal payments can be from checking or savings accounts or major credit card accounts. Plan details are available on LCCC's website, at the Student Hub, or at the Cashier's Offices. See schedule below for deadlines, required down payments, and number of payments for remaining balance.

Students enrolled in 11- to 16-week courses will be allowed two installment time periods for the balance due.

	Last Day to Enroll Online	Required Down Payment	Number of Payments	Months of Payments
Fall 2020	* July 24	15%	4	Aug-Nov
	* August 23	25%	3	Sept-Nov
	* September 8 B Block Only	35%	2	Oct & Nov
Spring 2021	* December 11	15%	4	Jan-Apr
	* January 17	25%	3	Feb-Apr
	* February 7 B Block Only	35%	2	Mar & Apr
Summer 2021	* May 8	25%	2	June & July
	* June 9 B Block Only	50%	1	July Only

\*Dates are subject to change. Please check myLCCC for exact dates.

### e-Cashier Availability

Availability of e-Cashier is determined by LCCC. The college may elect not to have e-Cashier available during specific times and dates during registration.

Students should not assume balances will automatically be adjusted if financial aid is received or a course is dropped or added. Consult catalog for class withdrawal policy and refund dates. Students can review agreement balances online through My FACTS Account or call the LCCC Accounting Office at 307.778.1203 to confirm the change.

## Residence Hall Automatic Payment Plan

Students may elect to pay their residence hall fees in full or through LCCC's Automatic Payment Plan. LCCC has contracted with Nelnet Business Solutions (NBS) to provide an automatic payment plan that is an easy, convenient, and interest-free alternative for payment of tuition and fees. A student must pay a nonrefundable \$25 processing fee to NBS and agree to automated withdrawal payments by NBS to participate in the plan. The automated withdrawal payments can be from checking or savings accounts or major credit card accounts. Plan details are available on LCCC's website, at the Student Hub or Cashier's Office.

## The Golden Age Privilege

LCCC offers individuals 60 and older the privilege of enrolling for credit classes at a cost of \$10 per credit hour. However, other fees such as lab, records, etc., must be paid.

## Western Undergraduate Exchange (WUE)

The Western Undergraduate Exchange (WUE) Program is a program through which students in participating states may enroll in designated institutions and programs in other participating states at a special, reduced tuition level. Under the terms of this program, students can be admitted at a cost of 150 percent of resident tuition.

Participating in the Western Undergraduate Exchange are Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. WUE rates are extended to Nebraska students by Wyoming community colleges.

LCCC will admit students from the above states to enter with the WUE designation. Requirements for proof of residency will be the same as currently in place for all LCCC students.

Students from any participating state may enroll in any program of study at LCCC.

## Refund Policy for Credit Courses

Dropping a course prior to the first class meeting will result in a 100 percent refund of tuition and fees. For a drop or withdrawal after the first class meeting, tuition and fees will be refunded based on the length of the course. The end of the 100 percent refund period aligns with the last day to drop a class without a "W" grade. The refund dates for each course block are listed in the Academic Calendar. Students must drop classes from the campus portal or submit an add/drop form to the Student Hub to officially drop or withdraw from any course. The effective date of the change is the date the form is received by the Student Hub or the date the online transaction is processed.

Students may expect to receive refunds approximately four to six weeks after the course is dropped. No cash refunds will be issued.

## Military Students

Laramie County Community College adheres to W.S. 19-11-120 with regard to the mobilization of its citizen soldiers. Students requesting to withdraw due to emergency mobilization status that is expected to exceed thirty (30) consecutive days should provide copies of orders to Office of the Registrar for necessary adjustments to the student's academic records and student account pursuant to the statute.

## Return to Title IV Calculation for Federal Financial Aid Recipients

This policy applies to any student awarded Title IV (federal) financial aid which includes the following: Pell Grant, SEOG, Work Study and student/parent Direct Loans.

Students who drop or withdraw from all courses in a semester may be subject to a Return to Title IV calculation. Students who receive all failing or incomplete grades may also be subject to this calculation. In some cases, this calculation results in a charge back of Title IV (federal) financial aid for which the student is responsible. When the Return to Title IV calculation results in a charge back of Title IV financial aid, the student will receive a letter to their home address indicating the amount charged back, the current

account balance, and the options for repayment. Questions about Return to Title IV calculations may be directed to the Student Hub. More information on this policy can be found at [lccc.wy.edu/services/financialaid](http://lccc.wy.edu/services/financialaid).

## Refund Policy for Noncredit Courses

There is a separate and different refund policy for all professional development and life enrichment noncredit courses. Please see the current Outreach and Workforce Development class schedule.

## Academic Policies and Regulations

### Catalog Under Which a Student May Graduate

The current catalog at the time a student enrolls in credit classes or changes programs determines the requirements for graduation. Students who change programs of study within a Pathway will remain in the catalog year assigned at the time the student enrolls at the College. Students who change programs of study to a program in a different Pathway must meet the requirements of the catalog in use at the time the student changes the Pathway and program of study. Students who have a break in attendance of one (1) semester, excluding summer semester, must meet the requirements of the catalog in use at the time of readmission even if they are not changing programs of study.

The College reserves the right to substitute courses for those no longer offered or to substitute one course for another in any program or degree. Refresher classes may be required for some skills courses.

Specific allied health programs require students to meet graduation requirements of the class for which they are admitted or readmitted.

### Prerequisites

A prerequisite is designed to help students be successful. Prerequisites also inform prospective students what body of knowledge is necessary to be successful in a particular course.

If a prerequisite course is listed for a subsequent course, the student must have completed satisfactorily (grade of C or better) the prerequisite course, placed according to high school GPA or ACT score, or completed an equivalent course at a college/university with regional accreditation. Equivalent courses must be demonstrated by submitting an official transcript, with final determination made by the Office of the Registrar. For additional information, please refer to the "Academic Skills Assessment and Placement Policy" on Page 17.

### Cancellation of Classes

The college reserves the right to cancel a class in cases of insufficient enrollment or budgetary constraints, and to close registrations for a class section that has reached its capacity. Course times, locations, modality of instruction, and instructors are subject to change without notice.

### Class Attendance

Students are expected to attend all classes for which they enroll. Attendance is defined as being physically present

for face-to-face classes, submitting coursework for online classes, and either being physically present or submitting coursework for hybrid classes. Faculty must report students who never attended during the first week of class. Students who never attended are removed from the official course roster. They are not charged tuition and fees for the course and the course will not appear on the student's transcript.

Students are responsible for all class work missed during an absence. Satisfactory attendance is normally a condition precedent to successful completion of the course. Students should refer to the course syllabus for additional attendance information.

### Grading System, Grade Reports, and Honors

The grading sequence at Laramie County Community College is A, B, C, D, F, S, U, I, W and Audit. A grade point scale is incorporated to maintain records that are consistent with neighboring institutions to ensure ease of transferability.

Grade Point Scale is:

A	Excellent.....	4 points
B	Above Average.....	3 points
C	Average.....	2 points
D	Below Average.....	1 point
F	Failing.....	0 points
S	Satisfactory (equivalent of "C" or higher) ..	0 points
U	Unsatisfactory (equivalent of "D" or "F") ...	0 points
I	Incomplete.....	0 points
W	Withdrawal from class.....	0 points
Audit.....	Course taken for informational purposes only .....	No credit
AF.....	Academic Forgiveness .....	No credit
TR.....	Transfer Credit or Credit by Exam .....	0 points

A student may repeat a course in an attempt to earn a higher grade. The higher grade for the repeated course is used in the GPA calculation.

### Satisfactory/Unsatisfactory Grades

Subject to the provisions listed below, a student may request to be graded on a Satisfactory (S) credit basis rather than the A, B, C, D, F, I system:

1. The decision must be made before the end of the first week of the class and agreed upon by the instructor of the course.
2. Courses which will be graded only on a satisfactory (S) credit basis will be identified as such in the class schedule.
3. The (S) credit option may not transfer to some institutions; therefore, students are urged to consult with their advisors prior to registration.
4. An (S) grade is the equivalent of a "C" or higher. A (U) grade is the equivalent of a "D" or "F" grade.
5. The grades of "S," "U," "I," "W" and Audit are not calculated into the GPA.

### Incomplete Grades

The incomplete "I" grade is a temporary grade issued at the request of the student with the consent of the instructor for reasons beyond the student's control. To be eligible for requesting and receiving an "I," a student must have: a) a valid and justifiable reason for requesting the "I," b) attended



more than 60 percent of the class sessions, c) satisfactorily met the course requirements as defined by the instructor, d) completed approximately two-thirds of the course length, e) met with the instructor and completed and signed the necessary forms for the incomplete.

The "I" grade cannot be changed to an audit or withdrawal by the student. A grade of "F" cannot be changed to an "I" grade. If the work for the incomplete is not completed within the time allowed, then the "I" will be automatically changed to an "F." The "I" must be made by the "date due" agreed to by both the instructor and the student in the written contract. The maximum allowable "date due" is one calendar year from the last day of finals; however, it is suggested that requirements be completed and the "due date" be set within one semester. An extension of time may be granted by the instructor under extraordinary circumstances.

## Auditing Courses

Students who want to enroll in a course for informational purposes only may do so by registering for audit. Students may repeat an audited course later for credit by registering for the course and paying tuition and any applicable fees. The tuition and any fees for an audited course are the same as if the course were taken for credit. The decision to audit a course should be made at registration; however, students may elect to change to audit if the following procedure is observed:

1. For a 16-week course, students may change a course from credit to audit at any time prior to the end of the ninth week of the semester following the standard procedure for a schedule change. Changing a course from credit to audit at any time during the semester may result in a reduction in financial aid. Students should discuss their financial aid and potential impact with the Student Hub prior to changing a course from credit to audit.
2. For courses fewer than 16 weeks, including summer courses, the deadline for changing is the midpoint of the course.
3. Students may only change a course from audit to credit after the first class meeting with an instructor's signature. Often an audit student is not expected to take examinations, complete writing assignments, or complete other course requirements. However, because of the particular nature of some courses, the instructor may require that an audit student complete writing assignments, term papers, examinations or other course requirements. Any student enrolled in a course for audit should clarify the requirements with the instructor before enrolling or on the first day of class. If there are course requirements that an audit student is unprepared or unwilling to meet, he or she may drop the course immediately subsequent to the first class period and receive a full tuition refund. An audit student who is unwilling to meet the stated course requirements and does not drop the course immediately subsequent to the first class period, may be withdrawn from the class at any time by the instructor for failing to meet stated requirements.

## Academic Honors

Students enrolled with a minimum of 12 credit hours in any semester who earn a grade point average of 3.75 or higher will be listed on the President's Honor Roll. Those earning

a grade point average of 3.5 to 3.74 in any semester will be listed on the Vice President's Honor Roll.

Students with a cumulative average of 3.75 or above will graduate with the honor of HIGH DISTINCTION. Students with a cumulative average of 3.5 or above will graduate with the honor of DISTINCTION.

## Academic Rights and Responsibilities

Each student is expected to display appropriate conduct while on campus or attending college-sponsored activities. The college will take appropriate action for any violation of the Academic Code of Conduct, which includes but is not limited to plagiarism; cheating; and the unauthorized acquisition or disposition, or other trafficking in exams, papers, or other classroom materials for which the student bears responsibility for originality. Disciplinary action may be taken if violations of the Academic Code of Conduct or General Code of Conduct occur. The Student Handbook, which contains the Codes of Conduct, Sanctions, Administrative Due Process and Appeals procedures, is available on LCCC's website at [lccc.wy.edu/life/handbook](http://lccc.wy.edu/life/handbook). Each student, as a member of the college academic community, is responsible for becoming familiar with and abiding by these policies and regulations. See the LCCC Student Handbook for further information on student rights and responsibilities.

## Satisfactory Academic Standing

Satisfactory academic standing must be maintained during attendance at the college in order that students may accomplish their educational goals. A system has been designed to encourage and assist students to attain these goals.

1. Every student must have a minimum of a 2.0 (C) cumulative grade point average by the time the certificate or degree is earned.
2. Students may progress toward this goal of satisfactory academic standing if the following standards are met:

### Minimum Required Cumulative Grade Point Average

2.0 or better = satisfactory standing

1.99 or less = academic probation

Two consecutive semesters with a cumulative GPA of 1.99 or less = academic suspension

### ACADEMIC PROBATION/SUSPENSION

Students will be placed on academic probation and notified by the Office of the Registrar when their cumulative grade point average (GPA) falls below a 2.0. The purpose of academic probation is to alert students that they have not met academic standards, to provide students with the opportunity to assess their academic standing, and to offer assistance in returning to good standing.

The first semester that a student does not meet academic standards, he/she will be placed on probation. The student will be required to meet with an academic advisor in the Advising Center to develop an education success plan which addresses the cause of his or her academic challenges.

The second consecutive semester a student does not meet academic standards, he/she will be placed on academic suspension and will be required to take one semester off from courses at LCCC. After a semester of non-enrollment



from LCCC, an academically suspended student will be able to petition for re-enrollment by meeting with an academic advisor and completing an academic plan designed to help the student meet his/her academic goals. The student will be required to meet with an academic advisor each semester until he/she has a cumulative GPA at or above a 2.0.

Students may appeal this suspension in writing to the Director of Student Planning and Success and the Registrar for an additional probationary semester.

Once a student's cumulative GPA is back at or above the 2.0 level, he/she is no longer on academic probation/suspension. Suspended students who achieve a semester GPA of 2.0 or higher but fail to raise their cumulative GPA above a 2.0 may continue taking courses at the discretion of the academic advisor.

### **ACADEMIC FORGIVENESS**

Laramie County Community College permits degree-/certificate-seeking students to petition for academic forgiveness of course work that was previously taken at LCCC. The goal of this procedure is to lighten the burden of academic recovery once a student has demonstrated the ability to succeed academically. Students wishing to pursue academic forgiveness should discuss the options available with their academic advisor.

The Academic Forgiveness procedure is available at [lccc.wy.edu/Documents/Academic-Forgiveness-Procedure.pdf](http://lccc.wy.edu/Documents/Academic-Forgiveness-Procedure.pdf)

## **Family Educational Rights and Privacy Act**

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights include:

1. The right to inspect and review students' education records within 45 days of the day that Laramie County Community College receives a request for access. Students should submit to the vice president, registrar, school dean of the academic department, or other appropriate official, written requests that identify the record(s) they wish to inspect. The college official will make arrangements for access and notify the students of the time and place where the records may be inspected. If the records are not maintained by the college official to whom the request was submitted, that official shall advise the students of the correct official to whom the request should be addressed.
2. The right to request the amendment of students' education records that students believe are inaccurate or misleading. Students may ask the college to amend a record that they believe is inaccurate or misleading. They should write the college official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading. If the college decides not to amend the record as requested by a student, the college will notify the student of the decision and advise the student of his/her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to students when notified of the right to a hearing.
3. The right to consent to disclosures of personally identifiable information contained in students' education records, except to the extent that FERPA authorizes disclosure without consent. One exception that permits

disclosure without consent is disclosure to school officials with legitimate educational interests including contractors, volunteers, and other non-employees performing institutional services and functions. A school official is a person employed by the college in an administrative, supervisory, academic or research, or support staff position (including law enforcement personnel and health staff); a person or company with whom the college has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill a professional responsibility. Upon request, the college discloses education records without consent to officials of another school in which students seek or intend to enroll.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by LCCC to comply with the requirements of FERPA.

Laramie County Community College designates the following items as Directory Information: student name, address, phone number, major field of study, participation in officially recognized activities and sports, photograph, email address, dates of attendance including whether currently enrolled, enrollment status (full time, part time), and degrees and awards received. The college may disclose any of these items without prior written consent, unless notified to the contrary in writing by the student at the Student Hub.

## **Records of Deceased Students**

Laramie County Community College will release information that is designated by the college as directory information of deceased students. It is LCCC's policy not to release the non-directory education records of deceased students without written authorization from either the personal representative (executor/executrix), parents, child, and/or spouse of the deceased student for a period of ten (10) years following the death of the student unless required by law. Proof sufficient to establish death and the relationship to the deceased student, to be determined at the sole discretion of the custodian of the record, are required for the release of any deceased student's education records. After the proscribed period of time, access to the deceased student's education records will be determined by the custodian of record on a case-by-case basis and in accordance with applicable federal, state, and local law.

## **Servicemembers Opportunity College**

Laramie County Community College has been designated an institutional member of Servicemembers Opportunity Colleges (SOC), a group of more than 400 colleges and universities providing voluntary postsecondary education to members of the military throughout the world. As a SOC member, LCCC recognizes the unique nature of the military lifestyle and has committed itself to easing the transfer of relevant course credits, providing flexible academic residency requirements, and crediting learning from appropriate military training and experiences. SOC has been developed jointly by educational representatives of each of

the Armed Services, the Office of the Secretary of Defense, and a consortium of 13 leading national higher education associations; it is sponsored by the American Association of State Colleges and Universities (AASCU) and the American Association of Community Colleges (AACC).

Servicemembers are encouraged to consult the Student Hub concerning the award of credit for nontraditional learning.

## **Distance Learning**

Distance learning courses currently offered by Laramie County Community College include online courses, hybrid courses, and synchronous courses.

### **Online Courses**

Online courses enable students to take college-level courses while meeting work, family, or transportation schedules that do not correspond to traditional classroom hours.

Online courses require that students be self-motivated and self-directed and have basic knowledge of how to operate a computer. Online students must have access to a computer and reliable internet service. Most online courses can be approved for VA benefits depending on the student's program.

### **Hybrid Courses**

A hybrid course is a blend of face-to-face instruction with an online learning component. Hybrid courses are designated as either hybrid distance or hybrid face-to-face. More than 75% of the course learning is online in a hybrid distance course, while a hybrid face-to-face course is 25% or more of the course learning in the classroom. A student taking a hybrid course must have the same technical skills and equipment as an online course.

### **Synchronous Courses**

Synchronous courses use communication technology to allow students at separate locations to receive instruction simultaneously. While students in a synchronous course are separated geographically, all students meet at the same time and are able to see and talk to one another at all sites.

## **Prior Learning Assessment**

Prior learning assessment (PLA) is designed to measure knowledge learned in school, on the job, through reading, through observation or through life experiences. This is another method of accumulating credit toward degree completion.

Prior learning assessment credit may be earned through instructional-based learning and experiential-based learning. Instructional-based learning is a result of formal instruction and/or assessment. Some examples of instructional-based learning assessment include Advanced Placement (AP), International Baccalaureate (IB), CLEP, and DSST. National exams such as Automotive Service Excellence (ASE) and Department of Labor recognized apprenticeship programs are also considered a type of instructional-based learning. Faculty developed challenge (departmental) exams are another option for instructional-based learning assessment. Experiential-based learning is learning acquired through work or other learning activities such as independent reading

and study, open courseware, or other self-directed learning. A portfolio is the most common form of assessment for experiential-based learning. Experiential-learning based credit awards may not exceed 25% of the required credits for any degree per the Higher Learning Commission.

Prior learning assessment is a form of transfer credit and is transcribed as such. Students must be admitted and enrolled in a degree-seeking program at LCCC to be eligible for PLA. Please refer to [Transfer of Credit Procedure No. 3.18P](#) for more information about PLA. CLEP, DSST, and Challenge (departmental) Exams can be administered at Laramie County Community College. For additional information, contact the Exam Lab, Clay Pathfinder Building, Suite 119, 307.778.1274, [examlab@lccc.wy.edu](mailto:examlab@lccc.wy.edu).

## **Correspondence and Military Service Credit**

Credits earned by correspondence or in military service-connected schools or through the U.S. Armed Forces Institute will be reviewed by the college and credit granted, if applicable. The American Council on Education (ACE) guidelines will be used for the evaluation of military service credits. A student requesting military service credit should contact the Student Hub.

## **Transcript Entries**

To qualify for prior learning assessment credit, a student must be enrolled at LCCC. Credit awarded through PLA will be applied to the total hours earned and will be entered on the student's transcript. A student may use PLA to fulfill all degree/certificate graduation requirements except for the mandatory 15-credit hour residency requirement. All credits for PLA will be entered on the student's transcript as Transfer Credit (T and/or TR) only. Credit will be awarded for Subject Exams only, not General Exams. Credit will be awarded only for exams for which there is a direct equivalent LCCC course.

Based on the schedule available in the Testing Center or the LCCC College Catalog. Credit earned by examination will be subject to all policies as stated within this general catalog.

## **Transferring Credits by Exam**

Students must request that DSST and CLEP scores be sent directly from Prometric or The College Board. Students should be aware that not all colleges have the same policies regarding acceptance of prior learning assessment credit. Therefore, if a student is transfer-bound, it is the student's responsibility to find out whether prior learning assessment credit earned at LCCC will transfer to another institution.

## **Testing Guidelines**

1. Registration information for CLEP and DSST examinations may be obtained at the Exam Lab (Clay Pathfinder Building, Suite 119, 307.778.1274, [examlab@lccc.wy.edu](mailto:examlab@lccc.wy.edu)).
2. CLEP and DSST examinations will be administered by scheduled appointment.
3. CLEP examinations are administered in the LCCC Exam Lab. CLEP and DSST subject examinations are also administered at F.E. Warren Air Force Base.
4. Students may contact the Exam Lab for the current schedule of fees for CLEP and DSST. An administrative fee of \$20 is assessed for each CLEP or DSST subject examination.

5. CLEP exams may be repeated in 90 days.
6. DSST exams may be repeated in 30 days.
7. Departmental examinations are administered and scheduled by the instructor of the individual department.
8. A fee of \$25 per credit hour is assessed for each departmental examination.

## **Transferability of Courses**

### **A. Transcripts**

Upon request by a student through the National Student Clearinghouse, the Office of the Registrar will send official transcripts to any college or agency named. There is a \$5 charge for each copy of an official transcript. Students can be issued an official transcript when all financial obligations to the college have been satisfied. Since LCCC is not permitted to copy and forward transcripts of other institutions, students must request records directly from prior institutions. All credentials become the property of the college.

### **B. Transfer of Credits from Regionally Accredited Postsecondary Institutions**

Credit earned at other institutions will transfer to LCCC upon evaluation by the Office of the Registrar. Lower division, freshman, and sophomore college-level courses completed with a grade of C or higher from regionally accredited institutions may be accepted in transfer. Upper division, junior, senior, and graduate-level courses may be accepted in transfer to satisfy degree requirements with advisor approval.

When students transfer to LCCC with an associate of science, an associate of arts, a bachelor's, or a graduate degree from an accredited institution, LCCC will accept that general education curricula, although students still must fulfill the Wyoming constitutional requirement. However, students transferring with an associate of applied science degree must fulfill LCCC's general education requirements if they are working toward an associate of arts or an associate of science degree.

### **C. Transfer Credits from Approved Secondary Institutions**

Laramie County Community College will award credit for various International Baccalaureate (IB) and Advanced Placement (AP) subjects as indicated in the tables on Pages 25-26. Submit official IB and/or AP transcripts to the Office of the Registrar for evaluation of possible transfer credit.

### **D. Transfer of Credits to Approved Institutions**

Credits earned at Wyoming community colleges are transferable to other approved institutions, though students are advised that usually only grades of C or higher can be applied to a degree program. Students, in conjunction with their advisors, should carefully consider each course to assure that no problems with transfer will arise. A knowledge of the transfer policy of the institution to which transfer will be made is also helpful. Transferability of each course is ultimately determined by the receiving institution.

Students should see their advisors or refer to the Wyoming Higher Education Transfer Guide to obtain information on transfer of credit to the University of Wyoming.

## International Baccalaureate (IB) Courses

(Students will be required to submit official IB Transcripts.)

IB SUBJECT	REQUIRED MINIMUM SCORE	LCCC COURSE	CREDIT HOURS TRANSFERRED TO LCCC	COURSE TITLE
Social Anthropology SL	4+	ANTH 1200	3	Introduction to Cultural Anthropology
History—American HL	4	HIST 1210 and HIST 1220	6	U.S. History I U.S. History II (must complete POLS 1100)
Math Methods	4	MATH 1450	5	Pre-Calculus Algebra and Trigonometry
Math HL	4	MATH 1450 MATH 2200	8	Pre-Calculus Algebra and Trigonometry Calculus I
English HL	4+	ENGL 1010	3	English I: Composition
Psychology SL	4+	PSYC 1000	3	General Psychology
French Language	4	FREN 1010	4	First Year French I
French Language	5	FREN 1010 and FREN 1020	8	First Year French I First Year French II
German Language	4	GERM 1010	4	First Year German I
German Language	5	GERM 1010 and GERM 1020	8	First Year German I First Year German II
Spanish Language	4	SPAN 1010	4	First Year Spanish I
Spanish Language	5	SPAN 1010 and SPAN 1020	8	First Year Spanish I First Year Spanish II
Biology HL	4+	BIOL 1010	4	General Biology
Biology SL	4+	BIOL 1000	4	Principles of Biology
Chemistry HL	4	CHEM 1000	4	Introductory Chemistry
Chemistry HL	5+	CHEM 1020 and CHEM 1030	8	General Chemistry I General Chemistry II
Chemistry SL	5+	CHEM 1000	4	Introductory Chemistry
Physics HL	4	PHYS 1110 and PHYS 1120	8	General Physics I General Physics II

## Advanced Placement (AP) Information

(Students will be required to submit their AP Test Scores.)

SUBJECT	ACCEPTABLE SCORE	COURSE TITLE	CREDITS
Art 2-D	4 or 5	Art Elective	3
Art 3-D	4 or 5	Art Elective	3
Art Drawing	4 or 5	Art Elective	3
Biology	4 or 5	BIOL 1010, General Biology	4
Calculus AB	3, 4, or 5	MATH 2200, Calculus I	4
Calculus BC	3, 4, or 5	MATH 2200, Calculus I <b>and</b> MATH 2205, Calculus II	4 4
Chemistry	4 or 5	CHEM 1020, General Chemistry I <b>and</b> CHEM 1030, General Chemistry II	4 4
Computer Science A	4 or 5	COSC 1010, Intro to Computer Science	4
Computer Science AB	4 or 5	COSC 1010, Intro to Computer Science <b>and</b> COSC 1030, Computer Science I	4 4
European History	3, 4, or 5	HIST 1110, Western Civilization I	3
French Language	3	FREN 1010, First Year French I	4
French Language	4	FREN 1010, First Year French I <b>and</b> FREN 1020, First Year French II	8
French Language	5	FREN 1010, First Year French I <b>and</b> FREN 1020, First Year French II <b>and</b> FREN 2030, Second Year French I	12
German Language	3	GERM 1010, First Year German I	4
German Language	4	GERM 1010, First Year German I <b>and</b> GERM 1020, First Year German II	8
German Language	5	GERM 1010, First Year German I <b>and</b> GERM 1020, First Year German II <b>and</b> GERM 2030, Second Year German I	12
Government and Politics	3, 4, or 5	POLS Elective credit – Government and Politics (must complete POLS 1100)	3
Human Geography	4 or 5	GEOG 1020, Intro to Human Geography	3
Language and Composition	4 or 5	ENGL 1010, English I Composition	3
Literature and Composition	4 or 5	ENGL 1010, English I Composition	3
Macroeconomics	4 or 5	ECON 1010, Principles of Macroeconomics	3
Music Theory	4 or 5	MUSC 1030, Music Theory I <b>and</b> MUSC 1035, Music Aural Theory I	3
Physics B	4 or 5	PHYS 1310, College Physics I	4
Psychology	3, 4, or 5	PSYC 1000, General Psychology	3
Spanish Language	3	SPAN 1010, First Year Spanish I	4
Spanish Language	4	SPAN 1010, First Year Spanish I <b>and</b> SPAN 1020, First Year Spanish II	4 4
Spanish Language	5	SPAN 1010, First Year Spanish I <b>and</b> SPAN 1020, First Year Spanish II <b>and</b> SPAN 2030, Second Year Spanish I	4 4 4
U.S. History	4 or 5	HIST 1210, US History I <b>and</b> HIST 1220, US History II (must complete POLS 1100)	3 3
Statistics	4 or 5	STAT 2010, Statistical Concepts – Business <b>or</b> STAT 2070, Introductory Stat for Social Science <b>or</b> STAT 2050, Fundamentals of Statistics	4



# Student Support Services and Campus Life

## **Student Rights and Responsibilities**

Laramie County Community College has established expectations designed to maximize the learning environment on campus. All members of the college community are expected to approach their academic endeavors, relationships, and personal responsibilities with a vigorous commitment to the pursuit of free expression and inquiry, integrity, civility, appreciation for diversity, and respect for self and others. Each student enrolling in the college assumes an obligation as a responsible member of the college community to demonstrate conduct compatible with the college's mission as an educational institution.

As a member of the campus community, it is each student's right and each student's responsibility to be informed. The following documents are just a few of the reports, policies, and procedures pertaining to student rights and responsibilities:

- Statement of Student Rights and Responsibilities
- Annual campus security report
- Graduation/Persistence Report
- Alcohol and Drug Education and Prevention information
- Sexual harassment and sexual assault policy and procedures
- Family Educational Rights and Privacy Act (FERPA) procedure
- Student grievance procedures

These materials regarding student rights and responsibilities are located online at [lccc.wy.edu](http://lccc.wy.edu), the Student Life Office, or the Dean of Students Office.

## **Commitment to Diversity**

Laramie County Community College is committed to providing a safe and nondiscriminatory educational and employment environment. The college does not discriminate on the basis of race, color, national origin, sex, disability, religion, age, veteran status, political affiliation, pregnancy, sexual orientation, gender identity, or other status protected by law. Sexual harassment, including sexual violence, is a form of sex discrimination prohibited by Title IX of the Education Amendments of 1972. The college does not discriminate on the basis of sex in its educational, extracurricular, athletic or other programs or in the context of employment.

Diversity is a key to excellence in education. LCCC is committed to enriching the lives of its students, faculty, staff, and community by providing a diverse campus where the safe exchange of ideas, knowledge, and perspectives is an active part of learning.

## **Counseling and Campus Wellness**

Clay Pathfinder Building, Suite 207, 307.778.4397,  
After hours 844.208.7073  
Albany County Campus, 307.772.4254

LCCC's professionally licensed, mental health staff provides short-term counseling, which includes individual and group counseling, workshops, seminars, crisis intervention, and referral.

All LCCC enrolled students are eligible for free confidential counseling services, regardless of age, ethnicity, gender, disability, race, religion, sexual orientation, or progress toward academic degree. LCCC is a Safe Zone (a safe, inclusive, and positive educational environment) for all individuals seeking services.

Students experiencing a mental health crisis during regular office hours can stop by the Counseling and Campus Wellness Center in Pathfinder 207 for help in determining an appropriate course of action. To speak with a counselor after business hours, students may call 844.208.7073. If a crisis occurs on-campus during evening or weekend hours, call 911 and Campus Safety. For all other after-hour emergencies, call 911.

## **Advocacy Services**

Confidential resources are available for students to receive support if they have experienced unwelcome sexual contact, harassment, stalking, assault, or are involved in the Title IX process. Students will be provided with campus and community resources.

## **Health Clinic**

The FREE Student Health Clinic is part of Counseling and Campus Wellness and is in the Cheyenne Campus College Community Center Room 129 (across from the bookstore). This health clinic is staffed by residents from University of Wyoming Family Medicine, and is open from 6 p.m. to 8 p.m. on Tuesdays during Fall and Spring semesters. For more information, contact Counseling and Campus Wellness 307.778.4397. Students needing to contact a nurse during clinic hours may call 307.432.1683.

## **Disability Support Services (DSS)**

Clay Pathfinder Building, Suite 207,  
[lccc.wy.edu/dsshandbook](http://lccc.wy.edu/dsshandbook)

Disability Support Services (DSS) provides services and resources intended to facilitate equal access for students with disabilities to participate in courses, programs, activities, and services. The DSS office provides a variety of accommodations on a case-by-case basis for students who have documented disabilities.

Students who have questions or want to set up accommodations should call 307.778.1359 or email [DSS@lccc.wy.edu](mailto:DSS@lccc.wy.edu) for an appointment with a DSS staff member.

Albany County Campus students who have questions or need an appointment should call 307.772.4254.

## **Student Planning and Success**

Student Planning & Success includes the services of Advising, the Career Center, and TRIO Student Support Services. All services are located in the Clay Pathfinder Building, Suite 111.

### **The Advising Center**

Clay Pathfinder Building, Suite 111, 307.778.1214  
Albany County Campus, 307.721.5138

At LCCC, the holistic advising partnership between advisors and students is a continuous, interactive process that empowers students to make informed decisions and facilitates the achievement of academic, career, and personal goals.

- All degree, certificate, and credit diploma-seeking students new to LCCC are assigned a professional advisor with whom they'll work throughout their career at LCCC.
- Through this partnership, advisors and students share the responsibility for student success that continues throughout the students' time at LCCC.
- Advisors assist students in learning the College academic policies and processes, adopting successful student behaviors, and clarifying goals.
- Students will work closely with program faculty as well to maximize opportunities in their chosen program of study.

### **The Career Center**

307.778.1351

The LCCC Career Center provides career-related services in order to partner with students and alumni in the development and implementation of a personalized career plan through:

- Identifying students values, interests, skills, and personality
- Exploring career and major opportunities
- Developing strategies to market students for the job search
- Writing a customized resume and cover letter
- Gaining the confidence and skills to accomplish an impressive interview
- Discovering marketable job experiences that fit the values, interests, skills, and personality early in a students' academic career

### **TRIO Student Support Services**

307.778.4361

TRIO Student Support Services (SSS) is a federally funded program that provides collaborative and intensive services to empower eligible LCCC students to overcome the social, economic, academic, and situational barriers to obtaining accessible educational opportunities. Students meet eligibility requirements if they are first generation, income-eligible, and/or have a documented disability. TRIO SSS encourages and empowers students to take ownership of their academic efforts and successes. Services include academic advising, transfer assistance, financial literacy, and financial aid assistance.

## **Student Hub**

Clay Pathfinder Building, Cheyenne Campus  
Lobby of Albany County Campus, Laramie  
307.778.1265

The Student Hub provides comprehensive service to assist students with financial aid, scholarships, registration, transcripts, and student ID cards. The Student Hub distributes and collects relevant forms pertaining to financial aid or updating student records. There is a Student Hub on both the Cheyenne and Laramie campuses, and assistance can be provided via phone/email.

## **Exam Lab**

Clay Pathfinder Building, Suite 119, 307.778.1274,  
[examlab@lccc.wy.edu](mailto:examlab@lccc.wy.edu)  
Albany County Campus, Room 218A, 307.772.4262,

The LCCC Exam Lab offers a variety of testing opportunities for students and the community. Tests offered include: LCCC make-up exams, testing for students with accommodations, College Level Examination Program (CLEP) tests, Nursing exams for entry level and advanced placement, distance learning exams for students at LCCC and other institutions, Pearson Vue and professional certification exams, and other standardized testing instruments.

Students at the Albany County Campus should contact the ACC Test and Exam Center at 307.772.4262 for details and information about testing services in Laramie.

## **Alcohol and Drug Education and Prevention**

Counseling and Campus Wellness,  
Clay Pathfinder Building, Suite 207, 307.778.4397

Laramie County Community College has the responsibility of maintaining an educational environment conducive to academic achievement and of assisting students to be successful. LCCC recognizes that the use and abuse of alcohol and other drugs interfere with students' educational goals and, therefore, is committed to facilitating a drug-free learning environment. Students, faculty and staff have access to education on alcohol and other drugs. As well as educating the college community, LCCC has stringent policies governing the use of alcohol and other drugs on campus or at LCCC-sponsored activities.

Students should be aware that according to the Anti-Drug Abuse Act of 1988 (Section 5301), state and federal courts are provided with the ability to deny benefits to students who receive federal financial aid (e.g., Pell Grant, Direct Loans). If a student is convicted of drug distribution or possession, the court may suspend eligibility for Title IV financial aid.

Students convicted of a drug-related offense under any federal of state law involving the possession or sale of a controlled substance while enrolled and receiving federal financial aid, will lose eligibility for federal financial aid under Section 484 (r) of the Higher Education Act according to the following schedule:

**Possession:**

- First offense—1 year from date of conviction.
- Second offense—2 years from date of conviction.
- Third offense—indefinite.

**Sale:**

- First offense—2 years from date of conviction.
- Second offense—indefinite.

If a student successfully completes a qualified drug rehabilitation program after the conviction, eligibility for federal student aid funds can be regained as of the day the student successfully completes the program.

Students pursuing certificate or licensure credentials should be aware that conviction of any crime (including drug- and/or alcohol-related offenses) may jeopardize their eligibility to successfully complete licensure requirements and be employed in their chosen field following the completion of a degree program at LCCC. Consult with an academic advisor or the appropriate accrediting agency for more detailed information regarding these restrictions.

The Drug-Free School and Communities Act Amendments of 1989 (Public Law 101-226) requires that Laramie County Community College inform students and employees of the legal sanctions of illicit drugs and alcohol. This information is made available to all campus community members on the LCCC website.

**Substance-Free Campus**

The Laramie County Community College Board of Trustees and the Student Government Association have enacted a drug and alcohol procedure stating that drugs and alcoholic beverages may not be present on campus or at college-sponsored student activities. (Alcohol may be used for instructional (non-consumption) purposes with the approval of the instructor and the appropriate school dean.) This procedure states that the college will take disciplinary action for the following violations:

1. "The manufacture, possession, use, sale or distribution of narcotics, illegal drugs, drug paraphernalia or prescription drugs for which the person does not have a prescription or being under the influence on college premises or at college-sponsored activities."
2. "The manufacture, possession, consumption, sale, or distribution of alcoholic beverages, including public intoxication, on college premises or at college-sponsored activities."

**Disciplinary Actions for Drug and Alcohol Violations**

Students are responsible for complying with provisions of Wyoming law that make it a crime to possess, sell, deliver or manufacture those drugs designated collectively as controlled substances. Any student who violates the law is subject to prosecution and punishment by the civil authorities and to disciplinary proceedings by the college.

The penalties which may be imposed by the college include verbal warnings, written warnings, restitution, withdrawal agreements, disciplinary probation, disciplinary suspension, summary suspension or expulsion. The following mandatory minimum sanctions apply when students are responsible for violating LCCC's substance-free policies.

**A. Trafficking in Illegal Drugs**

For students found responsible for the illegal manufacture, sale or delivery, or possession with intent to manufacture, sell or deliver any controlled substance, the minimum penalty shall be summary suspension.

**B. Illegal Possession of Drugs**

For students found responsible for a first offense involving the illegal possession of any controlled substance, the minimum penalty shall be probation for a period of time to be determined on a case-by-case basis. A person on probation must agree to participate in drug and alcohol information sessions. For subsequent violations involving illegal possession of controlled substances, progressively more severe penalties shall be imposed including possible suspension or expulsion. Refusal or failure to abide by the terms in the probation shall result in possible suspension or expulsion.

**C. Alcohol**

For students found responsible for offenses involving unlawful possession or consumption of alcohol, the minimum penalty shall be an alcohol assessment with Counseling & Campus Wellness. For subsequent violations, a progressive penalty system based on the type of infraction and the circumstances involved will be administered. Additional penalties may include a required compliance in an educational activity, referral for alcohol assessment/counseling, suspension, restitution, voluntary community service, and/or removal from the residential living and learning system, if applicable.

**Learning Commons**

Learning Commons, Room LIB 137, 307.778.4315, [tutor@lccc.wy.edu](mailto:tutor@lccc.wy.edu), [lccc.wy.edu/academics/services/learningCommons.aspx](http://lccc.wy.edu/academics/services/learningCommons.aspx)

Tutoring in all academic subjects, writing and communications assistance, and academic success skills support is available for free seven days a week in person and online by appointment or on a walk-in basis from LCCC tutors. Students can schedule their own appointments online through myLCCC or they can contact the Learning Commons to schedule an appointment or learn about Learning Commons services. More information about the Learning Commons and hours of operation are available online. Tutoring in all academic subjects or writing assistance is available outside of the Learning Commons hours online through NetTutor. Students can access NetTutor through Canvas.

The PASS (Peer-Assisted Study Sessions) program offers free, twice weekly, small group study sessions for some of the most challenging LCCC courses. Please contact your instructor or the Learning Commons for more information.

In Laramie, the ACC Learning Commons offers free tutoring to students in a range of subjects, including writing, communication, math, accounting, chemistry, and anatomy and physiology. Visit the ACC Library or call 307.772.4285 or 307.721.5138 ext. 4285 for more information.

## **Exam Lab**

Clay Pathfinder Building, Suite 121, 307.778.1274  
[lccc.wy.edu/academics/services/examLab/examLab.aspx](http://lccc.wy.edu/academics/services/examLab/examLab.aspx)

The Exam Lab administers make-up exams, telecourse and online exams, exams for students with testing accommodations, graduation exit assessment, Pearson VUE and other professional certification tests, distance learning exams from LCCC as well as other institutions (there is a small fee for exams from other institutions). Students at the Albany County Campus should contact the ACC Testing Center at 307.772.4262 for details and information.

## **Adult Career and Education System (ACES)**

LCCC Campus, Career and Technical Building,  
Rooms 111 and 113 (offices), 307.637.2450

Eastern Laramie County Campus, 607 Elm Street,  
Pine Bluffs, WY 82082, 307.245.3595

The Adult Career and Education System (ACES) provides day and evening classes in Adult Education (AE), High School Equivalency Certificate (HSEC) preparation, Adult Secondary Education (ASE), and English as a Second Language (ESL). The classes are noncredit and are available for residents 16 years of age or older in Laramie County. ACES is open fall, spring, and summer semesters.

### **Adult Education (AE)**

AE provides individualized instruction for those students wanting to upgrade their basic reading, writing, and math literacy skills.

### **High School Equivalency Certificate (HSEC) Preparation**

Instruction is provided to prepare students to complete the High School Equivalency Certificate (HSEC). Classes include reading, writing, math, science, social studies, and college and career transitions. Students who are 16 or 17 years of age must complete age waiver requirements through ACES prior to taking the tests.

### **Adult Secondary Education (ASE)**

ASE provides instruction for students who have their high school diploma or equivalent and want to improve their basic skills to upgrade their employment opportunities or pursue further education. Classes offered include reading, math, writing, and college transitions.

### **English as a Second Language (ESL)**

The English as a Second Language program provides opportunities for students to reach their language goals such as understanding, speaking, reading and writing the English language. Students will become more integrated into society by learning about American culture, customs and the rights and responsibilities of citizenship. The classes are designed for the non-native speaker of English.

## **Bookstore**

Cheyenne, Clay Pathfinder Building, First Floor, 307.778.1114  
Laramie, 307.432.1667

The LCCC Bookstore is open Monday through Friday. The Bookstore sells new and used books, school supplies, apparel, and college novelty items. Other services include refunds, used book buy-backs and special orders (check with the Bookstore for policies). The Bookstore is closed on holidays, weekends and student breaks.

## **Annual Student Right to Know/Campus Security Report**

In compliance with federal law No. 101-542, the Student Right-to-Know and Campus Security Act of 1990, Laramie County Community College provides crime statistics for the college for the past three calendar years and the campus security plan.

### **Crime Statistics**

As required by law, the LCCC campus crime statistics annual report is provided on the LCCC Website under Compliance & Consumer Information: [lccc.wy.edu/about/compliance](http://lccc.wy.edu/about/compliance) and on the Campus Safety web link [lccc.wy.edu/services/security/crimeReporting.aspx](http://lccc.wy.edu/services/security/crimeReporting.aspx). It is also available in the office of the Director of Campus Safety (Business Technology 213).

The Campus Safety Office prepares incident reports on reported crimes and all other incidents on campus. Any criminal activity is reported immediately to the Laramie County Sheriff's Department.

When a crime or crime problem occurs, Campus Safety notifies the student newspaper of the incident to inform students and employees of the occurrence and to recommend precautionary measures to avoid any further similar incidents.

A daily crime log is available for public inspection outside of the office of Campus Safety (Business Technology BT 213), on the Clay Pathfinder 1st floor lobby bulletin board, and at the Ludden Library. The crime log is also updated on the Campus Safety pages of the College's website.

### **Campus Safety Plan**

Walkways on the campus and all parking lots are well lighted. Regular security evaluations of the campus are conducted and improvements are implemented when needed.

LCCC has installed free courtesy and security (blue light) telephones at strategic locations throughout the campus. On the wall adjacent to each courtesy telephone, and prominently displayed on each security (blue light) telephone, are instructions on what to do in the event of crimes or other emergencies. LCCC Campus Safety also utilizes marked patrol cars which patrol the campus at all times of the year. Automated Electronic Defibrillators (AED's) are strategically placed throughout the campus and in each patrol vehicle. These are for use by members of the public or campus community in the event of an emergency requiring such medical equipment.

The college employs a Campus Safety force on a 24-hour, 365-day-a-year basis. The Laramie County Sheriff's Department responds to activities of a criminal nature. Because of its high patrol activity in the vicinity of



the campus, response time by the Sheriff's Department is typically under two minutes. The Sheriff's Department, the fire department, and/or emergency medical services can be contacted at 307.637.6524 or by dialing 911 (9-911 from a campus hard line phone).

Campus Safety Officers, while not law enforcement and unable to make arrests, are employed to enforce traffic and parking regulations, enforce college rules, regulations, and policies, and assist distressed motorists; make building security checks; and assist students, employees, and the general public in ways to make their time on campus a safe and satisfying experience. Campus Safety Officers are certified in Basic First Aid, CPR, use of AEDs and prevention of blood-borne pathogens. For further information, please contact Campus Safety at 307-630-0645. Campus Safety maintains patrol offices in the Auto Technology (AT) Building (AT111 and AT135). The Director of Campus Safety's office is located in the Business Technology Building (BT213; Telephone: 307.778.1340).

Campus Safety patrol officers may be contacted via cell phone at 307.630.0645. Campus Safety should be contacted to report crimes, suspicious activity, or emergencies.

The LCCC Emergency Response Plan can be accessed on the campus portal and on the Campus Safety pages of the College's website. This plan is also posted in offices throughout the campus and in the residence hall.

## **Graduation, Transfer and Persistence Rates of LCCC Students**

### **Graduation and Transfer Rates**

The following information is provided in compliance with federal regulations as found in Title 34 of the Code of Federal Regulations (34 CFR 668.45, 668.48).

During the 2016 fall semester, 441 first-time, full-time, degree- or certificate-seeking students enrolled at Laramie County Community College (LCCC). Of this group, referred to as the fall 2016 graduation rate cohort, 125 (28.34%) had graduated from LCCC and 113 (25.62%) had transferred to another college or university by August 31, 2019.

The fall 2016 graduation rate cohort included 49 students who received student aid related to an athletics program. Of this group, 19 (38.78%) had graduated from LCCC and 18 (36.73%) had transferred to another college or university by August 31, 2019.

Graduation and transfer rates for the overall cohort and the cohort of students who received athletics-related aid by gender, race/ethnicity, and type of federal student aid received, can be found at [lccc.wy.edu/about/InstitutionalResearch/graduates.aspx](http://lccc.wy.edu/about/InstitutionalResearch/graduates.aspx).

### **Persistence Rate**

The following information is provided in compliance with federal regulations as found in Title 34 of the Code of Federal Regulations (34 CFR 668.41(d)(4)).

During the fall 2018 semester, 474 first-time, full-time, degree- or certificate-seeking students enrolled at Laramie County Community College (LCCC). Of this group, 308 (64.98%) were still enrolled at LCCC or had graduated as of October 2019.

Anyone with additional questions should contact the Director of Institutional Research at 307.778.1113.

## **Vehicles on the Cheyenne Campus**

All vehicles operated on the Cheyenne campus are subject to traffic and parking regulations established by the Laramie County Community College Board of Trustees and the Student Government Association. Parking permits are not required except in the residence halls parking lot.

## **Student Engagement & Diversity**

Crossroads, Rooms 107, 307.778.1182

The Student Engagement & Diversity Office provides co-curricular opportunities for students to develop friendships and skills to successfully achieve their academic and personal goals. Student Engagement & Diversity activities and services build a strong campus community by providing involvement opportunities, community building, diversity programming and education, as well as civic engagement and leadership opportunities. This office seeks to maintain a supportive and inclusive environment for the students of Laramie County Community College.

Getting involved with Student Engagement & Diversity provides the opportunity to learn and grow while working in partnership with others. Students participate in rewarding and fun-filled experiences to expand leadership skills and knowledge. Student Engagement & Diversity provides an engaging and purposeful learning environment, opportunities to connect with others, and support in personal discovery. LCCC values a diverse community, honest and open communication, respect for self and others, and life-long learning.

### **Student Government Association (SGA)**

Crossroads, Room 107, 307.778.1119

All students registered for credit classes at LCCC may consider themselves to be members of the Student Government Association (SGA). SGA senators represent the students at the collegiate, community and state levels. SGA responds to students' needs and voices their perspectives to LCCC administration. SGA is also responsible for the distribution of Student Activity Fees. Senators serve with integrity, professionalism and impartiality in their role as liaisons between students, faculty and staff. SGA strives to improve the campus for all students by providing a forum for student concerns as well as programs and activities to benefit the college and community.

### **Campus Activities Board (CAB)**

Crossroads, Room 107, 307.778.1119

The Campus Activities Board (CAB) is a group of students who provide activities to make the college experience more enjoyable. CAB sponsors Weeks of Welcome, service learning, family fun nights, educational awareness weeks and many other social and recreational activities. CAB is always in need of creative and talented students to help plan and organize activities. Being involved with CAB gives students many opportunities to meet people and make new friends. Students also improve their leadership skills and enhance their career preparation by improving planning, organizational and communication skills.

The mission of Campus Activities Board is to enrich our student's lives through activities to inspire collaboration, cultural/diversity awareness, and learning through engagement.



CAB is a programming ally for the student body and student organizations. Ultimately, CAB seeks to make LCCC students' college experience engaging and more enjoyable through the following:

1. Provide collaboration opportunities for students to work with one another to host and organize events on campus.
2. Provide engaging activities to promote cultural and diversity education.
3. Provide faculty opportunities to partner with campus activities to help promote learning in coursework.
4. Instill a sense of belonging within the campus community.

For more information about CAB at the Albany County Campus, students should call 307.721.5138.

## **Residential Living & Learning**

Residence Hall Community Center, 307.637.2498

The LCCC student housing complex is in a comfortable campus setting with easy access to classrooms, computer labs, a fully equipped physical education facility, and the dining room. The Residence Hall Council and Residential Living & Learning staff provide activities, programs, and leadership opportunities to assist students in transition to LCCC, support their academic success, and facilitate the development of lifelong friendships. Students are encouraged to participate in these activities that are designed to provide a safe and enhanced experience in addition to the classroom experience.

## **Multicultural Student Engagement**

LCCC offers services to assist international students on F-1 visas. Orientation, transitional services, academic and personal advising, and assistance with housing and issues with the United States Citizenship and Immigration Services (USCIS) are provided to international students at LCCC. Interested students, faculty, staff, and community members also have the opportunity to learn more and expand their cultural awareness through the International Student Association. International students at the Albany County Campus should call 307.721.5138 for more information.

## **Recognized Student Organizations**

Crossroads, Room 107, 307.778.1119

Student organizations are recognized to enhance the educational, social, cultural, professional, spiritual, and/or recreational experiences of students. Recognized student organizations may be clubs or teams and are classified as instructional or student service organizations. Instructional clubs or teams are associated with, or are an extension of, a specific academic school or program. Students wishing to develop a new club should visit Office of Student Engagement & Diversity for current recognition procedures.

Student Engagement & Diversity will support officially recognized student organizations by providing supplies, publicity materials, monetary and organizational assistance, and leadership training information. Requests for financial assistance should be directed to the office of Student Life. A current list of clubs and teams can be obtained from the Office of Student Engagement & Diversity and also found online.

## **Student Identification and Library Cards**

Student Hub, Clay Pathfinder Building, Cheyenne Campus  
Lobby of Albany County Campus, Laramie  
307.778.1265

LCCC students enrolled in credit classes are required to receive a student identification (ID) card. There is no charge for the initial card; however, a replacement fee will be assessed for lost or stolen cards. Students are eligible to receive the card once they are registered for classes, and must present another form of photo ID in order to obtain the student identification card. The Student ID Card entitles students to attend campus activities and events for discounted or free admission and enables students to use various College facilities such as the Recreation and Athletics Complex (RAC) and the Student Computer Center. The Student ID Card also serves as the student's library card for both online and physical library materials. In addition, the Student ID Card is used for meal plans in the dining hall and to access the Residence Hall for students who live on-campus.

## **Veterans' Information**

Student Hub, Clay Pathfinder Building, Cheyenne Campus  
Lobby of Albany County Campus, Laramie  
307.778.1265

Laramie County Community College is approved by the state of Wyoming for veterans' training under the Montgomery G.I. Bill and for those training under Dependents' Educational Assistance.

All questions concerning VA eligibility for educational benefits may be directed to the Student Hub. Additionally, the veteran may request assistance directly from the U.S. Department of Veterans Affairs Office, P.O. Box 66830, St. Louis, MO 63166, 1.888.442.4551.

Those applying for VA educational assistance will be provided with the most recent VA requirements concerning attendance and satisfactory academic progress.

## **Children's Discovery Center (CDC)**

Arp Building, Room 146, 307.778.1303

The LCCC Children's Discovery Center on the LCCC campus provides high-quality, child care for students, staff and the community, offering a comprehensive preschool/child care program. Hours of operation are 6:30 a.m. to 5:30 p.m., Monday through Friday, excluding college holidays.

The full-day preschool program is for children 12 months to six years of age, the half-day preschool program is for children four to six years of age, and the part-time preschool program is for children three to five years of age and is based on requests and availability.

The primary goal of the CDC is to meet the developmental needs of young children. Children who attend the CDC receive an early childhood education specifically designed to enhance skill development in all areas of a child's life: intellectual, social, emotional, creative and physical.

At the CDC, children are actively involved as they learn about themselves and their world. The center's curriculum provides a wide variety of enriching experiences that promote

the development of a positive self-concept and help foster competencies throughout a lifetime. The LCCC Children's Discovery Center is accredited by the National Association for the Education of Young Children.

## **Dining Room**

College Community Center, 307.778.1318

Food service is available to students from the Dining Room. A variety of food options is available in a food court atmosphere. Meal plan packages are available for purchase that save significantly on per meal costs to any dining service guest. Menus and other information are available online at [lcccdining.sodexomyway.com](http://lcccdining.sodexomyway.com).

## **Athletics**

As a member of the National Junior College Athletic Association (NJCAA), Laramie County Community College Golden Eagle Athletic teams compete in Region IX. Golden Eagle Athletics is comprised of Men's and Women's Basketball, Men's and Women's Soccer, Men's and Women's Rodeo and Women's Volleyball. The Rodeo team competes under the guidance of the National Intercollegiate Rodeo Association. Multiple Golden Eagles teams have qualified for district and national tournaments. The Rodeo team has had individual members qualify for the College National Finals Rodeo (CNFR). For more information, regarding Golden Eagle Athletics call 307.778.1185 or visit [golccc.com](http://golccc.com).

## **Scholarships and Financial Aid**

Student Hub, Clay Pathfinder Building, Cheyenne Campus  
Lobby of Albany County Campus, Laramie  
307.778.1265

Each year, LCCC students receive more than \$13 million in financial assistance from federal, state, LCCC, and private sources. For information about the financial aid process, application procedures, eligibility requirements, satisfactory academic progress standards for continued eligibility, and available assistance, students may inquire at the Student Hub or visit [lccc.wy.edu/services/financialaid](http://lccc.wy.edu/services/financialaid).

## **Lifelong Learning**

Rather than enrolling in a complete degree or certificate program, many students prefer to take selected courses that help them pursue, personal goals. For some, this means courses that will help them as employees or as business owner. Others simply want to know more about their world, whether it's government, psychology, literature, science, computers, automotive technology, physical fitness or art. Others are exploring new career or educational directions or want to examine other approaches to living and learning. For many diverse reasons, LCCC has a wide variety of offerings and services available to interested students.

## **Life Enrichment**

LCCC's Life Enrichment program enhances peoples' lives through lifelong learning opportunities. Life Enrichment classes help people to learn new skills, Life Enrichment classes give people an opportunity to learn a new hobby, enhance existing talents, and socialize with others who have the same interests. People can enjoy a variety of classes including quilting, swimming, rock climbing, computer software programs, and dog training.

The Life Enrichment program serves a diverse array of students from children to senior citizens.

## **Facilities and Events**

The Facilities and Events office serves the campus and community by providing facility scheduling and facility rental to individuals and groups. Activities and events are scheduled in the Center for Conferences and Institutes, the Training Center, the Physical Education Building, the college arena, and other campus spaces. The Facilities and Events office coordinates with campus service areas to provide catering, audiovisual equipment, and event setup support to individuals and groups renting facilities at LCCC.

For more information call 307.778.1291.

## **Business Training and Development**

The Business Training and Development programs at LCCC help businesses meet performance, productivity, and profitability goals by providing employees with the customized training needed for organizational success.

Classes are designed to support all levels of organizations, from the frontline worker to the executive management team. Classes are offered as open enrollment or can be customized to meet the specific needs of an organization.

# Academic Degrees and Certificates

## **Degrees and Certificates**

Laramie County Community College offers students four degrees and numerous certificates of completion:

- Bachelor of Applied Science (BAS)
- Associate of Arts Degree (AA)
- Associate of Science Degree (AS)
- Associate of Applied Science Degree (AAS)
- Associate Degree of Nursing (ADN)
- Certificate of Completion
- Certificate of General Education
- Credit Diploma

### **The Bachelor of Applied Science (BAS)**

This degree is for students seeking to further their advancement within an occupational area or career field through additional study. The program has academic and applied coursework with distinct curriculum specific to the field of study. The program is primarily intended for students who have completed an Associate of Applied Science degree and are working in an occupational area or career field, but not limited to such.

### **The Associate of Arts Degree (AA) and The Associate of Science Degree (AS)**

These degrees prepare students for transfer to a baccalaureate degree program. The Associate of Arts degree is designed for students pursuing arts, humanities, social sciences and education areas. The Associate of Science is designed for students pursuing sciences, technology, agriculture, engineering, business and mathematics. Baccalaureate programs vary considerably; therefore, students are urged to obtain specific information regarding requirements of the transfer institution and the assistance of an LCCC advisor.

### **The Associate of Applied Science Degree (AAS)**

This degree is designed for students planning to enter the workplace upon degree completion. This degree has substantial applied coursework associated with the fields of study.

The AAS degree typically can be transferred into a Bachelor of Applied Science (BAS) degree at some colleges and universities. Courses within the AAS degree programs may be accepted at a four-year college or university if the student is transferring into degrees other than the BAS. Students anticipating transfer are encouraged to consult with an advisor and carefully check the requirements of the institution and program into which they plan to transfer.

### **The Associate Degree in Nursing (ADN)**

This degree is designed for students pursuing nursing. This degree has substantial applied coursework and allows the student to enter the workplace upon degree completion. The ADN degree typically can be transferred into a Bachelor

of Science in Nursing (BSN) degree at some colleges and universities. Students anticipating transfer are encouraged to consult with an advisor and program faculty to carefully check the requirements of the institution and program into which they plan to transfer.

### **Certificate of Completion**

The Certificate of Completion is a program of applied study primarily designed to prepare students for immediate employment or advancement in a job indicated by the certificate title, and provides eligibility to sit for state or national licensing or certification exams. Certificates of Completion include general education as outlined in Board of Trustees Policy 2.2, except for post-baccalaureate options, and must meet a minimum requirement of 30 credits.

### **Certificate of General Education**

The Certificate of General Education is a credential granted to a student by LCCC upon completion of a coherent list of academic credit courses, which satisfy the requirements of the General Education Core for an AA or AS degree. The Certificate of General Education is not a stand-alone program.

### **Credit Diploma**

The credit diploma is designed to prepare students for immediate entry into or advancement in the workplace. This credential is granted to a student upon completion of a list of academic credit courses, which is less than either an associate degree or a certificate of completion. Credit Diploma is a very short program of study, between 12-29 credits with the expectation that it can be completed in two academic semesters.

Students desiring to further their education are encouraged to submit their certificates, licenses or transcripts to the Office of the Registrar for evaluation. As many as 49 semester hours may be applied toward an Associate of Applied Science degree for previous technical training and experience.

Laramie County Community College cooperates with various public and private institutions so that transfer students may be granted the maximum possible number of credits for technical training. The additional courses needed to complete an Associate of Applied Science degree are taken from LCCC and are selected based upon published degree requirements and the advisor's recommendations.

In those cases in which course work is transferred and applied toward certificates or licensure, students may be asked to demonstrate competency.

### **Interstate Passport**

The Interstate Passport enables successful transfer of a block of lower-level general education learning to other institutions participating in the Interstate Passport Network. All students who complete the general education requirements for an AA or AS degree will have completed the Interstate Passport. Students who complete their Passport at LCCC will not be required to repeat course work to meet lower

division general education requirements in the Passport's nine areas when they transfer to a participating institution in any member state. LCCC began transcribing the Interstate Passport following the Fall 2016 semester.

## **Online Degree Programs**

All LCCC degrees and certificates are accredited, including online degrees and certificates, through the Higher Learning Commission. A variety of courses, certificates, and degrees is available online to assist students in meeting their educational goals. Students should discuss their educational plans with an advisor.

## **Assessment of Student Learning**

Assessment of student learning is an integral and ongoing component in Laramie County Community College's effort to continuously improve and strengthen itself so that the college may more effectively meet the needs of the learner. In addition, the assessment of student learning provides information used to determine if students are learning what the institution expects them to learn. The success of the student learning assessment process depends on the commitment of the administration, faculty, and staff to excellence in programming and services. Continuous assessment of student learning ensures that informed and professional choices are made to improve the learning experience and academic achievement of students.

The college assesses student learning in a variety of ways. Students will be asked to participate in assessment activities designed to measure achievement in their courses and programs of study and of general education competencies and core abilities.

## **Graduation Requirements**

1. Successfully complete a minimum of 60 semester hours with a grade point average of 2.0 or higher.
2. Complete the general education degree requirements indicated on the following page for the AA, AS, AAS, ADN, BAS degrees, or Certificates of Completion.
3. Meet the state statutory requirement for instruction in the constitutions of the United States and Wyoming by completing one of the following:

POLS 1000 – American and Wyoming

Government (3 credit hours) -or-

HIST 1211 – U.S. to 1865 (3 credit hours) -or-

HIST 1221 – U.S. from 1865 (3 credit hours) -or-

HIST 1251 – Wyoming History (3 credit hours) -or-

ECON 1200 – Economics, Law, and

Government (3 credit hours)

Exception: Students who have earned credit for American Government or U.S. History at an out-of-state college or by advanced placement but have not fulfilled the Wyoming Constitution requirement may complete the one-credit hour POLS 1100 instead of one of the above courses.

4. Complete a minimum of 30 semester hours from Laramie County Community College applied toward graduation for a Bachelor of Applied Science. Complete a minimum of 15 semester hours from Laramie County Community College applied toward graduation for an AA, AS, AAS, or

ADN. Complete a minimum of 25% of the semester hours from Laramie County Community College applied toward a Certificate of Completion or a Credit Diploma.

5. Submit a graduation application online through Self-Service. A cap and gown fee is required to participate in graduation ceremonies. Students planning to graduate should consult the academic calendar for the application deadline. If a student does not meet all the requirements for graduation and later completes the remaining requirements, the student should reapply or contact the Office of the Registrar with questions.

## **Multiple Associate Degrees from LCCC**

1. It is permissible for a student to earn more than one degree at LCCC.
2. A student may receive as many degrees at the end of the semester as he or she has earned at that point.
3. For each degree earned, a student must successfully complete a minimum of 15 additional credits from LCCC. A student may concurrently earn two degrees by achieving 30 hours from LCCC.
4. Students must complete the degree requirements for a second degree as listed in the current year's catalog.
5. A maximum of 45 semester hours of credit from the first degree may be applied toward the second degree.
6. Students must consult an advisor when planning multiple degrees.

## **General Education Competencies**

The general education component is a purposeful program of students educational activities that builds a mature understanding and appreciation of diverse cultures and the human condition, the mastering of multiple modes of inquiry, the ability to effectively analyze and communicate information, and the recognition of the importance of creativity fundamental to lifelong intellectual growth.

At LCCC, the mechanism by which student learning outcomes are assessed is the competency. A competency is a specific, measurable statement of what students know or are able to do upon completion of a course or program of study. LCCC's general education competencies are the overarching skills that students develop throughout their education experience at LCCC and are able to demonstrate upon graduation.

All graduates of LCCC's certificate and associate degree programs will have completed a robust curriculum that builds the competencies and abilities necessary for students to engage successfully as citizens in a globalized, competitive, and socially interconnected world, regardless of their chosen career field. Therefore, LCCC has established a blueprint for academic success based on the following four general education outcomes that are incorporated throughout the curriculum.

The LCCC General Education program leverages nationally recognized and readily transferable, competencies-based learning through the Interstate Passport program. At LCCC, the mechanism by which student learning is assessed is the trait:



1. **Oral Communication:** Oral communication entails a crucial set of skills for higher education students to develop not just because of its importance for effective participation in classrooms, but primarily because of its central position as a tool of democracy and civic engagement. Proficiency in oral communication also requires development of the ability to actively listen, accurately summarize, and evaluate oral presentations by others.
2. **Written Communication:** Writing sits at the heart of the mission of the higher education institution. Regardless of the discipline, irrespective of the curriculum, written communication is the key that unlocks critical thinking, analysis, and logical reasoning. Learning to write effectively as an undergraduate is not accomplished in any one course, but learning to use this key to unlock intellectual potential across the curriculum does, in fact, require at least one dedicated course.
3. **Quantitative Literacy:** Quantitative literacy requires comfort and capability with fundamental quantitative methods, and incorporation of quantitative concepts into the student's worldview, so the student does not hesitate to apply quantitative skills in any appropriate context.
4. **Natural Sciences:** Proficiency in the natural sciences entails exploration and comprehension of the universe that requires an informed understanding of the scientific method and its scope, an appreciation of the inherent beauty and wonder that one can find in science and its possibilities, and its application in conducting research to gather and subject empirical evidence to quantitative analysis. Proficiency also demands understanding and appreciation of the requirement that all applicable evidence must be integrated into scientific models of the universe, and that scientific models must evolve. Proficiency of Natural Sciences includes both physical and life sciences, describing the scope of scientific study using core theories, practices and discipline-related terminology in both fields.
5. **Human Cultures:** Proficiency in evolving human cultures, increases student knowledge and appreciation of the human condition in different cultures in relation to each other and of cultural diversity and/or cultural evolution over time.
6. **Human Society and the Individual:** Human society and the individual explores human behavior in social settings through scientific inquiry within the context of value systems, institutions, economic structures, social groups and/or environments.
7. **Creative Expression:** Interpretive and creative expression of the potential and limits of the human condition relies on critical analysis of specific texts or works to support its claims.

We value how students think as much as what they learn. A successful general education program will help students transform their lives regardless of their path after graduation. All general education courses will incorporate all four of these essential practices:

1. Exploration, Research, and Problem Solving
2. Creativity and Innovation
3. Empathy and Integrity
4. Communication and Collaboration

Students who are successful in these four essential practices will be better prepared to be leaders and entrepreneurs in their fields and their communities.

## General Education Core Curriculum Requirements

The general education core curriculum is guided by Laramie County Community College's student learning core abilities and are designed to be in alignment with Wyoming statutory requirements, Wyoming Community College Commission recommendations, and the accreditation criteria set forth by the Higher Learning Commission.

The specific courses listed below are designed to fulfill general education categories for associate degree programs and are taken in conjunction with the specific course requirements for each program of study and degree completion requirements. Individual programs of study may require specific core courses from the table below, so students should contact their program advisors prior to registration to ensure the proper selection of courses for their desired majors. Students are advised that delays in graduation may result if they change their program of study due to these specific course requirements in some programs. The General Education Procedure can be found at [lccc.wy.edu/Documents/General-Education-Procedure.pdf](http://lccc.wy.edu/Documents/General-Education-Procedure.pdf).

## General Education Core Requirements by Degree Type

		CREDITS REQUIRED PER CREDENTIAL			
		CERTIFICATE of COMPLETION	AAS and ADN	AA and AS	BAS
	Student Success (SS)	3	3	3	3
Foundational Skills	Written Communication (WC)	3	3	3	3
	Oral Communication (OC)	3	3	3	3
	Quantitative Literacy (QL)	3	3	3	3
Knowledge Areas	Human Society and the Individual (HSI)		3 of either area, provided the course meets the Wyoming Statutory requirement*	3*	3*
	Human Culture (HC)			3*	3*
	Natural Sciences (NS, NSL, NSP)			4^	4^
	Creative Expression (CE)			3	3
	Program-Specified (PS)			3~	3~
	Upper Division General Education (UDGE)				3
MINIMUM TOTAL CREDITS		12	15	28	31
* At least one of these courses must also satisfy the Wyoming Statutory requirement.					
^ Coursework must have equitable representation of both physical and life science.					
~ This course must come from the General Education courses approved in oral communication, written communication, quantitative literacy, natural sciences, human cultures, human society and the individual, or creative expression.					

### Approved General Education Core Courses

STUDENT SUCCESS	WRITTEN COMMUNICATION	ORAL COMMUNICATION	QUANTITATIVE LITERACY	HUMAN SOCIETY AND THE INDIVIDUAL	HUMAN CULTURES	NATURAL SCIENCES	CREATIVE EXPRESSION
STRT 1000	BADM 3010	COMM 1015*	MATH 1105	ECON 1010	ANTH 1200	AECL 1000	ART 1000
	ENGL 1010	COMM 2010	MATH 1405	ECON 1200*	ART 1010	BIOL 1002	ART 1050
	ENGL 1020		MATH 2350	HIST 1211*	COMM 1000	GEOL 1200	ART 1110
			MATH 1000	HIST 1221*	ECON 1000	BIOL 1003	ART 2210
			MATH 1400	HIST 1251*	ENGL 2020	BIOL 1010	ART 2410
			MATH 2200	POLS 1000*	GEOG 1000	ASTR 1050	COMM 2400
			STAT 2050		HUMN 1010	CHEM 1000	ENGL 1040
			STAT 2070		HUMN 1020	CHEM 1020	MUSC 1000
					MUSC 2024	GEOG 1010	THEA 1100
		*satisfies OC requirement for AAS and Certificate programs only		*satisfies Wyoming statutory requirement	PSYC 1000	GEOL 1100	THEA 2000
					SOC 1000	PHYS 1050	
					SPAN 1010		
					THEA 1000		

Natural Science characteristics:

Physical and Life Science (NS)

Life Science only (NSL)

Physical Science only (NSP)

### **\*STRT 1000 – Strategies for Success Exemption**

Students learn academic success skills, explore life and career goals, develop a support system to connect to campus, and prepare for responsible lives in a dynamic and interdependent world in the STRT 1000 course. LCCC recognizes that students may have already achieved the learning outcomes and competencies of STRT 1000 through prior learning. Students may request an exemption from STRT 1000 if they meet one of the following requirements:

- Student has completed a credit-bearing Credit Diploma, Credit Certificate, Certificate of Completion, AAS, AA, AS, or higher degree from a regionally accredited institution.
- Student has successfully completed a minimum of 15 college-level credits, which must include college-level English and college-level math, with a GPA of 2.5 or higher at a regionally accredited institution at the time of admission or readmission.
- Student has successfully completed a minimum of 24 college-level institutional credits with a GPA of 2.5 or higher at the time the student submits a formal change of program.
- Student has transferred a minimum of 15 military credits (Joint Services Transcript).

The STRT 1000 Exemption Form should be completed by the student and his/her academic advisor, and submitted to the Student Hub for review and final approval from the Office of the Registrar.

### **LCCC/University of Wyoming Precollege Program**

LCCC offers Precollege courses on the University of Wyoming campus for both University of Wyoming and non-University of Wyoming students. The university in return offers select upper division courses for LCCC and University of Wyoming students.

## **Additional Academic Resources**

### **LCCC/University of Wyoming Off-Campus Bachelor's and Master's Programs**

Combining courses at LCCC with University of Wyoming courses delivered in Cheyenne, Cheyenne-based students can complete several bachelor's and master's degree programs as off-campus students. The University of Wyoming Southeast Regional Office is in Suite 406 in the Clay Pathfinder Building. Call 307.632.8949 for more information.

### **Articulation Agreements**

Articulation agreements are in place with the University of Wyoming and other transfer institutions for specific programs. The articulation agreements ensure that the academically successful student who selects and follows an articulated major can transfer to the specified institution and complete the baccalaureate degree within the period of time that such a degree would normally be completed at that institution. Articulated programs are denoted within the program description in the catalog and require students to complete a very specific course sequence. It is recommended that students speak with their advisor and program faculty to ensure that courses in the chosen programs are aligned for maximum transferability. Detailed information about existing articulation agreements LCCC has with several four-year institutions is available at [lccc.wy.edu/academics/policies/articulation-agreements.aspx](http://lccc.wy.edu/academics/policies/articulation-agreements.aspx).

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## Online Certificate and Degree Programs

LCCC has been accredited by the Higher Learning Commission to offer courses and degrees via online delivery. Not all courses are available online every semester. Course availability is dependent on scheduling and enrollment. Students are recommended to work closely with their advisor to ensure timely completion of their program of study.

The following programs may be completed through online course delivery:

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**\*\*Campus resources are available for all students on all LCCC campuses\*\***



# Agriculture & Equine Pathway

The Agriculture & Equine Pathway is designed for students who wish to explore and prepare for a wide range of careers in the fields of agriculture and equine. Students will learn about livestock and horses, facility management and business management. Students may participate in livestock show team, livestock judging team, ranch horse team, Block & Bridle Club, Intercollegiate Horse Show Association Team, rodeo team and industry field trips.

This program is a great option for students who want a broad understanding of this area, those who intend to continue their education at a four-year institution, as well as those who are unsure which Ag & Equine program is best for them. Students can easily transfer into a specific Ag & Equine program after starting here.

- Agriculture & Equine
- Agricultural Business
- Agriculture Production Technology
- Animal Science
- Equine Science
- Equine Science — Training Management
- Natural Resources Management

## Pathway: Agriculture & Equine

### Associate of Applied Science, Agriculture & Equine

The Agriculture & Equine program is designed for students who wish to explore and prepare for a wide range of careers in the fields of agriculture and equine. Students will learn about livestock and horses, facility management, and business management. This program is designed for students who want a broad understanding of this area, those who intend to continue their education in a Bachelors of Applied Science, Business – Applied Management program, and those who are unsure which Ag & Equine program is best for them. Students can easily transition to another program within the Ag & Equine pathway after starting here. Students desiring to transfer to Bachelors of Science degree program upon graduation should consult with their advisor.



### Contact Information

Contact information is available on the [Ag & Equine](#) website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply critical thinking with the appropriate academic and technical skills to problems faced by the agriculture and equine industries.
2. Communicate effectively in a persuasive and informative manner.
3. Work productively in teams in the classroom, workplace, and agriculture and equine community.
4. Apply management principles to agriculture and equine enterprises.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Ag & Equine pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ANSC 1010	Livestock Production	4	<b>Milestone-</b> Completion of AS and AAS Math and English requirements
SS	✓	STRT 1000	Strategies for Success	3	
QL	✓	MATH 1400	College Algebra	3	
WC	✓	ENGL 1010	English Composition I	3	<b>Milestone-</b> Completion of ENGL 1010 as a prerequisite for other courses.
NS	✓	AECL 1000	Agroecology	4	<b>Choice Point-</b> Students choosing to take EQST 1515 will need to take AECL 1000 in the 2nd semester.
	✓	OR EQST 1515	OR Equine Science I		
			Semester Total	17	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
OC	✓	COMM 2010	Public Speaking	3	<b>Choice Point-</b> Students who have not taken AECL 1000 will need to take it this semester.
	✓	AGEC 1020	Agricultural Economics II	3	
		BADM 2010 OR EQST 2985	Legal Environment for Business OR Equine Business	3	
		ANSC 2320 OR EQST 2516	Livestock Health and Management OR Equine Science II	2 3	
NS	✓	ANSC 2020 OR AECL 1000	Feeds and Feeding OR Agroecology	4	
			Semester Total	15-16	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ACCT 2010	Principles of Accounting I	3	
		ECON 1010	Macroeconomics	3	
		RGMG 2000 OR EQST 2500	Principles of Range Management OR Equine Health Management	3	
		CMAP 1200	Computer Information Systems	3	
		AGEC 2020	Farm-Ranch Business Management	4	
			Semester Total	16	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ACCT 2020	Principles of Accounting II	3	<b>Choice Point-</b> See listing of approved program electives courses Approved Electives section below.  <b>Milestone-</b> Completion of AAS Agriculture & Equine degree.
		AGEC 2400	Farm Credit and Finance	4	
CE			Choose an approved Creative Expression course	3	
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course	3	
			Choose two program approved electives.	4-5	
			Semester Total	17-18	

Program Credit Hour Total	65-67
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### Program Approved Electives:

Students may choose from the following approved Agriculture & Equine electives: AECL 1005, ANSC 1100, ANSC 1260, EQST 2800, or EQST 2520.

### Program Information

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

Students who choose to complete the Agriculture & Equine Degree will be qualified for entry level jobs in the agriculture and equine industry. Qualification for these jobs will vary depending on electives chosen



and other work experience. Possible jobs opportunities may include ranch hand, stall assistant, facilities assistant, agriculture or equine sales, livestock or equine technician, field technician for government agency or crop consulting firm, management and introductory management positions, and other opportunities depending on interest and qualifications.

Additional information on careers in Agriculture & Equine is available through [Career Coach](#).

### **Transfer Information**

This degree is well suited for those who may be interested in pursuing a Bachelor of Applied Science, Business – Applied Management degree at Laramie County Community College.

LCCC courses may transfer to institutions in addition to those above with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Agriculture & Equine

### Associate of Science, Agricultural Business

The Associate of Science Agricultural Business program prepares students to be agile problem solvers and strong communicators in order to effectively meet the challenges facing the next generation in the food and fiber sector. This program is designed to provide a pathway for students to pursue a bachelor's degree in Agribusiness, Agricultural Economics, or Agriculture Leadership and Communication related fields at a university. An Agricultural Business degree offers the graduate a variety of career opportunities including business ownership, political analyst, international business, banking and lending, farm or ranch management, financial consulting, education, commodity trading, marketing, transportation analyst, agricultural and water law, and the list goes on.



### Contact Information

Contact information is available on the [Agricultural Business](#) website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply critical thinking with the appropriate academic and technical skills to business problems faced by the agriculture industry.
2. Produce agriculture business reports that effectively communicate in a persuasive and informative manner.
3. Work collaboratively with agriculture communities of interest to in order to build consensus and accomplish agriculture business and financial management goals.
4. Apply agriculture business management principles and research to the development and selection of agriculture enterprises.
5. Evaluate the success of agricultural management plans and enterprises using financial and accounting information and tools.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Ag & Equine pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ANSC 1010	Livestock Production	4	<b>Milestone-</b> Completion of Math and English requirements.
SS	✓	STRT 1000	Strategies for Success	3	
QL	✓	MATH 1400	College Algebra	3	<b>Milestone-</b> Completion of ENGL 1010 as a prerequisite for other courses.  <b>Choice Point-</b> Students choosing to pursue degrees other than the AS Agricultural Business should make the appropriate course selections.
WC	✓	ENGL 1010	English Composition I	3	
NS	✓	AECL 1000	Agroecology	4	
			Semester Total	17	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
OC	√	COMM 2010	Public Speaking	3	<b>Milestone-</b> Completion of the first year of the AS Agricultural Business program of study.
		AGEC 1010	Agricultural Economics I	3	
		STAT 2070	Introductory Statistics for the Social Sciences	4	
		OR STAT 2050	OR Fundamental of Statistics		
		BIOL 1010	General Biology	4	
		CMAP 1200	Computer Information Systems	3	
			Semester Total	17	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ACCT 2010	Principles of Accounting I	3	<b>Milestone-</b> Completion of the third semester of the AS Agricultural Business program of study.
	√	AGEC 1020	Agriculture Economics II	3	
		MATH 2350	Business Calculus I	4	
		AGEC 2020	Farm-Ranch Business Management	4	
			Semester Total	14	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ACCT 2020	Principles of Accounting II	3	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.  <b>Milestone-</b> Completion of AS Agricultural Business degree.
		AGEC 2400	Farm Credit and Finance (Capstone Experience)	4	
CE			Choose from an approved Creative Expression course	3	
HC			Choose from an approved Human Cultures course	3	
HSI			Choose from an approved U.S./ Wyoming Constitution course	3	
			Semester Total	16	

Program Credit Hour Total	64
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## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

The Agricultural Business program is intended for students who are wishing to transfer to a university and obtain a Bachelor's or Master's degree. Most of the potential jobs listed below require you to transfer and continue your education at the next level.

Potential job opportunities for individuals with degrees Agricultural Business may include farmers, ranchers, agricultural managers, agricultural transportation, livestock production, feedlot management, agricultural communications, agricultural finance, commodity merchandising, equipment sales and financing, agriculture lending, agriculture agency and service sector.

Additional information on careers in Agricultural Business is available through [Career Coach](#).

## Transfer Information

The AS Agricultural Business program is well suited for transfer to a Bachelor's program in Agribusiness Management, Farm and Ranch Management, Livestock Business Management, and International Agriculture.

LCCC courses may transfer to institutions in addition to those above with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Agriculture & Equine

### Associate of Applied Science, Agriculture Production Technology

Students in the Associate of Applied Science Agriculture Production Technology program will obtain skills for employment in the following areas: farm or ranch operator or assistant manager, herdsman, swine specialist, feedlot operator, and emerging jobs in the agriculture production industry. This program features classroom instruction, laboratory exercises, and requires two eight-week internships in the spring of the first and second years to prepare the student for gainful employment.



### Contact Information

Contact information is available on the [Agriculture Production Technology](#) website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply critical thinking with the appropriate academic and technical skills to operational problems faced by the agriculture production industry.
2. Work collaboratively with agriculture production communities of interest in order to build consensus and accomplish production goals.
3. Apply management principles to agriculture production processes.
4. Apply principles of effective animal health to include nutritional management.
5. Design agricultural methods that balance agriculture production goals with environmental concerns.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Ag & Equine pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ANSC 1010	Livestock Production	4	<b>Choice point-</b> Students should take the highest level of math they are eligible for at this time.
SS	✓	STRT 1000	Strategies for Success	3	
QL	✓	MATH 1400	College Algebra	3	<b>Milestone-</b> Completion of AS and AAS Math requirements. Completion of ENGL 1010 as a prerequisite for other courses.
WC	✓	ENGL 1010	English Composition I	3	
NS	✓	AECL 1000	Agroecology	4	
			Semester Total	17	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		AECL 1005	Integrated Pest Management	2	<b>Milestone-</b> First year of Agriculture Production Technology completed.
		ANSC 1260	Livestock Merchandising	2	
OC	✓	COMM 2010	Public Speaking	3	
		AGRI 2470	Agriculture Internship I	8	
			Semester Total	15	



### Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		AGEC 2020	Farm-Ranch Business Management	4	
		RGMG 2000	Principles of Range Management	3	
		OR AECL 2010	OR The Ecological Web: Soils	4	
		ANSC 1200	Livestock Fitting and Showing	2	
		OR ANSC 1210	OR Livestock Judging I		
HSI	√		Choose from an approved U.S./ Wyoming Constitution course		
	√	AGEC 1020	Agricultural Economics II	3	
			Semester Total	15-16	

### Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ANSC 1100	Artificial Insemination	2	
		AGEC 2010	Farm-Ranch Business Records	2	
		ANSC 2025	Livestock Nutrition	2	
		ANSC 2320	Livestock Health Management	2	
		AGRI 2471	Agriculture Internship II	8	
			Semester Total	16	

Program Credit Hour Total	63-64
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The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

Students who choose to pursue a degree in Agriculture Production Technology will be qualified many jobs in the agriculture industry. Possible jobs opportunities may include ranch hand, stall assistant, facilities assistant, agriculture or equine sales, livestock or equine technician, field technician for government agency or crop consulting firm, management and introductory management positions, and other opportunities depending on interest and qualifications.

Additional information on careers in Agriculture Production Technology is available through [Career Coach](#).

### Transfer Information

This program is well suited for those who may be interested in pursuing a Bachelor of Applied Science, Business – Applied Management degree at Laramie County Community College. Students desiring to transfer to Bachelors of Science degree program upon graduation should consult with their advisor.

## Pathway: Agriculture & Equine

### Associate of Science, Animal Science

The Associate of Science Animal Science program equips students in applied sciences and management to meet the challenges in producing domestic livestock species and features a robust experience working with beef cattle, horses, sheep, and swine. This program is designed to allow students the option to transfer to pursue a bachelor's degree in Animal Science at a university. The Animal Science program can lead to future specialization including genetics, reproduction, nutrition, pharmaceuticals, toxicology, metabolism, and welfare. Rewarding career opportunities are available in business, industry, government, education, and research.



### Contact Information

Contact information is available on the [Animal Science](#) website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply critical thinking with the appropriate academic and technical skills to problems faced by the animal agriculture industry.
2. Work productively in teams in the classroom and the agriculture community to ensure safe and progressive animal handling practices.
3. Apply the scientific method to improve processes and decision making in livestock management.
4. Design proper animal nutrition to achieve desired outcomes for performance, development, and reproduction for economic sustainability.
5. Apply financial management principles to animal agriculture enterprises.
6. Design methods that balance livestock production goals with environmental effects.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Ag & Equine pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ANSC 1010	Livestock Production	4	<b>Milestone-</b> Completion of Math and English requirements as prerequisites for other courses.  <b>Choice Point-</b> Students choosing to pursue degrees other than the AS in Animal Science should make the appropriate course selections.
SS	✓	STRT 1000	Strategies for Success	3	
QL	✓	MATH 1400	College Algebra	3	
WC	✓	ENGL 1010	English Composition I	3	
NS	✓	AECL 1000	Agroecology	4	
			Semester Total	17	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
OC	✓	COMM 2010	Public Speaking	3	<b>Milestone-</b> Completion of the first year of the AS Animal Science program of study.  <b>Choice Point-</b> Consult with advising team to make the best choice of Chemistry based on prior academic preparation and plans for future transfer.
	✓	AGEC 1020	Agricultural Economics	3	
HC			Choose from an approved Human Cultures course	3	
		STAT 2050	Fundamentals of Statistics	4	
PS		CHEM 1020 OR CHEM 1000	General Chemistry I OR Introductory Chemistry	4	
			Semester Total	17	

### Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		AGEC 2020	Farm-Ranch Business Management	4	<b>Milestone-</b> Completion of third semester of AS of Animal Science. <b>Choice Point-</b> Consult with advising team to make the best choice of Chemistry based on prior academic preparation and plans for future transfer.
		CHEM 2300 OR AECL 2010 OR CHEM 1030	Introductory Organic Chemistry OR The Ecological Web: Soils OR General Chemistry II	4	
		RGMG 2000	Principles of Rangeland Management	3	
		BIOL 1010	General Biology	4	
			Semester Total	15	

### Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ANSC 2020	Feeds and Feeding	4	<b>Milestone-</b> Graduation with AS degree in Animal Science.
		BIOL 2022	Animal Biology	4	
HSI			Choose from an approved U.S./ Wyoming Constitution course	3	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.
CE			Choose from an approved Creative Expression course	3	
			Semester Total	14	
Program Credit Hour Total				63	

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

The Animal Science program is intended for students who are wishing to transfer to a university and obtain a Bachelor's or Master's degree. Most of the potential jobs listed below require you to transfer and continue your education at the next level.

Potential job opportunities for individuals with degrees in animal science may include agricultural scientists, agriculturists, animal geneticists, animal nutritionists, assistant general manager, barn manager, beef cattle nutritionists, dairy bacteriologists, dairy scientist, extension educator, feedlot manager, food preservation scientists, food processing scientists, food safety scientists, food scientists, food technologists, livestock buyer, livestock manager, meat inspector, poultry scientists, ranch foremen, sale representative, swine genetics researchers, and viticulturists.

Additional information on careers in Animal Science is available through [Career Coach](#).

### Transfer Information

LCCC courses may transfer to institutions in addition to those with which there are formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer. Students should consult with their advising team regarding questions about articulation.

## Pathway: Agriculture & Equine

### Associate of Science, Equine Science

The equine studies program provides students with hands-on experience in training and health care to produce graduates who are in high demand in the equine industry. Built on a strong foundation of training and expertise, the nationally recognized program continually adapts to incorporate the latest techniques and scientific advances to best prepare students for success. Equine Science students gain access to transfer into animal science and equine science baccalaureate programs.



### Contact Information

Contact information is available on the [Equine](#) programs website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply critical thinking with the appropriate academic and technical skills to problems faced by the equine industry.
2. Use effective and clear communications addressing key topics in equine management to persuade and inform others.
3. Work collaboratively with the equine industry and community in order to build consensus, to address challenges, and accomplish equine management goals.
4. Associate abnormal equine behavior with possible health concerns to include possible causes, pathology, prevention, and treatments.
5. Assess equine health by correlating symptomatic presentations with associated physiological causes.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Ag & Equine pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ANSC 1010	Livestock Production	4	<b>Milestone-</b> Completion of AS and AAS Math and English requirements.
SS	✓	STRT 1000	Strategies for Success	3	
	✓	EQST 1515	Equine Science I	4	<b>Milestone-</b> Completion of ENGL 1010 as a prerequisite for other courses.
WC	✓	ENGL 1010	English I: Composition	3	<b>Choice Point-</b> Students choosing to pursue degrees other than Equine Science should make the appropriate course selections.
QL	✓	MATH 1400	College Algebra	3	
			Semester Total	17	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EQST 1505	Basic Horsemanship	4	<b>Milestone-</b> Upon completion of this semester, the student will have completed the first year of the Equine Science.
		EQST 2516	Equine Science II	3	
		EQST 2985	Equine Business Law	3	
NSP/PS		CHEM 1000	Introductory Chemistry	4	
		STAT 2050 OR STAT 2070	Fundamentals of Statistics OR Introductory Statistics for the Social Sciences	4	
			Semester Total	18	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
NSL		BIOL 1010	General Biology	4	
		EQST 2500	Equine Health Management	3	
HC			Choose from an approved Human Cultures course	3	
CE			Choose from an approved Creative Expression course	3	
OC	✓	COMM 2010	Public Speaking	3	
			Semester Total	16	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EQST 2520	Equine Reproduction	3	<b>Milestone:</b> Completion of the LCCC general education core and eligible for the Interstate Passport.
		BIOL 2022	Animal Biology	4	
	✓	AGEC 1020	Agricultural Economics	3	
HSI	✓		Choose from approved U.S./ Wyoming Constitution courses	3	<b>Milestone:</b> Completion of AS Equine Science degree.
			Semester Total	13	
Program Credit Hour Total				64	

## Program Information

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

The AS in Equine Science is intended for students who are wishing to transfer to a university and obtain a Bachelor's or Master's degree. Most of the potential jobs listed below require a student to transfer and continue their education at the next level. Potential job opportunities for individuals with degrees in equine science may include equine scientists, equine geneticists, equine nutritionists, assistant general manager, barn/stable manager, extension educator, ranch foreman, or sales representative.

Additional information on careers in Equine Science is available through [Career Coach](#).

## Transfer Information

The Equine Science Associate of Science is well suited for transfer to a Bachelor degree program. Possible options at the Bachelor's level include degrees in Animal Biology, Business, Communication, Equine Science, Meat Science and Food Technology, Pre-Veterinary Medicine, Production, and Range Livestock.



## Pathway: Agriculture & Equine

### Associate of Applied Science, Equine Training Management

The Equine Training Management AAS builds upon the one-year credit diploma in Equine Training and further prepares students for work in the equine industry with an option to pursue a bachelor's of applied science program. Students learn equine anatomy and physiology, nutritional requirements based on performance needs, horsemanship, equine training techniques, and entrepreneurial and communication skills. Admission to LCCC does not ensure admission to the equine training management program; a supplemental program application and horseback riding proficiency tryout is required.



### Contact Information

Contact information is available on the [Equine](#) programs website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply critical thinking with the appropriate academic and technical skills to problems faced in the equine training industry.
2. Use effective and clear communications addressing key topics in equine training to persuade and inform others.
3. Apply equine training techniques to control, correct, or modify equine behavior.
4. Associate equine symptomatic presentations with potential equine disease processes by applying equine physiological principles.
5. Work collaboratively with team members and members of the equine training industry to help build consensus and address challenges faced in the equine training industry.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Ag & Equine pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	EQST 1515	Equine Science I	4	
		EQST 2500	Equine Health Management	3	
		EQST 2985	Equine Business	3	
		EQST 1685	Equine Behavior and Horsemanship	4	
SS	✓	STRT 1000	Strategies for Success	3	
			Semester Total	17	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EQST 2516	Equine Science II	3	<b>Milestone-</b> Completion of the Equine Training Credit Diploma
		EQST 2560	Advanced Training Techniques and Equine Evaluation	4	
		EQST 2800	Fundamentals of Teaching Riding	2	
		EQST 2970	Equine Internship	3	
			Semester Total	12	

### Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
CW	✓	ENGL 1010	English I: Composition	3	<b>Milestone-</b> Completion of AS and AAS Math and English requirements
QR	✓	MATH 1000	Problem Solving	3	
	✓	ANSC 1010	Livestock Production	4	
		ENTR 1500	Intro to Entrepreneurship	3	<b>Milestone-</b> Completion of ENGL 1010 as a prerequisite for other courses.
		EQST 2975	Individualized Training	4	
			Semester Total	17	

### Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course	3	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.
CV	✓	COMM 2010	Public Speaking	3	
		AGEC 2010	Farm-Ranch Business Records	2	
		EQST 2520	Equine Reproduction	3	
		MKT 1000	Personal Selling	3	
		EQST 2805 OR EQST 1550 OR EQST 2570	Western Equitation OR Equine Evaluation OR Basic Ranch Horse Versatility	2	<b>Milestone-</b> Completion of AAS Equine Training Management degree.
			Semester Total	16	

Program Credit Hour Total	66
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### Program Information

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

Students who choose to complete the Equine Training Program will be qualified for entry level jobs in the equine industry. Possible job opportunities may include horse trainer, barn manager, riding instructor, and equine industry correspondent.

Additional information on careers in Equine Training is available through [Career Coach](#).

### Transfer Information

Equine Training Management is not designed as a transfer degree. However, this degree will allow student to continue their education with an emphasis in equine while offering increased employment opportunities and opening the door to pursue a Bachelors of Applied Science in Management through Laramie County Community College.

## Pathway: Agriculture & Equine

### Credit Diploma, Equine Training Management

The Equine Training credit diploma prepares students for work in the field of equine training and management. Students will gain an overall understanding of equine anatomy, physiology, nutritional needs, and proper evaluation of a horse. Invaluable horsemanship skills in a variety of disciplines, including starting a colt under saddle are learned. Students will gain knowledge and skills necessary to prepare them for their internship in their chosen field which will ultimately prepare them for work in the equine industry. Admission to LCCC does not ensure admission to the equine training CD program; a supplemental program application and horseback riding proficiency tryout is required.



### Contact Information

Contact information is available on the [Equine](#) programs website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Identify the appropriate academic and technical skills required for problems faced in the equine training industry.
2. Demonstrate the appropriate training techniques to control, correct, or modify equine behavior.
3. Associate equine symptomatic presentations with potential equine disease processes by applying equine physiological principles.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Ag & Equine pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	EQST 1515	Equine Science I	4	
		EQST 2500	Equine Health Management	3	
		EQST 2985	Equine Business	3	
		EQST 1685	Equine Behavior and Horsemanship	4	
SS	✓	STRT 1000	Strategies for Success	3	
			Semester Total	17	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EQST 2516	Equine Science II	3	<b>Milestone-</b> Completion of the Equine Training Credit Diploma
		EQST 2560	Advanced Training Techniques and Equine Evaluation	4	
		EQST 2800	Fundamentals of Teaching Riding	2	
		EQST 2970	Equine Internship	3	
			Semester Total	12	
Program Credit Hour Total				29	

## **Program Information**

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

Students who choose to complete the Equine Training Credit Diploma will be qualified for entry level jobs in the equine industry. Possible job opportunities may include horse trainer, barn manager, riding instructor, and equine industry correspondent.

Additional information on careers in Equine Training is available through [Career Coach](#).

## **Transfer Information**

Transfer Information This certificate is not designed to transfer to other institutions; however it is intended to allow student to continue seamlessly into the Equine Training Management Associate of Applied Science program at LCCC. This degree will allow student to continue their education with an emphasis in equine while offering increased employment opportunities and opening the door to pursue Bachelors of Applied Science in Management through Laramie County Community College.

## Pathway: Agriculture & Equine

### Associate of Science, Natural Resources Management

The Associate of Science in Natural Resources Management equips students with skills in applied management and ecological fundamentals and features a hands-on, outdoor-focused, research-based curriculum. This degree is designed to allow students the option to transfer to pursue a bachelor's degree in Natural Resource Management, Forestry or Rangeland Ecology, Ecosystem Science and Management, or Environmental Restoration at a university. A Natural Resources Management degree allows students to pursue a career in both the public and private sectors.



### Contact Information

Contact information is available on the [Agriculture](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply critical thinking with the appropriate academic and technical skills to problems faced in natural resources management.
2. Use effective and clear communications addressing key topics of natural resource management to persuade and inform others.
3. Work collaboratively with natural resource management communities of interest to in order to build consensus and accomplish natural resource management goals.
4. Conduct natural resource management activities that apply logical, reasoned, and scientifically based solutions to natural resources and goals.
5. Analyze the interrelationships between natural resources and humans.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Ag & Equine pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ANSC 1010	Livestock Production	4	<b>Milestone-</b> Completion of AS and AAS Math and English requirements.
SS	✓	STRT 1000	Strategies for Success	3	
NS	✓	AECL 1000	Agroecology	4	<b>Milestone-</b> Completion of ENGL 1010 as a prerequisite for other courses.  <b>Choice Point-</b> Students choosing to pursue degrees other than Natural Resource Management should make the appropriate course selections.
WC	✓	ENGL 1010	English I: Composition	3	
QL	✓	MATH 1400	College Algebra	3	
			Semester Total	17	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
OC	✓	COMM 2010	Public Speaking	3	<b>Milestone-</b> Upon completion of this semester, the student will have completed the first year of the Natural Resources Management program.
CE			Choose from an approved Creative Expressions course	3	
		BIOL 1010	General Biology	4	
		STAT 2050	Fundamentals of Statistics	4	
HSI			Choose from an approved U.S./ Wyoming Constitution course	3	
			Semester Total	17	



## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		AECL 2010	The Ecological Web: Soils	4	
		RGMG 2000	Principles of Range Management	3	
		BIOL 2020 OR GEOL 1100	Plant & Fungal Biology OR Physical Geology	4	
	√	AGEC 1020	Agriculture Economics II	3	
			Semester Total	14	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HC			Choose an approved Creative Expression course	3	<b>Milestone-</b> Completion of AS in Natural Resources Management degree. <b>Choice Point-</b> Consult with faculty or advisor to make the best choice of Chemistry based on prior academic preparation and plans for future transfer. <b>Choice Point-</b> Consult with faculty or advisor to make the best choice of based on plans for future transfer.
PS		CHEM 1020 OR CHEM 1000	General Chemistry I OR Introductory Chemistry	4	
		BIOL 2030 OR GEOL 1100	Animal Biology OR Physical Geology	4	
		RGMG 2400 OR AECL 2395	Range Ecosystems and Plants OR Agricultural Science Research Methods Capstone	4	
			Semester Total	14-15	

Program Credit Hour Total	62-63
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## Program Information

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

The AS in Natural Resources Management is intended for students who are wishing to transfer to a university and obtain a Bachelor's or Master's degree. Most of the potential jobs listed below require a student to transfer and continue their education at the next level.

Over one- half of the jobs in natural resources are with the federal, state, or local governments – many with the U.S. Department of Agriculture. Private sector jobs can be within consulting firms or scientific research groups. Potential job opportunities for individuals with degrees in Natural Resource Management may include conservation officer or specialist, environmental or science educator, extension educator, field researcher, forest/rangeland/wildlife ecologist, GIS systems specialist, industrial ecologist, land-use planner, natural resource specialist, range manager, range conservationist, riparian/watershed specialist, or wetlands restoration specialist.

Additional information on careers in Natural Resource Management is available through [Career Coach](#).

## Transfer Information

The Natural Resource Management Associate of Science is well suited for transfer to a Bachelor degree program. Possible options at the Bachelor's level include degrees in Rangeland Ecology and Watershed Management, Agroecology, Environmental Systems Science, Environment and Natural Resources, and Outdoor Recreation and Tourism Management.



# Business & Accounting Pathway

The Business & Accounting Pathway is designed for students who wish to explore and prepare for a wide range of career options in business, accounting, finance, management, marketing, or related fields. Students may participate in the Rocky Mountain Investment Challenge, business startup weekend, Rotoract and Future Business Leaders of America-Phi Beta Lambda.

This program is a great option for students who want a broad understanding of this area, those who intend to continue their education at a four-year institution, as well as those who are unsure which Business & Accounting program is best for them. Students can easily transfer into a specific Business & Accounting program after starting here.

- Business & Accounting
- Accounting Services
- Applied Management
- Entrepreneurship
- Financial Services
- Supply Chain Management

## Pathway: Business & Accounting



### Associate of Science, Business & Accounting

The Business & Accounting program is designed for students who wish to explore and prepare for a wide range of career options in business, accounting, finance, management, marketing, or related fields. This program offers all the necessary course work to transfer to a four-year university, allowing students to pursue a baccalaureate degree in Accounting, Business Administration, Economics, Finance, Management, or Marketing.

### Contact Information

Contact information is available on the [Business & Accounting](#) website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply Generally Accepted Accounting Principles (GAAP) of financial accounting.
2. Practice decision-making principles in business.
3. Demonstrate management concepts in business situations.
4. Demonstrate mathematical concepts required in business situations.
5. Demonstrate financial concepts to business situations.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Business & Accounting pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ACCT 2010	Principles of Accounting I	3	<b>Milestone-</b> Completion of ENGL 1010, MATH 1400, and ACCT 2010 as prerequisites for other courses. <b>Milestone-</b> Common Business first semester completed. <b>Choice Point-</b> Students choosing to pursue a degree which is intended for employment after their Associate's degree will need to switch programs of study following their first semester. Students should work with their Advising Team to make this change.
SS	✓	STRT 1000	Strategies for Success	3	
HSI	✓	ECON 1200	Economics, Law, and Government	3	
WC	✓	ENGL 1010	English I: Composition	3	
QL	✓	MATH 1400	College Algebra	3	
			Semester Total	15	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ACCT 2020	Principles of Accounting II	3	<b>Milestone-</b> Completion of ACCT 2020 as a prerequisite for other courses.
OC	✓	COMM 2010	Public Speaking	3	
PS		ECON 1010	Principles of Macroeconomics	3	<b>Milestone-</b> Common Business Transfer first year completed
		MATH 2200 OR MATH 2350	Calculus I OR Business Calculus I	4	
CE			Choose an approved Creative Expression course	3	<b>Choice Point-</b> Common Business Students choosing to pursue a baccalaureate degree in Accounting will need to switch programs of study following their second semester. Students should work with their Advising Team to make this change.
			Semester Total	16	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ECON 1020	Principles of Microeconomics	3	<b>Milestone-</b> Completion of ECON 1020 and MATH 2250 or MATH 2355 as prerequisites for other courses.  <b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.
		MATH 2205 OR MATH 2355	Calculus II OR Math Applications for Business	4	
		ACCT 2450 OR MGT 2100	Cost Accounting I (Accounting Track) OR Principles of Management (Business Track)	3	
HC		ECON 1000 OR PSYC 1000 OR SOC 1000	Global Economic Issues OR General Psychology OR Sociological Principles	3	
NS		AECL 1000 OR BIOL 1002 OR GEOL 1200	Agroecology OR Discovering Science OR History of Earth	4	
			Semester Total	17	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		BADM 2010	Legal Environment for Business	3	<b>Milestone-</b> Graduation with AS degree in Business & Accounting.
		FIN 2100	Corporate Finance	3	
		IMGT 2400	Introduction to Information Management	3	
		ACCT 2230 OR MKT 2100	Intermediate Accounting I (Accounting Track) OR Principles of Marketing (Business Track)	3	
		STAT 2010	Business Statistics	4	
			Semester Total	16	
Program Credit Hour Total				64	

## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The following careers are based on a career path which starts with the Business & Accounting degree at Laramie County Community College. Possible careers in or related to Business & Accounting include Director of Accounting; Tax Director; Financial Manager; Human Resources Management, including compensation and benefits and training and development managers; Controller; Internal Auditor; Supply Chain Management, including production, transportation, storage, and distribution managers; Tax Services (Public Accounting); Tax Accountant; Construction Management; Cost Accountant; Financial Analyst; General Accountant; Budget Analyst; External Audit and Assurance Services; Management Analyst; Economist; Operations Specialist, including logisticians; Financial Services Agent; Sales Agent, including wholesale, manufacturing, advertising, and real estate; Market Research Analyst; and Human Resource Specialist, including labor relations, compensation & benefits and training & development specialists.

In addition to a bachelor's or master's degree, some careers may require or prefer candidates with professional designations such as Certified Public Accountant (CPA), Certified Managerial Accountant (CMA) or Certified Internal Auditor (CIA).

Additional information on careers in Business & Accounting is available through [Career Coach](#).

## Transfer Information

The Business & Accounting Associate of Science is well suited for transfer to a Bachelor degree program. Possible options at the Bachelor's level include degrees in Accounting, Business Administration, Economics, Finance, Management, Marketing, Professional Land Management, and Construction Management.

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/ university and program to which they plan to transfer.



## Pathway: Business & Accounting



### Associate of Applied Science, Business – Accounting Services

The Accounting Services program prepares students for a career in bookkeeping and other accounting services. The two-year occupational program combines academic study with work-related experience. The program provides students with the opportunity to gain meaningful employment after only two years of college-level coursework.

#### Contact Information

Contact information is available on the [Accounting Services](#) website.

#### Competencies

Upon successful completion of this program, students will be able to:

1. Apply Generally Accepted Accounting Principles (GAAP) of financial accounting
2. Practice decision-making principles in business
3. Demonstrate effective communication skills
4. Demonstrate management concepts in business situations
5. Demonstrate financial concepts to business situations
6. Apply accounting principles to maintain the bookkeeping system of a business

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Business & Accounting pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

#### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ACCT 2010	Principles of Accounting I	3	<b>Milestone-</b> Completion of ENGL 1010, MATH 1400, and ACCT 2010 as prerequisites for other courses.
SS	✓	STRT 1000	Strategies for Success	3	
HSI	✓	ECON 1200	Economics, Law, and Government	3	
WC	✓	ENGL 1010	English I: Composition	3	<b>Milestone-</b> Common Business first semester completed.
QL	✓	MATH 1400	College Algebra	3	
			Semester Total	15	

#### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ACCT 2020	Principles of Accounting II	3	<b>Milestone-</b> Completion of ACCT 2020 and BADM 1020 as prerequisites for other courses.
OC	✓	COMM 2010	Public Speaking	3	
		BADM 1020	Business Communication	3	
		CMAP 1200	Computer Information Systems	3	<b>Milestone-</b> Common Business Career and Technical Education first year completed
HC		ECON 1000	Global Economic Issues	3	
			Semester Total	15	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ACCT 2430	Income Tax Accounting	3	<b>Choice Point-</b> See listing of approved program electives in the Program Information section below.
		ACCT 2460	Payroll Accounting	3	
		FIN 1001	Personal Financial Planning	1	
		FIN 1002	Risk and Credit Management	1	
		FIN 1003	Investment and Retirement Planning	1	
		PSYC 1100	Organizational Human Relations	3	
		ACCT 2470	Accounting Internship I OR Choose an approved Program Elective	3	
			Choose an approved Program Elective	3	
			Total Semester Credits	18	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ACCT 2110	Quickbooks Accounting	3	<b>Choice Point-</b> See listing of approved program electives in the Program Information section below.  <b>Milestone-</b> Graduation with AAS Degree in Accounting Services.  <b>Milestone-</b> Eligible to sit for Certified Bookkeeper Exam.
		ACCT 2230	Intermediate Accounting	3	
		ACCT 2800	Certified Bookkeeper Exam Review	3	
		BADM 2010	Legal Environment for Business	3	
		BADM 2030	Business Ethics	3	
		ACCT 2471	Accounting Internship II OR Faculty Advisor Approved Program Electives	3	
			Semester Total	18	

Program Credit Hour Total	66
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## Approved Program Electives

Approved Accounting Services electives are courses with the following prefixes: ACCT, BADM, BUSN, DSCI, ECON, ENTR, FIN, MGT, and MKT. Additional options include a sequence of non-business courses that align with the industry for which students will pursue employment opportunities. Students should consult with their Advising Team for assistance with the non-business courses.

## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. The Accounting Services degree is intended to give students the academic coursework helpful in obtaining the potential jobs. Possible careers in or related to Accounting Services include Bookkeeping, Accounting, and Auditing Clerks; Tax Preparers; Billing Cost and Rate Clerk; and Payroll and Timekeeping Clerks.

Additional information on careers in Accounting Services is available through [Career Coach](#).

## Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Business & Accounting



### Associate of Applied Science, Business – Applied Management

The Applied Management program is designed to prepare students for supervisory and managerial careers. Students may ultimately manage their own small business or use their skills to manage existing businesses. The two-year occupational program combines academic study with work-related experience and leads to an Associate of Applied Science degree, allowing students to gain meaningful employment after only two years of college-level coursework or transfer directly into a Bachelor of Applied Science degree.

### Contact Information

Contact information is available on the [Applied Management](#) website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply Generally Accepted Accounting Principles (GAAP) of financial accounting.
2. Practice decision-making principles in business.
3. Demonstrate effective communication skills.
4. Demonstrate management concepts in business situations.
5. Demonstrate financial concepts to business situations.
6. Demonstrate management skills in the analysis of business practices

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Business & Accounting pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ACCT 2010	Principles of Accounting I	3	<b>Milestone-</b> Completion of ENGL 1010, MATH 1400, and ACCT 2010 as prerequisites for other courses.
SS	✓	STRT 1000	Strategies for Success	3	
HSI	✓	ECON 1200	Economics, Law, and Government	3	
WC	✓	ENGL 1010	English I: Composition	3	<b>Milestone-</b> Common Business first semester completed.
QL	✓	MATH 1400	College Algebra	3	
			Semester Total	15	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ACCT 2020	Principles of Accounting II	3	<b>Milestone-</b> Completion of ACCT 2020 and BADM 1020 as prerequisites for other courses.
OC	✓	COMM 2010	Public Speaking	3	
		BADM 1020	Business Communication	3	
		CMAP 1200	Computer Information Systems	3	<b>Milestone-</b> Common Business Career and Technical Education first year completed
HC		ECON 1000	Global Economic Issues	3	
			Semester Total	15	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ENTR 1500	Introduction to Entrepreneurship	3	<b>Choice Point-</b> See listing of approved program electives in the Program Information section below.
		MKT 1000	Personal Selling	3	
		MGT 2475 OR ENTR 1520	Management Internship I OR Creating a Business Plan	3	
NS		AECL 1000 OR BIOL 1002 OR GEOL 1200	Agroecology OR Discovering Science OR Historical Geology	4	
			Choose an approved Program Elective	3	
			Total Semester Credits	16	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		MGT 1000	Supervision	3	<b>Choice Point-</b> See listing of approved program electives in the Program Information section below.  <b>Milestone-</b> Graduation with AAS Degree in Accounting Services.  <b>Milestone-</b> Eligible to sit for Certified Bookkeeper Exam.
		MGT 2476 OR ENTR 2550	Management Internship II OR Social and Internet Technologies	3	
CE		ENGL 1040 OR MMMM 2400 OR THEA 1100	Introduction to Creative Writing OR Introduction to Photography OR Beginning Acting	3	
			Faculty Advisor Approved Program Electives	3	
			Faculty Advisor Approved Program Electives	3	
			Semester Total	15	
Program Credit Hour Total				61	

## Approved Program Electives

Approved Applied Management electives are courses with the following prefixes: ACCT, BADM, DSCI, FIN, and MGT. Additional options include a sequence of non-business courses that align with the industry for which students will pursue employment opportunities. Students should consult with their Advising Team for assistance with the non-business courses.

## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. The Applied Management degree is intended to give students the academic coursework helpful in obtaining the potential jobs. Possible careers in or related to Applied Management include Administrative Services Manager; First-Line Supervisors of Administrative or Personal Service Workers; Executive Administrative Assistants; Customer Service Representatives; and First-Line Supervisors of Food Preparation and Serving Workers.

Additional information on careers in Applied Management is available through [Career Coach](#).

## Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Business & Accounting



### ***Bachelor of Applied Science, Applied Management***

The BAS in Applied Management is designed for students who have completed an Associate of Applied Science (AAS) degree from a regionally accredited institution of higher education or technical training provider. The degree is intended for students who have expertise within a specific technical area, experience working within that field, and who seek to further their education and move into management or administrative roles by completing the requirements for a baccalaureate degree. Although previous work experience within a specific technical field is not required for entry into the program, it is highly encouraged.

A minimum of 60 credits from a completed AAS will be applied to the BAS degree, however additional lower-division coursework may be required as a part of the degree requirements. A minimum of 45 upper-division credits are required for completion of the bachelor's degree.

### **Contact Information**

Contact information is available on the [Applied Management](#) program website.

### **Competencies**

Upon successful completion of this program, students will be able to:

1. Evaluate the impact of human behavior on the economy and an organization
2. Employ professional communication skills essential to the management of a complex organization
3. Demonstrate strategic decision making within an organization
4. Evaluate essential functions of managing resources necessary to a successful organization
5. Evaluate the essential functions necessary to establish, to develop, and to manage human resources within a successful organization
6. Assemble strategies to promote ethical behavior for socially responsible decision making within an organization
7. Plan and implement supervisory, operational, and entrepreneurial activities to improve an organization
8. Integrate business concepts and processes to accomplish organizational goals

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Business & Accounting pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

Associates of Applied Science degree: Prior to enrolling in the Bachelor of Applied Science coursework, students must have completed an Associate of Applied Science (AAS) degree from a regionally accredited institution. Students new to LCCC who have not completed an AAS degree should first enroll in and complete one of the many program offerings available by the College.

Requirements	Credits	Achievements and Next Steps
Associate of Applied Science degree	60+	<b>Milestone-</b> Completion of Associate of Applied Science degree <b>Choice Point-</b> Students choosing to pursue a Bachelor of Applied Science degree would need to apply for admission during their last semester of the Associate of Applied Science degree

General Education: Students must complete a minimum of 30 General Education credits and satisfy the Wyoming Statutory Requirement for United States and Wyoming constitutional knowledge prior to or as a part of their bachelor's degree. Most students with a completed AAS degree will bring a significant number of general education credits from their previous coursework. Some general education courses are included in the bachelor's degree program. However, students may need to take additional courses to satisfy the general education requirements. Please work with your advisor on determining general education requirements and building them into your academic plan.



Requirements	Credits	Achievements and Next Steps
As a part of their associate degree, bachelor degree, or additional coursework, students must complete a minimum of 30 credits of general education to fulfill the requirements for a Bachelor of Applied Science degree at LCCC. General Education coursework must demonstrate proficiency in Oral Communication, Written Communication, Quantitative Literacy, Natural Sciences, Human Cultures, Creative Expression, Human Society and the Individual, and the Wyoming Statutory Requirement for constitutional knowledge.	30+	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
PS		ECON 1010	Principles of Macroeconomics	3	<b>Milestone-</b> Completion of ECON 1010, ACCT 3080, BADM 3010, and MGT 3210 as prerequisites for other courses.
		ACCT 3080	Accounting for Decision Makers	3	
UDGE		BADM 3010	Business and Professional Writing (Satisfies Upper Division General Education Requirement)	3	
		MGT 3210	Management and Organization	3	
			Choose an approved Creative Expression, Human Culture, or Natural Science General Education course (if needed)  OR Approved Program Elective	3	<b>Choice Point-</b> See listing of approved program electives in the Program Information section below.
			Semester Total	15	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		BADM 2010	Legal Environment for Business	3	<b>Milestone-</b> Completion of MGT 3410 as prerequisites for other courses.
		BADM 3020	Data Analysis for Managers	3	
		MGT 3410	Human Resources Management	3	
		IMGT 3020	Information Management and Security	3	
			Choose an approved Creative Expression, Human Culture, or Natural Science General Education course (if needed)  OR Approved Program Elective	3	<b>Choice Point-</b> See listing of approved program electives in the Program Information section below.
			Semester Total	15	

### Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		BADM 3210	Business Ethics	3	<b>Milestone-</b> Completion of MGT 3420 as prerequisites for other courses.
		ENTR 2700	Entrepreneurial Mindset	3	
		DSCI 3210	Introduction to Operations and Supply Chain Management	3	
		MGT 3420	Organizational Behavior and Leadership	3	
		MKT 3210	Introduction to Marketing	3	
			Total Semester Credits	15	

### Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		DSCI 4260	Project Management	3	<b>Milestone-</b> Graduation with B.AS Degree in Applied Management.
		FIN 4010	Business Finance	3	
		MGT 4010	Supervisory and Employee Communications	3	
		MGT 4800	Business Strategy and Policy (Capstone)	3	
		BADM 4600	Advanced Internship	3	
			Total Semester Credits	15	

Program Credit Hour Total	120+
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### Approved Program Electives

Approved Applied Management electives are courses with the following prefixes: ACCT, BADM, DSCI, FIN, and MGT. Additional options include a sequence of non-business courses that align with the industry for which students will pursue employment opportunities. Students should consult with their faculty advisor for assistance.

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. The Bachelor of Applied Science, Applied Management degree is intended to give students the academic coursework and experience helpful in obtaining the potential jobs.

Additional information on careers in Applied Management available through [Career Coach](#).

### Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/ university and program to which they plan to transfer.

## Pathway: Business & Accounting

### Credit Diploma, Business – Entrepreneurship

The Entrepreneurship program is designed to be added to other career or occupational degrees or as a standalone diploma. Students who are wishing to start a new business venture will gain insight useful in their venture. Existing business owners may use the certificate for skills helpful in developing new growth strategies.



### Contact Information

Contact information is available on the [Entrepreneurship](#) website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Create a viable business plan, based on market research and feasibility studies.
2. Create a digital marketing strategy for a new startup business or existing business expansion.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Business & Accounting pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ENTR 1500	Introduction to Entrepreneurship	3	<b>Choice Point-</b> See listing of approved program electives in the Program Information section below.
		ENTR 1520	Creating a Business Plan	3	
		ENTR 2550	Social and Internet Technologies	3	
		MKT 1000	Personal Selling	3	
			Choose an approved Program Elective	3	<b>Milestone-</b> Completion of Entrepreneurship Credit Diploma.
			Choose an approved Program Elective	3	
			Semester Total	18	

### Approved Program Electives

Approved Entrepreneurship electives are courses with the following prefixes: ACCT, BADM, BUSN, DSCI, ECON, ENTR, FIN, MGT, and MKT. Additional options include a sequence of non-business courses that align with the industry for which students will pursue employment opportunities. Students should consult with their Advising Team for assistance with the non-business courses.

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. The Entrepreneurship credit diploma is intended to give students the academic coursework helpful in obtaining the potential jobs. An Entrepreneur is a possible career related to the Entrepreneurship program.

Additional information on careers in Entrepreneurship is available through [Career Coach](#).

### Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Business & Accounting



### Associate of Applied Science, Business – Financial Services

The Financial Services program prepares students for a broad range of finance-based careers such as Real Estate, Banking, and Financial Planning. The two-year occupational program combines academic study with work-related experience and leads to an Associate of Applied Science degree. This degree helps students gain meaningful employment after only two years of college-level coursework. Careers include loan officers and other banking positions, real estate agents, real estate assessors, and financial clerks.

### Contact Information

Contact information is available on the [Financial Services](#) website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply Generally Accepted Accounting Principles (GAAP) of financial accounting.
2. Practice decision-making principles in business.
3. Demonstrate effective communication skills.
4. Demonstrate management concepts in business situations.
5. Demonstrate financial concepts to business situations.
6. Apply financial analysis tools to business situations.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Business & Accounting pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ACCT 2010	Principles of Accounting I	3	<b>Milestone-</b> Completion of ENGL 1010, MATH 1400, and ACCT 2010 as prerequisites for other courses.
SS	✓	STRT 1000	Strategies for Success	3	
HSI	✓	ECON 1200	Economics, Law, and Government	3	
WC	✓	ENGL 1010	English I: Composition	3	<b>Milestone-</b> Common Business first semester completed.
QL	✓	MATH 1400	College Algebra	3	
			Semester Total	15	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ACCT 2020	Principles of Accounting II	3	<b>Milestone-</b> Completion of ACCT 2020 and BADM 1020 as prerequisites for other courses.
OC	✓	COMM 2010	Public Speaking	3	
		BADM 1020	Business Communication	3	
		CMAP 1200	Computer Information Systems	3	<b>Milestone-</b> Common Business Career and Technical Education first year completed
HC		ECON 1000	Global Economic Issues	3	
			Semester Total	15	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ACCT 2430	Income Tax Accounting	3	<b>Choice Point-</b> See listing of approved program electives in the Program Information section below.
		FIN 1100	Financial Planning and Consulting	3	
		FIN 1110	Financial Statement and Credit Analysis	3	
		FIN 1120	Investments	3	
		MKT 1000	Personal Selling	3	
		FIN 2470	Finance Internship I OR Choose an approved Program Elective	3	
			Total Semester Credits	18	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ACCT 2110	Quickbooks Accounting	3	<b>Choice Point-</b> See listing of approved program electives in the Program Information section below.  <b>Milestone-</b> Graduation with AAS Degree in Financial Services.
		BADM 2010	Legal Environment for Business	3	
		BADM 2030	Business Ethics	3	
		FIN 2000	Principles of Banking	3	
		FIN 2200	Real Estate Principles and Practice	3	
		FIN 2471	Finance Internship II OR Choose an approved Program Elective	3	
			Semester Total	18	

Program Credit Hour Total	66
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## Approved Program Electives

Approved Financial Services electives are courses with the following prefixes: ACCT, BADM, BUSN, DSCI, ECON, ENTR, FIN, MGT, and MKT.

## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. The Financial Services program is intended to give students the academic coursework helpful in obtaining the potential jobs. Possible careers in or related to Financial Services include Loan Officer; Real Estate Agents and Assessors; Financial Clerk; and Banking Clerk.

Additional information on careers in Financial Services is available through [Career Coach](#).

## Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.



## Pathway: Business & Accounting



### Associate of Applied Science, Business – Supply Chain Management

The Supply Chain Management program combines core business with specialized studies in logistics, transportation, and leadership. Students develop the knowledge, decision making, and organizational skills needed to manage a supply chain. When students graduate, they will be ready to begin in any one of several jobs in supply chain management – warehouse management, logistics analyst, third-party brokering, transportation specialist and more. The two-year occupational program leads to an Associate of Applied Science degree in Business, with an emphasis on supply chain management.

### Contact Information

Contact information is available on the [Supply Chain Management](#) website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply Generally Accepted Accounting Principles (GAAP) of financial accounting.
2. Practice decision-making principles in business.
3. Demonstrate effective communication skills.
4. Demonstrate management concepts in business situations.
5. Demonstrate financial concepts to business situations.
6. Demonstrate organizational management of an integrated global business.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Business & Accounting pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ACCT 2010	Principles of Accounting I	3	<b>Milestone-</b> Completion of ENGL 1010, MATH 1400, and ACCT 2010 as prerequisites for other courses.
SS	✓	STRT 1000	Strategies for Success	3	
HSI	✓	ECON 1200	Economics, Law, and Government	3	
WC	✓	ENGL 1010	English I: Composition	3	<b>Milestone-</b> Common Business first semester completed.
QL	✓	MATH 1400	College Algebra	3	
			Semester Total	15	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	ACCT 2020	Principles of Accounting II	3	<b>Milestone-</b> Completion of ACCT 2020 and BADM 1020 as prerequisites for other courses.
OC	✓	COMM 2010	Public Speaking	3	
		BADM 1020	Business Communication	3	
		CMAP 1200	Computer Information Systems	3	<b>Milestone-</b> Common Business Career and Technical Education first year completed
HC		ECON 1000	Global Economic Issues	3	
			Semester Total	15	

### Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		DSCI 1000	Introduction to Decision Science	3	<b>Choice Point-</b> See listing of approved program electives in the Program Information section below.
		DSCI 1100	Supply Chain Management	3	
		PSYC 1100	Organizational Human relations	3	
		MGT 1000	Supervision	3	
		MKT 1000	Sales	3	
		MGT 2475	Management Internship I OR Choose an approved Program Elective	3	
			Total Semester Credits	18	

### Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		BUSN 2000	International Business	3	<b>Milestone-</b> Graduation with AAS Degree in Supply Chain Management.  <b>Choice Point-</b> See listing of approved program electives in the Program Information section below.
		BADM 2030	Business Ethics	3	
		DSCI 1200	Logistics and Transportation	3	
		DSCI 1300	Project Management	3	
		MGT 1500	Leadership	3	
		MGT 2476	Management Internship II OR Choose an approved Program Elective	3	
			Semester Total	18	

Program Credit Hour Total	66
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### Approved Program Electives

Approved Supply Chain Management electives are courses with the following prefixes: ACCT, BADM, BUSN, DSCI, ECON, ENTR, FIN, MGT, and MKT. Additional options include a sequence of non-business courses that align with the industry for which students will pursue employment opportunities. Students should consult with their Advising Team for assistance with the non-business courses.

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. The Supply Chain Management program is intended to give students the academic coursework helpful in obtaining the potential jobs. Possible careers in or related to Supply Chain Management include Stock, Shipping, Receiving and Traffic Clerks; Freight Agents; Production, Planning, and Expediting Clerk; Wholesale and Retail Buyers; First-line Supervisor of Material Movers; and Inspectors, Weighers, Testers, Samplers, and Sorters.

Additional information on careers in Supply Chain Management is available through [Career Coach](#).

### Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.



# Communication & Creative Arts Pathway

The Communication & Creative Arts Pathway is designed for students who wish to explore and prepare for a wide range of transfer options, including fine arts, humanities, English, Spanish and/or communication. Students with these skills prepare themselves to navigate complex working environments, to make difficult ethical choices, to contribute to their community, and to develop their creativity.

This program is a great option for students who want a broad understanding of this area, those who intend to continue their education at a four-year institution, as well as those who are unsure which Communication & Creative Arts program is best for them. Students can easily transfer into a specific Communication & Creative Arts program after starting here.

- Communication & Creative Arts
- Art
- Music
- Theatre

## Pathway: Communication & Creative Arts

### Associate of Arts, Communication & Creative Arts

The Communication & Creative Arts program is designed for students who wish to explore a wide range of options in the fine arts, humanities, and communication in anticipation of selecting a degree in one of these specific fields.

This program offers the necessary course work to transfer to a four-year university, allowing students to pursue a baccalaureate degree or further education in related fields.

If students wish to leave the Communication & Creative Arts program for a specific program in this Pathway, they should work closely with their Advising Team to select appropriate courses.

### Contact Information

Contact information is available on the [Communication & Creative Arts](#) website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Analyze works (written, oral, visual, musical, or performative) using appropriate skills (e.g. reading, writing, and research).
2. Apply discipline-specific terms to works.
3. Analyze aspects of culture using discipline-specific terminology.
4. Create original works utilizing discipline-specific techniques.
5. Implement critical thinking skills using discipline specific strategies and techniques.
6. Demonstrate improvement in work with feedback from peers and instructor.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Communication & Creative Arts pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

The Communication & Creative Arts program is made of a primary area of interest and a secondary area of interest. To graduate, students must take at least 12 credits of course work in a primary area of interest and at least 9 in a secondary area of interest. Students should work with their Advising Team to select courses in the primary and secondary areas of interest.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion college level English.  <b>Milestone-</b> Common Communication & Creative Arts first semester completed.  <b>Choice Point-</b> Students choosing to pursue an AA degree in Art, Theatre, or Music will need to change programs of study following their first semester to ensure their total credits and time to graduation are minimized. Students should work with their Advising Team in making the change.
WC	✓	ENGL 1010	English I: Composition	3	
CE	✓		Choose an approved Creative Expression course	3	
PS	✓		Choose an approved General Education course	3	
	✓		Choose an approved Communication & Creative Arts elective from ART, ENGL, MMMM, MUSC, SPAN, or THEA	3-4	
			Semester Total	15-16	



## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	✓	MATH 1000	Problem Solving	3	<b>Milestone-</b> Completion of college level Math.
OC	✓	COMM 2010	Public Speaking	3	
HC	✓		Choose an approved Human Cultures course, HUMN 1010 or HUMN 1020 Recommended	3	
			Choose an approved Communication & Creative Arts elective from ART, ENGL, MMMM, MUSC, SPAN, or THEA	3-4	
			Choose an approved Communication & Creative Arts elective from ART, ENGL, MMMM, MUSC, or THEA	3	
			Semester Total	15-16	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course	3	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.
NS	✓	AECL 1000 OR BIOL 1002 OR GEOL 1200	Choose a Natural Science course that satisfies both the Life and Physical Sciences requirements	4	
			Choose a World Language course	4	
			Choose an approved Communication & Creative Arts elective from ART, ENGL, MMMM, MUSC, or THEA	3	
			Semester Total	14	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ENGL 1020	Composition II	3	<b>Milestone-</b> Graduation with AA degree in Communication & Creative Arts
			Choose a World Language course	4	
			Choose an approved Communication & Creative Arts elective from ART, ENGL, MMMM, MUSC, SPAN, or THEA	3-4	
			Choose an approved Communication & Creative Arts elective from ART, ENGL, MMMM, MUSC, or THEA	3	
			Choose an approved Communication & Creative Arts elective from ART, ENGL, MMMM, MUSC, or THEA	3	
			Semester Total	16-17	

Program Credit Hour Total	60-63
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## Approved Program Electives

The approved Communication & Creative Arts courses that students may choose for their Primary and Secondary areas of interest (listed in the program map as Communication & Creative Arts electives) are:

Art: ART 1110, ART 1120, ART 2010, ART 2020, ART 1050, ART 2210, ART 2410

English: ENGL 2020, ENGL 2040, ENGL 2041, ENGL 2100, ENGL 2210, ENGL 2220, ENGL 2230, ENGL 2270, ENGL 2310, ENGL 2320, ENGL 2330, ENGL 2340, ENGL 2411, ENGL 2420

Mass Media and Multimedia: MMMM 1000, MMMM 1111, MMMM 1370, MMMM 1371, MMMM 2100, MMMM 2222, MMMM 2310, MMMM 2325, MMMM 2400, MMMM 2408

Music: MUSC 1030, MUSC 1035, MUSC 1040, MUSC 1045, MUSC 1051, MUSC 1052, MUSC 1290, MUSC 1295, MUSC 1380, MUSC 1390, MUSC 1400, MUSC 1445, MUSC 1480

Spanish: SPAN 1010, SPAN 1020, SPAN 1071, SPAN 2030, SPAN 2040, SPAN 2070 (World Language courses not listed may meet the CCA elective requirements through the course substitution process.)

Theatre: THEA 1100, THEA 2000, THEA 2010, THEA 2020, THEA 2100, THEA 2160

## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

Additional information on careers in Communication & Creative Arts is available through [Career Coach](#).

## Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Communication & Creative Arts

### Associate of Arts, Art

The AA in Art program is designed for students who wish to explore and prepare for a wide range of career options in visual arts. Completing this program may qualify students for a variety of employment in visual art fields, including as entrepreneurs, designers, educators, and artists. This program offers coursework intended to transfer to a four-year university, allowing students to pursue a baccalaureate degree in Graphic Design, Illustration, Marketing, or Education. The program also provides students with skills to establish meaningful self-employment in the Art field.



### Contact Information

Contact information is available on the [Art](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Develop knowledge of studio studies, practice, and experiences.
2. Establish methods of historical inquiry, critical thinking, and analysis in visual arts.
3. Develop knowledge of medium(s), technologies, and equipment.
4. Synthesize skills, materials, theory, and history, into personal understanding of moral and ethical issues in visual arts.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Communication & Creative Arts pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion college level English. <b>Choice Point-</b> ART 1120 is a first semester requirement for students in the Art program.
WC	✓	ENGL 1010	English I: Composition	3	
CE	✓		Choose an approved Creative Expression course; ENGL 2040, MMMM 2400, MUSC 1000, or THEA 1100 recommended.	3	
PS	✓		Choose an approved General Education course; HUM 1010 recommended.	3	
		ART 1110	Foundation: Two Dimensional (FALL ONLY)	3-4	
			Semester Total	15	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	✓	MATH 1000	Problem Solving	3	<b>Milestone-</b> Completion of college level Math and English in the first year.
OC	✓	COMM 2010	Public Speaking	3	
HC	✓		Choose an approved Human Cultures course; HUMN 1010 or HUMN 1020 Recommended	3	
		ART 1050	Beginning Drawing	3	
		ART 1120	Foundation: Three Dimensional (SPRING ONLY)	3	
			Semester Total	15	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course	3	
		ART 1130	Foundation: Color Theory (FALL ONLY)	3	
		ART 2010	Art History I: Pre-history to Medieval (FALL ONLY)	3	
		ART 2310	Sculpture I	3	
			Program elective; First-year world language course recommended	3-4	
			Semester Total	15-16	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
NS	✓	AECL 1000 OR BIOL 1002 OR GEOL 1200	Choose a Natural Science course that satisfies both the Life and Physical Sciences requirements	4	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.  <b>Milestone-</b> Completion of AA Art degree.
		ART 2020	Art History II: Renaissance to Modern (SPRING ONLY)	3	
		ART 2410	Ceramics I	3	
		ART 2210	Beginning Painting	3	
			Program elective; First-year world language course recommended	3-4	
			Semester Total	15 - 16	

Program Credit Hour Total	61-64
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## Approved Program Electives

ART 2075, ART 2005, ART 2080, ART 2050, ART 2320, ART 2220, ART 2230, ART 2350, ART 2420, and ART 2430.

## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

Additional information on careers in Art is available through [Career Coach](#).

## Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/ university and program to which they plan to transfer.

## Pathway: Communication & Creative Arts

### Associate of Arts, Music

The AA Music program is designed for students who wish to explore and prepare for a wide range of career options in music. Within the music program, students will have the opportunity to study and perform music from a variety of styles throughout history and across multiple cultures. Completing this program may qualify students for employment in areas related to music. This degree offers coursework intended to transfer to a four-year university, allowing students to pursue a baccalaureate degree in Music, Music Education (vocal or instrumental), or Music Performance (vocal or instrumental). Students seeking to complete a major in music, or who are interested in music courses, should seek the advice of a music faculty member in addition to their Advising Team.



### Contact Information

Contact information is available on the [Music](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply appropriate terminology in music courses.
2. Demonstrate basic analytical knowledge in music in its cultural contexts.
3. Develop basic musicianship skills.
4. Demonstrate basic analytical knowledge in music in its historical contexts.
5. Develop high level individual performance skills on a major instrument.
6. Demonstrate fundamental teaching concepts for majors pursuing the Music Education Field of Study.
7. Develop high level ensemble performance skills on a major instrument.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Communication & Creative Arts pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion college level English.
WC	✓	ENGL 1010	English I: Composition	3	
PS	✓		Choose an approved General Education course	3-4	<b>Choice Point-</b> Students pursuing the Music Education Field of Study should choose a 3 credit PS course to not exceed 64 credits.
		MUSC 0200	Convocation	0	
		MUSC 1030	Written Theory I	3	<b>Choice Point-</b> ^Elementary Class Piano I-IV (MUSC 1290, 1295, 2290, 2295) are not required for music majors pursuing the Music Education Field of Study. (See program information below.)
		MUSC 1035	Aural Theory I	1	
		MUSC 1051	Applied Music Instruction I	1	
		MUSC 1290	Elementary Class Piano I	1^	
			Choose an approved Music Ensemble course**	1	
			Semester Total	16-17	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	✓	MATH 1000	Problem Solving	3	<b>Milestone-</b> Completion of college level Math and English in the first year.  <b>Choice Point-</b> Diction for Singers is only required for students pursuing the Music Education field of study and whose primary instrument is voice. Voice students must take Diction for Singers and one set of Public School Methods (I and II) in a different semester.  ^Elementary Class Piano I-IV (MUSC 1290, 1295, 2290, 2295) are not required for music majors pursuing the Music Education Field of Study. (See program information below.)
OC	✓	COMM 2010	Public Speaking	3	
		MUSC 0200	Convocation	0	
		MUSC 1040	Written Theory II	3	
		MUSC 1045	Aural Theory II	1	
		MUSC 1052	Applied Music Instruction II	1	
		MUSC 1295 OR MUSC 13XX/13XX AND MUSC 1025 OR MUSC 2320 AND MUSC 1025	Elementary Class Piano II OR Public School Methods I and II** AND Introduction to Music Education OR Diction for Singers I AND Introduction to Music Education	1-5	
			Choose an approved Music Ensemble course**	1	
			Semester Total	13-17	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course	3	<b>Choice Point-</b> ^Elementary Class Piano I-IV (MUSC 1290, 1295, 2290, 2295) are not required for music majors pursuing the Music Education Field of Study. (See program information below.)
HC	✓		Choose an approved Human Culture course; MUSC 2024 recommended	3	
		MUSC 0200	Convocation	0	
		MUSC 2030	Written Theory III	3	
		MUSC 2035	Aural Theory III	1	
		MUSC 2050	Music History Survey I	3	
		MUSC 2071	Applied Music Instruction III	1	
		MUSC 2290	Elementary Class Piano III	1^	
			Choose an approved Music Ensemble course**	1	
			Semester Total	15-16	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
NS	✓	AECL 1000 OR BIOL 1002 OR GEOL 1200	Choose a Natural Science course that satisfies both the Life and Physical Sciences requirements	4	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.  <b>Choice Point-</b> ^Elementary Class Piano I-IV (MUSC 1290, 1295, 2290, 2295) are not required for music majors pursuing the Music Education Field of Study. (See program information below.)
CE	✓		Choose an approved Creative Expression except MUSC 1000	3	
		MUSC 0200	Convocation	0	
		MUSC 2040	Written Theory IV	3	
		MUSC 2045	Aural Theory IV	1	
		MUSC 2055	Music History Survey II	3	
		MUSC 2072	Applied Music Instruction IV	1	
		MUSC 2295 OR MUSC 13XX/13XX	Elementary Class Piano IV OR Public School Methods I and II**	1-2^	
		MUSC 2395	Piano Proficiency	0	
			Choose an approved Music Ensemble course**	1	
			Semester Total	17-18	
Program Credit Hour Total				61-68	

## Approved Program Courses

\*\*Ensemble courses: MUSC 1380, MUSC 1390, MUSC 1400, MUSC 1410, MUSC 1450, MUSC 1460, MUSC 1470, or MUSC 1480 may be repeated up to 8 times for credit.

Applied Music Instruction (MUSC 1051, 1052, 2071, 2072) may be repeated up to 8 times for credit.

\*\*Public School Methods must be chosen from the following: MUSC 1310/1315 Brass, 1320/1325 Percussion, 1330/1335 Strings, 1350/1355 Woodwind or the combination of MUSC 1360/1340 Guitar.

## ^Program Comments

For students pursuing the Music Education field of study:

- All music students must pass MUSC 2395 Piano Proficiency by the end of the fourth semester.
- Although not required for students seeking the Music Education Field of Study, it is strongly encouraged to take Elementary Class Piano I-IV (MUSC 1290, 1295, 2290, 2295) for students needing extra academic support with piano skills. Please see an advisor or the music faculty representative if recommendations are needed.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

Additional information on careers in Music is available through [Career Coach](#).

## Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.



## Pathway: Communication & Creative Arts



### Associate of Arts, Theatre

The Theatre program introduces students to the disciplines within theatre arts through practical, production-based work. Students complete comprehensive foundation theater and humanities courses, preparing them for transfer to University theatre programs or a career in theatre arts.

### Contact Information

Contact information is available on the [Theatre](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply skills to the creation of performance.
2. Analyze and respond to texts and performances both in writing and orally.
3. Demonstrate knowledge of theatre history and literature to draw connections between theatrical practices and social contexts in and across historical periods.
4. Apply collaborative skills in a variety of theatrical contexts.
5. Develop and refine process skills in rehearsal, production and studio settings.
6. Demonstrate problem-solving skills in the creation of artistic work.
7. Demonstrate proficiency in one or more area-specific skills: acting, technical theatre, or management.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the Course Descriptions section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Communication & Creative Arts pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion college level English.
WC	✓	ENGL 1010	English I: Composition	3	
PS	✓		Choose an approved General Education course	3	
		THEA 2000	Theatre Production	3	
		THEA 1100	Beginning Acting	3	
			Semester Total	15-16	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	✓	MATH 1000	Problem Solving	3	<b>Milestone-</b> Completion of college level Math and English in the first year.
NS	✓	AECL 1000 OR BIOL 1002 OR GEOL 1200	Choose a Natural Science course that satisfies both the Life and Physical Sciences requirements	3	
HC		THEA 1000	Intro to Theater	3	
		THEA 2100	Acting II	3	
		THEA 2000	Theatre Production	3	
			Semester Total	16	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course	3	
OC	✓	COMM 2010	Public Speaking	3	
		THEA 2000	Theatre Production	3	
		THEA 2010	Backgrounds of Dramatic Literature I	3	
		SPAN 1010	Spanish I	4	
			Semester Total	16	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
CE	✓		Choose an approved Creative Expression course	3	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.
		THEA 2000	Theatre Production	3	
		THEA 2160	Introduction to Stage Makeup	3	
		THEA 2020	Backgrounds of Dramatic Literature II	3	<b>Milestone-</b> Completion of the AA Theatre degree.
		SPAN 1020	Spanish II	4	
			Semester Total	16	

Program Credit Hour Total	63-64
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## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

Additional information on careers in Theatre is available through [Career Coach](#).

## Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/ university and program to which they plan to transfer.



# Health Sciences & Wellness Pathway

The Health Sciences & Wellness Pathway is designed for students who wish to explore and prepare to apply for a selective-admission Health Science and Wellness program. Students working toward admission into a Health Science & Wellness program are required to declare the Associate of Science in Health Science and Wellness as their program of study until they are officially accepted into a program. This degree is designed to allow students the option to pursue a bachelor's degree.

Additional Requirements: Each program has specific admission requirements – see program webpages for detailed information or meet with a health science academic advisor or faculty mentor for specifics.

- Health Sciences & Wellness
- Dental Hygiene
- Diagnostic Medical Sonography
- Emergency Medical Services
- Exercise Science
- Healthcare Administration
- Health Information Technology
- Nursing
- Physical Therapist Assistant
- Radiography
- Speech Language Pathology Assistant
- Surgical Technology

## Pathway: Health Sciences & Wellness

### Associate of Science, Health Sciences & Wellness

The Health Sciences and Wellness program is designed for students who wish to explore and prepare to apply for a selective admissions health science program. Students working toward admission into a Health Science program are required to declare the Associate of Science in Health Sciences and Wellness as their program of study until they are officially accepted into a program. This degree is designed to allow students the option to pursue a bachelor's degree.

Each closed program has specific admission requirements – check the program website for detailed information or meet with a health science academic advisor or faculty mentor for specifics.

### Contact Information

Contact information is available on the [Health Sciences & Wellness](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Integrate knowledge from behavioral and biological sciences as a basis for allied health practice.
2. Apply professional standards to health science situations
3. Demonstrate critical thinking relevant to a career focus area within health sciences
4. Apply multiple communication modalities across healthcare disciplines

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	✓	MATH 1400	College Algebra	3	<b>Milestone-</b> Completion of ENGL 1010 and MATH 1400 as prerequisites for other courses. <b>Choice Point-</b> MATH 1000 may be substituted for MATH 1400 for students interested in Surgical Technology, Speech-Language Pathology, or Health Information Technology only. <b>Choice Point-</b> See Program Comments below for application specific information for each closed program. <b>Choice Point-</b> Students should consult with their advising team to determine which physical or life science lab class to take. <b>Choice Point-</b> Students choosing to pursue Exercise Science – Physical Education Teacher Education (PETE) or Exercise Science – Sport Management should switch programs at the end of the first semester to stay on track to program completion. Students should work with their Advising Team to make this change.
WC	✓	ENGL 1010	English Composition	3	
SS	✓	STRT 1000	Strategies for Success	3	
OC	✓	COMM 2010	Public Speaking	3	
NSL OR NSP			Choose an approved Natural Science Life or Physical Science course	4	
			Semester Total	16	



## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		HLTK 1200	Medical Terminology	2	<b>Choice Point-</b> Students pursuing Exercise Science must take PSYC 1000, ZOO 2010, and HLTK 1210.  <b>Choice Point-</b> See Program Comments below for application specific information for each closed program.  <b>Choice Point-</b> Students choosing to pursue Exercise Science should switch programs to stay on track to program completion. Students should work with their Advising Team to make this change.
HSI	✓		Choose an approved U.S./ Wyoming Constitution course	3	
HC		PSYC 1000	General Psychology	3	
		ZOO 2010 OR HLTK 1210	Anatomy & Physiology I OR Human Body Systems	4 3	
		HTLK 2300 OR PHYS 1050	Healthcare Ethics OR Concepts of Physics	3 4	
			Semester Total	14-16	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		HLTK 2510 OR ZOO 2020	Pathophysiology OR Anatomy & Physiology II	2 4	<b>Choice Point-</b> Students pursuing Exercise Science must take EDST 2420  <b>Choice Point-</b> See Program Comments below for application specific information for each closed program.
		EDST 2420 OR PSYC 1100	Human Life Span Development OR Organizational Human Relations	3	
		MICR 2240	Medical Microbiology	4	
		HOEC 1140	Nutrition	2	
		CMAF 1200	Computer Information Systems	3	
			Semester Total	14-16	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
NSL		BIOL 1010 OR CHEM 1000	General Biology OR Intro to Chemistry	4	<b>Choice Point-</b> Students should consult with their advising team to determine which physical or life science lab class to take.  <b>Choice Point-</b> Students pursuing Exercise Science must take EDST 2420  <b>Choice Point-</b> See Program Comments below for application specific information for each closed program.  <b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.  <b>Milestone-</b> Completion of AS degree in Health Sciences & Wellness.
NSP			Choose an approved Creative Expression Course	3	
CE			Choose an approved Creative Expression Course	3	
		EDST 2420 OR PSYC 1100	Human Life Span Development OR Organizational Human Relations	3	
		MGT 1000 OR HMDV 1510	Choose one of the following: Intro to Supervision OR Success in the Workplace: Soft Skills	3	
PS		SOC 1000 OR ANTH 1200	Introduction to Sociological Principles OR Cultural Anthropology	3	
			Semester Total	16	

Program credit hour total	60-64
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## Program Comments

Students planning to apply to a specific closed program should work closely with their Advising Team regarding course sequence options required for completion prior to program application. Some program applications are points based. The information below is intended to be a guide to show how course work in the Health Sciences & Wellness program leads to requirements for each of the closed programs.

**Dental Hygiene:** Students must complete ENGL 1010, MATH 1400, COMM 2010, CHEM 1000, MICR 2240, PSYC 1000, ZOO 2010 or ZOO 2015, ZOO 2020 or ZOO 2025, and SOC 1000 or ANTH 1200 prior to program application. The Dental Hygiene program awards various points on the application for successful completion of the required observation forms as well as course and cumulative GPA. Students considering applying to the Dental Hygiene program should closely review the program application for specific information and work closely with their Advising Team.

**Diagnostic Medical Sonography:** Students must complete ENGL 1010, COMM 2010, HLTK 1200, MATH 1400, ZOO 2010 or ZOO 2015, ZOO 2020 or ZOO 2025, and PHYS 1050 prior to program application. Students receive points on the application for completion of the following with a C or higher: PSYC 1000, HLTK 2300, US & Wyoming Government or History (HIST 1211, HIST 1221, HIST 1251, ECON 1200, or POLS 1000), and a computer literacy courses such as CMAP 1200 or CMAP 1610.

**Emergency Medical Services/Paramedics:** Students must complete EMT 1500 and have one year of EMT experience prior to program application.

**Health Information Technology (HITM):** Students must complete HLTK 1210 prior to program application.

**Nursing:** Students must complete STRT 1000, ENGL 1010, MATH 1400, and ZOO 2010 or ZOO 2015 prior to program application. The application to the Nursing program is points based. Students receive points on the application for completion of the following with a C or higher: ENGL 1010, MATH 1400, ZOO 2010/ZOO 2015, ZOO 2020/ZOO 2025, PSYC 1000, MICR 2240, COMM 2010, US & Wyoming Government or History (HIST 1211, HIST 1221, HIST 1251, ECON 1200, or POLS 1000), BIOL 1010, HOEC 1140, and CHEM 1000.

**Physical Therapist Assistant (PTAT):** Students must complete ENGL 1010, COMM 2010, MATH 1400, HLTK 1200, and ZOO 2010 or ZOO 2015 prior to program application. The application to the PTAT program is points based. Students receive points on the application for completion of the following with a C or higher: ENGL 1010, COMM 2010, MATH 1400, HLTK 1200, ZOO 2010/ZOO 2015, ZOO 2020/ZOO 2025, US & Wyoming Government or History (HIST 1211, HIST 1221, HIST 1251, ECON 1200, or POLS 1000), EDST 2420, and HLTK 2510. Additional points are awarded for an optional PE course and cumulative GPA. Students considering applying to the PTAT program should closely review the program application for specific information and work closely with their Advising Team.

**Radiography:** Students must complete HLTK 1200, MATH 1400, ZOO 2010 or ZOO 2015, and ZOO 2020 or ZOO 2025 prior to program application. Students receive points on the application for completion of the following with a C or higher: HLTK 2300, PSYC 1000, and PHYS 1050.

**Speech-Language Pathology Assistant:** Students must complete ENGL 1010 and COMM 2010 prior to program application.

**Surgical Technology:** Students must complete STRT 1000, ENGL 1010, MATH 1000 or higher, HLTK 2510, ZOO 2015 or 2010, ZOO 2020 or 2025, HLTK 1200, MICR 2240, US & Wyoming Government or History (HIST 1211, HIST 1221, HIST 1251, ECON 1200, or POLS 1000), and COMM 2010 prior to program application.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

Additional information on careers in Health Sciences & Wellness is available through [Career Coach](#).

## Transfer Information

The Health Sciences & Wellness Associate of Science is well suited for transfer to a Bachelor degree program. LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.



## Pathway: Health Sciences & Wellness

### Associate of Applied Science, Dental Hygiene

The dental hygienist is a preventive oral care professional licensed to provide educational, clinical, and therapeutic dental hygiene services to the public. This unique 16-month program combines academic study with supervised clinical experience. Graduates of the program receive an Associate of Applied Science degree and are eligible to take the appropriate national, regional and/or state examinations. Applicants are encouraged to contact the state boards of dentistry in the states in which they wish to practice for individual licensing requirements and circumstances for licensure denial.

The dental hygiene program is a vigorous study of advanced science classes offered in an accelerated format. General education and basic science courses are essential to prepare students to succeed. Therefore, applicants are required to complete pre-dental hygiene course requirements. Each prerequisite course must be completed with a grade of "C" or higher. Completion of the prerequisite coursework does not guarantee admission into the dental hygiene program. Additionally, LCCC's academic skills assessment and placement policy apply.

The Dental Hygiene program is accredited by the Commission on Dental Accreditation. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at 312.440.4653 or at 211 East Chicago Avenue, Chicago, Illinois 60611.

### Contact Information

Contact information is available on the [Dental Hygiene](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Provide evidence-based dental hygiene care
2. Practice informed decision-making to function as an integral member of the dental health team
3. Exhibit professional behavior consistent with legal and ethical standards of the dental hygiene code of ethics
4. Educate patients in all aspects of oral health care

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester – Prerequisites

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	✓	MATH 1400	College Algebra	3	<b>Choice Point-</b> Students pursuing Dental Hygiene must take either ZOO 2010 OR ZOO 2015
WC	✓	ENGL 1010	English Composition	3	
SS	✓	STRT 1000	Strategies for Success	3	
OC	✓	COMM 2010	Public Speaking	3	
		ZOO 2010 OR ZOO 2015	Anatomy & Physiology I OR Human Anatomy	4	<b>Choice Point-</b> Students pursuing Dental Hygiene should complete the prerequisite courses listed here during their first semester to avoid losing credits and to stay on track to apply to the program.
		PSYC 1000	General Psychology	3	
			Semester Total	19	



## Second Semester – Prerequisites

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ZOO 2020 OR ZOO 2025	Anatomy & Physiology II OR Human Physiology	4	<b>Choice Point-</b> Students pursuing Dental Hygiene must take either ZOO 2020 OR ZOO 2025.  <b>Choice Point-</b> Students pursuing Dental Hygiene are required to take SOC 1000 or ANTH 1200; however, SOC 1000 is strongly recommended.  <b>Milestone-</b> Students are eligible to apply to the Dental Hygiene program during this semester.  <b>Choice Point-</b> Students may choose to take an approved HSI course at any time throughout the Dental Hygiene program. Student are encouraged to take this course prior to program entry.
	✓	SOC 1000 OR ANTH 1200	Sociological Principles OR Intro to Cultural Anthropology	3	
	✓	MICR 2240	Medical Microbiology	4	
	✓	CHEM 1000	Introductory Chemistry	4	
HSI	✓		Choose an approved U.S./ Wyoming Constitution course	3	
			Semester Total	18	

## First Semester – Spring I

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		DHYG 1110	Dental Biology	3	<b>Milestone-</b> Students are eligible for clinical learning.
		DHYG 1150	Preventive Dentistry	2	
		DHYG 1410	Dental Hygiene Principles	6	
		DHYG 2450	Dental Radiology	3	
			Semester Total	14	

## Second Semester – Spring II

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		DHYG 1200	Pharmacology	2	<b>Milestone-</b> Students are eligible for clinical rotations for on- and off-site patient care rotations.
		DHYG 1245	Dental Nutrition and Biochemistry	3	
		DHYG 1420	Dental Hygiene Seminar I	2	
		DHYG 1425	Dental Hygiene Clinic I	3	
		DHYG 2400	Head, Neck, and Oral Anatomy	2	
		DHYG 2455	Dental Materials	3	
			Semester Total	15	

## Third Semester – Fall I

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		DHYG 2200	General and Oral Pathology	2	
		DHYG 2250	Pain Management	2.5	
		DHYG 2330	Periodontology	4	
		DHYG 2430	Dental Hygiene Seminar II	2	
		DHYG 2435	Dental Hygiene Clinic II	5	
			Semester Total	15.5	

## Fourth Semester – Spring I

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		DHYG 2260	Dental Public Health	3	<b>Milestone-</b> Completion of AAS in Dental Hygiene.  <b>Milestone-</b> Upon successful completion of the program, students are eligible to take national and regional clinical boards. Boards are required for licensure within the field based on each state's statute.
		DHYG 2410	Ethics, Law, and Practice Management	3	
		DHYG 2440	Dental Hygiene Seminar III	1	
		DHYG 2445	Dental Hygiene Clinic III	5	
			Semester Total	12	

Program credit hour total	93.5
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### Program Comments

Students planning to apply to a specific closed program should work closely with their Advising Team regarding course sequence options required for completion prior to program application. Some program applications are points based.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Dental Hygienists may work in private dental practices, community health settings, nursing homes and hospitals. Many hygienists work part-time in multiple offices, particularly in rural locations. Students are required to pass the national and regional boards required for licensure according to each state's statutes.

Additional information on careers in Dental Hygiene is available through [Career Coach](#).

### Transfer Information

The AS Dental Hygiene program is well suited for transfer to a Bachelor of Dental Hygiene degree. LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Health Sciences & Wellness

### Associate of Applied Science, Diagnostic Medical Sonography

The Diagnostic Medical Sonography (DMS) program offers students the knowledge and skills for performing high-quality diagnostic exams to aid the physicians in making a diagnosis. Most sonographers work in hospitals covering various shifts (nights, weekends, and holidays), medical clinics, and private practices. Sonographers may also find employment in the industrial sales of equipment, traveling sonography agencies, and educational institutions.

Graduates of this program will receive an Associate of Applied Science in Diagnostic Medical Sonography. The program is an intensive, six-semester program, not including prerequisite courses and is designed for students new to patient care. The sonographer must have an in-depth knowledge of physics, pathophysiology, human anatomy and physiology, and sonographic technique to create a diagnostic ultrasound image. Physicians depend on the sonographer's experience to evaluate normal and abnormal body parts. The DMS program is accredited in general studies, which include Abdomen/Small Parts, OB/GYN, and Vascular Technology. Students of this program are eligible to sit for the national certifying exams of the American Registry of Diagnostic Medical Sonographers. Upon passing the Sonography Principles and Instrumentation and one of the specialties (Abdomen, OB, Vascular), a student is certified as a registered diagnostic medical sonographer (RDMS). For vast employment opportunities, it is advised to have all three specialty exams passed upon or following graduation.

The Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDS), is the accreditation agency of the sonography program at LCCC. The JRCDS has established specific criteria for clinical settings for students, thus limiting the number of accepted students pending clinical site availability. Most students are employed immediately following graduation. The program begins a new class each summer.

The last three semesters of the program are primarily clinical experience, and students may be placed in various hospitals or clinics in Wyoming, Colorado, Nebraska, or Montana. Students interested in the program may contact the Program Director, Clinical Coordinator, or the Admission Office for details about the program admission process and timeline. Student selection occurs in March based on the application, prerequisites completed or in-progress, and other criteria as indicated in the program application material.

Laramie County Community College does not discriminate based on race, color, national origin, sex, age, religion, political affiliation, or disability in admission or access to, or treatment or employment in, its education program or activities.

The following prerequisites must be in progress or complete with a grade of "C" or better by the application deadline (February 28) for the sonography program. Students are encouraged to contact the sonography faculty for program-specific questions.

### Contact Information

Contact information is available on the [Diagnostic Medical Sonography](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Demonstrate technical proficiency by producing high-diagnostic images consistently.
2. Demonstrate professional communication skills.
3. Demonstrate consistent high-quality patient care.
4. Display themselves ethically and professionally
5. Gain employment as a general and vascular entry-level sonographer.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.



## First Semester – Prerequisites

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ZOO 2015 OR ZOO 2010	Human Anatomy OR Anatomy and Physiology I	4	<b>Choice Point-</b> Students pursuing Diagnostic Medical Sonography (DMS) must take either ZOO 2010 OR ZOO 2015  <b>Choice Point-</b> Student pursuing DMS should complete the prerequisite courses listed here during their first semester to avoid losing credits and to stay on track to apply to the program.
QL	✓	MATH 1400	College Algebra	3	
WC	✓	ENGL 1010	English I: Composition	3	
SS	✓	STRT 1000	Strategies for Success	3	
			Semester Total	13	

## Second Semester – Prerequisites

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ZOO 2025 OR ZOO 2020	Human Physiology OR Anatomy and Physiology II	4	<b>Milestone-</b> Students are eligible to apply to the DMS program upon completion of the courses in this semester.
		PHYS 1050	Concepts of Physics	4	
		HLTK 1200	Medical Terminology	2	
OC	✓	COMM 2010	Public Speaking	3	
			Semester Total	13	

## First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		IMAG 1505	Introduction to Diagnostic Medical Sonography	3	The DMS program typically begins during the summer semester.
		IMAG 1500	Cross-Sectional Anatomy	3	
			Semester Total	6	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		IMAG 1510	Ultrasound Physics I	2	
		IMAG 1520	OB/GYN Sonography I	2	
		IMAG 1521	OB/GYN Sonography I Lab	1	
		IMAG 1525	Abdominal Sonography I	2	
		IMAG 1526	Abdominal Sonography I Lab	1	
		IMAG 1530	Vascular Sonography I	1	
		IMAG 1531	Vascular Sonography I Lab	0.5	
HSI	✓		Choose an approved U.S./ Wyoming Constitution course	3	
			Semester Total	12.5	

### Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		IMAG 1515	Ultrasound Physics II	3	<b>Milestone-</b> Upon completion of IMAG 1515 students are eligible to sit for the Sonography Principles of Instrumentation (SPI) board certification.
		IMAG 1540	OB/GYN Sonography II	2	
		IMAG 1541	OB/GYN Sonography II Lab	1	
		IMAG 1545	Abdominal Sonography II/ Small parts	2	
		IMAG 1546	Abdominal Sonography II/ Small Parts Lab	1	
		IMAG 1550	Vascular Sonography II	2	
		IMAG 1551	Vascular Sonography II Lab	1	
			Semester Total	12	

### Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		IMAG 2500	Sonography Clinical Experience I	6	<b>Milestone-</b> DMS Clinical Education Begins typically occurs during the Summer Semester
			Semester Total	6	

### Fifth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		IMAG 2515	Sonography Clinical Experience II	11	
		IMAG 2530	Registry Review I	1	
			Semester Total	12	

### Sixth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		IMAG 2520	Sonography Clinical Experience III	13	<b>Milestone-</b> Completion of AAS degree in Diagnostic Medical Sonography.
		IMAG 2535	Registry Review II	1	<b>Milestone-</b> Students are eligible during this semester to apply for certification through ARDMS. The majority of employers mandate these certifications.
		IMAG 2540	Vascular Sonography Registry Review	1	
			Semester Total	15	

Program credit hour total	89.5
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### Program Comments

Students planning to apply to the Diagnostic Medical Sonography program should work closely with their Advising Team regarding course sequence options required for completion prior to program application. STRT 1000 is a general education requirement, but is not a prerequisite course requirement prior to program application. Students may apply to the program while enrolled in or completing the last semester of prerequisites. Students should closely review the program application for specific information and requirements prior to applying to the program.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Students are required to pass a licensure examination to work as a sonographer.

At the end of the Spring I semester, DMS students will obtain the following credential to become eligible for licensure:

- ARDMS Sonography Principles of Instrumentation (SPI)



Upon graduation and/or employment, students are required to obtain licensure in the following concentrations:

- ARDMS Abdomen
- ARDMS OB/GYN
- ARDMS Vascular Technology (VT)

Laramie County Community College Diagnostic Medical Sonography Students are eligible to sit for Abdomen and Obstetrics and Gynecology registries 60 days prior to graduation due to the longevity of their accreditation status.

Most sonographers seek employment in medical clinics and hospitals.

Additional information on careers in Diagnostic Medical Sonography is available through [Career Coach](#) and career specific related links below.

Society of Diagnostic Medical Sonography (SDMS)

2745 Dallas Parkway, Suite 350

Plano, TX 75093-4706

214.473.8057

[www.sdms.org](http://www.sdms.org)

American Registry for Diagnostic Medical Sonography (ARDMS)

51 Monroe Street, Plaza East One

Rockville, MD 20852

301.738.8401

[www.ardms.org](http://www.ardms.org)

## **Transfer Information**

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Health Sciences & Wellness

### Associate of Applied Science, Emergency Medical Services – Paramedic

The Emergency Medical Services – Paramedic program prepares competent entry-level paramedics for work in various emergency services fields including fire departments, Emergency Medical Service (EMS) agencies, hospitals, and other healthcare areas. The program integrates didactic and internship opportunities, allowing students to immediately be employed after graduation. The Emergency Medical Services program is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

Students must pass a written exam and interview board prior to being accepted into the Paramedic Program. All other LCCC application processes must also be met. Prerequisites for entry to the program are Emergency Medical Technician (EMT) state licensure and or National Registry of Emergency Medical Technicians NREMT certification and employment in the EMS or healthcare field for at least one year, or NREMT certification and employment in the EMS or healthcare field for at least one year. Individuals currently holding EMT licensure may be eligible to have EMT 1500 waived.

The program offers coursework intended to prepare students for immediate employment after completions of coursework and successful and licensure exams. This program has specific admission requirements—see program website for detailed information or meet with a health sciences academic advisor or faculty mentor for specifics.

### Contact Information

Contact information is available on the [Emergency Medical Services](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Perform skills as established by the National Highway Traffic Safety Administration, (NHTSA).
2. Document using accepted emergency services practices.
3. Demonstrate competency in decision making in emergency situations.
4. Exhibit professional and ethical behavior in accordance with accepted EMS standards and practices.
5. Apply leadership skills

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EMT 1500	Emergency Medical Technician	9	<b>Milestone-</b> Students are eligible to sit for certification and licensure exams upon completion of EMT 1500. Once licensed as an EMT, students should begin obtaining EMT work experience. One year of experience as an EMT is required prior to program application and starting the EMS – Paramedic program.
SS	✓	STRT 1000	Strategies for Success	3	
WC	✓	ENGL 1010	English Composition	3	
			Semester Total	15	



## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HSI	✓		Choose an approved U.S./ Wyoming Constitution course	3	
QL		MATH 1000	Problem Solving	3	
		HLTK 2300	Healthcare Ethics	3	
OC	✓	COMM 2010	Public Speaking	3	
		HLTK 1200	Terminology	2	
			Semester Total	14	

*Gain 1 year of experience as an EMT prior to beginning the Paramedic Program.*

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EMGT 2500	Paramedic Preparatory	2	The EMS – Paramedic program typically begins during the spring semester. <b>Milestone-</b> Students complete The Difficult Airway Course as part of EMGT 2535.
		EMGT 2515	Paramedic Anatomy and Physiology	3	
		EMGT 2525	Paramedic Pharmacology	2	
		EMGT 2535	Paramedic Airway	2	<b>Milestone-</b> Students receive ACLS certification as part of EMGT 2545.
		EMGT 2545	Paramedic Advanced Cardiac Life Support	4	
		EMGT 2555	Paramedic Advanced Medical Life Support	3	<b>Milestone-</b> Students complete AMLS certification as part of EMGT 2555.
		EMGT 2600	Paramedic Clinical I	1	
			Semester Total	17	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EMGT 2565	Paramedic Pre-hospital Trauma Life Support	2	<b>Milestone-</b> Students complete PHTLS and TECC certifications as part of EMGT 2565.
		EMGT 2575	Paramedic Special Populations and Operations	3	
		EMGT 2605	Paramedic Clinical II	4	<b>Milestone-</b> Students begin vehicular rotations in EMGT 2620.
		EMGT 2620	Paramedic Vehicular I	3	
			Semester Total	12	

## Fifth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EMGT 2630	Paramedic Vehicular II	10	<b>Milestone-</b> Completion of AAS degree in Emergency Medical Services – Paramedics. <b>Milestone-</b> Students are eligible to sit for NREMT exam and obtain state licensure.
		EMGT 2700	Paramedic Capstone	3	
			Semester Total	13	

Program credit hour total	71
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## Program Comments

Students planning to apply to the Emergency Management Services – Paramedics program should work closely with their Advising Team regarding course sequence options required for completion prior to program application.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The Emergency Medical Services – Paramedic program prepares competent entry-level paramedics for work in various emergency services

fields. EMS/EMT personnel typically work for private ambulance services, fire departments, hospitals or other rescue services.

Additional information on careers in Emergency Medical Services is available through [Career Coach](#).

### **Transfer Information**

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Health Sciences & Wellness

### Credit Diploma, Emergency Medical Services – Paramedic

The Credit Diploma in Emergency Medical Services-Paramedic program prepares competent entry-level paramedics for work in various emergency services fields including fire departments, Emergency Medical Services (EMS) agencies, hospitals and other healthcare areas. The program integrates didactic and internship opportunities, allowing students to immediately be employed after graduation. The program is accredited by the Commission on Accreditation of Allied Health Programs (CAAHEP), on the recommendation of the Committee on Accreditation of Emergency Medical Services Programs (CoAEMSP.) Upon completion of the Credit Diploma, students may work towards completion of the AAS degree.

Students must pass a written exam and interview board prior to being accepted into the Paramedic Program. All other LCCC application processes must also be met. Prerequisites for entry to the program are Emergency Medical Technician (EMT) state licensure and or NREMT certification and employment in the EMS or healthcare field for at least one year, or National Registry of Emergency Medical Technicians (NREMT) certification and employment in the EMS or healthcare field for at least one year. Individuals currently holding EMT licensure may be eligible to have EMT 1500 waived.

The certificate diploma offers coursework intended to prepare students for immediate employment after completion of the coursework and successful and licensure exams.

This program has specific admission requirements—see program website for detailed information or meet with a health sciences academic advisor or faculty mentor for specifics.

### Contact Information

Contact information is available on the [Emergency Medical Services](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Perform skills as established by the National Highway Traffic Safety Administration, (NHTSA).
2. Document using accepted emergency services practices.
3. Demonstrate competency in decision-making in emergency situations.
4. Exhibit professional and ethical behavior in accordance with accepted EMS standards and practices.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### Prerequisite

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EMT 1500	Emergency Medical Technician	9	<b>Milestone-</b> Students are eligible to sit for certification and licensure exams upon completion of EMT 1500. Once licensed as an EMT, students should begin obtaining EMT work experience. One year of experience as an EMT is required prior to program application and starting the EMS – Paramedic program.
			Semester Total	9	

**Gain 1 year of experience as an EMT prior to beginning the Paramedic Program.**



## First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EMGT 2500	Paramedic Preparatory	2	The EMS – Paramedic program typically begins during the spring semester. <b>Milestone-</b> Students complete The Difficult Airway Course as part of EMGT 2535. <b>Milestone-</b> Students receive ACLS certification as part of EMGT 2545. <b>Milestone-</b> Students complete AMLS certification as part of EMGT 2555. <b>Milestone-</b> Students begin clinical rotations in EMGT 2600.
		EMGT 2515	Paramedic Anatomy and Physiology	3	
		EMGT 2525	Paramedic Pharmacology	2	
		EMGT 2535	Paramedic Airway	2	
		EMGT 2545	Paramedic Advanced Cardiac Life Support	4	
		EMGT 2555	Paramedic Advanced Medical Life Support	3	
		EMGT 2600	Paramedic Clinical I	1	
			Semester Total	17	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EMGT 2565	Paramedic Pre-hospital Trauma Life Support	2	<b>Milestone-</b> Students complete PHTLS and TECC certifications as part of EMGT 2565. <b>Milestone-</b> Students complete PALS and NRP certifications as part of EMGT 2675. <b>Milestone-</b> Students begin vehicular rotations in EMGT 2620.
		EMGT 2575	Paramedic Special Populations and Operations	3	
		EMGT 2605	Paramedic Clinical II	4	
		EMGT 2620	Paramedic Vehicular I	3	
			Semester Total	12	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EMGT 2630	Paramedic Vehicular II	10	<b>Milestone-</b> Completion of Credit Diploma in Emergency Medical Services – Paramedics. <b>Milestone-</b> Students are eligible to sit for NREMT exam and obtain state licensure.
		EMGT 2700	Paramedic Capstone	3	
			Semester Total	13	

Program credit hour total	51
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## Program Comments

Students planning to apply to the Emergency Management Services – Paramedics program should work closely with their Advising Team regarding course sequence options required for completion prior to program application.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The Emergency Medical Services – Paramedic program prepares competent entry-level paramedics for work in various emergency services fields. EMS/EMT personnel typically work for private ambulance services, fire departments, hospitals or other rescue services.

Additional information on careers in Emergency Medical Services is available through [Career Coach](#).

## Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.



## Pathway: Health Sciences & Wellness

### Associate of Science, Exercise Science

The Exercise Science program is concerned with the many aspects of human movement and its application to physical activity and the quality of one's life. This program is suggested for students who are interested in a career in exercise science, sports medicine, athletic training, physical therapy, occupational therapy, personal training or related fields.

Students complete coursework that provides a solid knowledge base of human anatomy, physiology, chemistry, and health. All students must complete the general education core and the Exercise Science core courses. Students should carefully study the specific requirements of the institutions to which they plan to transfer. Based on student transfer needs, course substitutions are possible; however, the degree requirements must be met. Please speak with an Exercise Science advisor or faculty member to finalize your program of study.

Upon completion of all coursework the student would have an Associate of Science degree in Exercise Science and it intended for transfer. The program offers sound research based foundation and practical applications. While students must earn a Bachelor's degree, many of the professional fields to which this degree leads require a master's degree or beyond.

### Contact Information

Contact information is available on the [Exercise Science](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Correlate the structures of the human body with their functions.
2. Discuss the relationships among physical activity, health, and nutrition.
3. Describe methods of injury prevention.
4. Evaluate physical activity skills.
5. Apply Exercise Science principles to maintain and enhance health throughout the human lifespan.
6. Teach physical activity skills across the human lifespan.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
WC	✓	ENGL 1010	English I: Composition	3	<b>Milestone-</b> Completion of ENGL 1010 and MATH 1400 as prerequisites for other courses. <b>Choice Point-</b> KIN 1100 provides overview of various careers in the field of Exercise Science.
QL	✓	MATH 1400	College Algebra	3	
SS	✓	STRT 1000	Strategies for Success	3	
		KIN 1100	Kinesiology: The Study of Human Movement	3	<b>Milestone-</b> Students begin development of their professional portfolio during this semester and continue throughout the program.
		HLED 1221	Standard First Aid & Safety	2	
			Semester Total:	14	



## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		HOEC 1140	Nutrition	2	<b>Milestone-</b> Completion of the first class for the personal trainer certification. Students who complete with a C or better can sit for the certification exam.
		HLTK 1210	Human Body Systems	3	
		KIN 2135	Personal Trainer Education	3	
NSL		BIO 1010	General Biology	4	
NSP		CHEM 1000 OR CHEM 1020	Introductory Chemistry OR General Chemistry I	4	
			Semester Total:	16	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		KIN 2470	Exercise Science Practicum I	1	
		EDST 2420	Human Life Span Development	3	
		ZOO 2010	Anatomy & Physiology I	4	
OC	✓	COMM 2010	Public Speaking	3	
HC		PSYC 1000	General Psychology	3	
HSI	✓		Choose an approved U.S./ Wyoming Constitution course	3	
			Semester Total:	17	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		PEPR 2050	Prevention & Care of Athletic Injuries	2	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.
		KIN 2471	Exercise Science Practicum II	1	
		HLED 1006	Personal Health	3	<b>Milestone-</b> Exercise Science internship completed within student-selected sub-discipline of interest.
		ZOO 2020	Anatomy & Physiology II	4	
CE		THEA 1100	Beginning Acting	3	<b>Milestone-</b> Completion of AS degree in Exercise Science.
		KIN 2450	Exercise Science Internship	1	
PS		SOC 1000	Sociological Principles	3	
			Semester Total:	17	

Program credit hour total	64
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## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

The AS in Exercise Science is intended for students who are wishing to transfer to a university and obtain a Bachelor's or Master's degree. Most of the potential careers listed below require a student to transfer and continue their education at the next level. Potential careers include exercise science, sports medicine, physical therapy, athletic training, physical education teacher education (PETE) or occupational therapy.

Additional information on careers in Exercise Science is available through [Career Coach](#).

## Transfer Information

The AS Exercise Science degree is well suited for transfer to a Bachelor degree program. LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Health Sciences & Wellness

### Credit Diploma, Exercise Science – Coaching

Sports coaching is an emerging field with diverse content areas and athletic populations. This certificate enables students to combine sport specific content, scientific knowledge, and pedagogical practices in preparation for the continually changing world of coaching and athletics. At the completion of the program, students will meet the requirements to coach in the state of Wyoming. Individuals who wish to qualify for a Wyoming Public School Coaching Permit or Endorsement must complete the corresponding course work to serve as a head or assistant coach in the state of Wyoming. If you currently hold a Wyoming Educator License, you must apply to add a Coaching Endorsement to your Educator License. A Coaching Permit is for non-licensed individuals. The Wyoming Professional Teaching Standards Board (PTSB) sets these standards.



### Contact Information

Contact information is available on the [Exercise Science](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Analyze sport specific techniques in a variety of settings such as practice, competition, and conditioning.
2. Incorporate concepts of an athlete's psychological and physical health to improve performance
3. Recognize high-risk situations, as well as unsafe equipment, facilities, and environmental conditions in order to ensure the safety of the athletes.
4. Implement research-based, developmentally appropriate drills and teaching techniques that support athlete development while maintaining safety
5. Qualify for employment as a coach by the Wyoming PTSB.
6. Develop practice plans specific to a chosen sport.
7. Implement modifications, as needed, to correct unsafe conditions in a variety of settings such as practice, competition, and training.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EDST 2420	Human Life Span Development	3	<b>Milestone-</b> Completion of Credit Diploma, Exercise Science – Coaching. <b>Choice Point-</b> Submit application to Wyoming Professional Teaching Standards Board. <b>Choice Point-</b> Enter the job market or continue working on Exercise Science – Physical Education Teacher Education, or Sport Management degree
		HLED 1221	Standard First Aid & Safety	2	
		PEPR 2050	Prevention and Care of Athletic Injuries	2	
		PEPR 2110	Scientific Foundations of Athletic Coaching	3	
		PEPR 2100	Theory of Coaching	3	
			Semester Total	13	

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

The CD in Exercise Science – Coaching is intended for students who are wishing to start a career in athletic coaching or continue in the AS Exercise Science – Physical Education Teacher Education or Exercise Science – Sport Management program.

Additional information on careers in Exercise Science – Coaching available through [Career Coach](#).

### **Transfer Information**

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Health Sciences & Wellness

### Credit Diploma, Exercise Science – Personal Trainer



This program has a spring semester start and is a two-semester program of study. The Personal Trainer Credit Diploma is designed to provide students with the knowledge and skills required to become a certified personal trainer. Students who complete the credit diploma are well prepared to sit for national exams offered by certifying agencies. These agencies include the American College of Sports Medicine, The National Strength and Conditioning Association, and the American Council on Exercise. Personal trainers who earn a certification through one of the listed agencies are eligible to be employed at any major health club such as 24 Hour Fitness, Gold's Gym, and the YMCA. Students may also begin a private business as a personal trainer or work within organizations as health and wellness coaches. Students who complete the program will be able to design, implement, and evaluate individual exercise programs, perform fitness assessments, explain physiological changes that occur during exercise, and provide basic nutritional guidance to clients. Students who complete the program and pass the certifying agency's exam, which can be taken on the LCCC campus, can begin training clients while working on their AS or BS in Exercise Science.

### Contact Information

Contact information is available on the [Exercise Science](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Evaluate the effectiveness of individualized exercise programs for diverse populations as designed and implemented by the student.
2. Perform health and performance related fitness assessments for diverse populations
3. Explain the acute, short, and long term physiological adaptations of exercise and physical activity

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		HLED 1221	Standard First Aid & Safety	2	The Personal Trainer program typically begins during the spring semester.
		HLTK 2300	Health Care Ethics	3	
		KIN 1006	Fitness Component: Flexibility	2	
		KIN 1008	Fitness Component: Muscular Strength/Muscular Endurance	2	
		PEAC 1295	Individualized Exercise Programs	1	
		PEPR 2050	Prevention and Care of Athletic Injuries	2	
			Semester Total	12	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		HLTK 1210	Human Body Systems	3	<b>Milestone:</b> Completion of Credit Diploma, Exercise Science – Personal Trainer.
		HOEC 1140	Nutrition	2	
		KIN 1007	Fitness Component: Cardiovascular Endurance	2	<b>Milestone:</b> Eligible to sit for national exams offered by certifying agencies.
		KIN 2135	Personal Trainer Education	3	<b>Choice Point:</b> Enter the job market as a Personal Trainer or continue working on AS Exercise Science degree
		KIN 2470	Exercise Science Practicum I	1	
			Semester Total	11	
Program Total				23	

## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

The CD in Exercise Science – Personal Trainer is intended for students who are wishing to start a career as a personal trainer or continue their education in the AS Exercise Science program. Upon completion, students are eligible to sit for national exams offered by certifying agencies.

Additional information on careers in Exercise Science – Personal Trainer available through [Career Coach](#).

## Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/ university and program to which they plan to transfer.



## Pathway: Health Sciences & Wellness

### Associate of Science, Exercise Science – Physical Education Teacher Education

The Exercise Science program focuses on the many aspects of human movement, its application to physical activity, and the quality of one's life. The Physical Education Teacher Education program is intended for those students who are interested in a career in teaching physical education at the K- 12 level or higher.

Students complete coursework that provides a solid knowledge base of human anatomy, physiology, chemistry, and health. All students must complete the general education core and the Physical Education Teacher Education (PETE) courses. Students should carefully study the specific requirements of the institutions to which they plan to transfer. Based on student transfer needs, course substitutions are possible; however, the degree requirements must be met. Please speak with an Exercise Science advisor or PETE faculty member to finalize your program of study.

Upon completion of all coursework, the student would have an Associate of Science degree in Exercise Science: Physical Education Teacher Education and it is intended for transfer. The program offers a sound research based foundation and practical applications. While students must earn a Bachelor's degree and complete their teacher certification in order to teach at the collegiate level, students should plan on completing a Master's degree or higher.

### Contact Information

Contact information is available on the [Exercise Science](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Describe the development of Physical Education as an academic discipline
2. Demonstrate the competent performance of motor skills in a variety of physical activities across the lifespan.
3. Apply bioscience (anatomical, physiological) concepts to skilled movement and fitness.
4. Describe behavior modification methods that enhance health
5. Design appropriate physical education learning activities based on the students, the learning environment, and the lesson objectives.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
WC	✓	ENGL 1010	English Composition: I	3	<b>Milestone-</b> Completion of ENGL 1010 and MATH 1400 as prerequisites for other courses.
QL	✓	MATH 1400	College Algebra	3	
SS	✓	STRT 1000	Strategies for Success	3	<b>Choice Point-</b> KIN 1100 provides overview of various careers in the field of Exercise Science.
		KIN 1100	Kinesiology: The Science of Human Movement	3	
		KIN 1006	Fitness Component: Flexibility	2	<b>Milestone-</b> Students begin development of their professional portfolio during this semester and continue throughout the program.
		HLED 1221	Standard First Aid & Safety	2	
			Semester Total	16	



## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		PEPR 1470	PETE Practicum I	1	<b>Milestone-</b> PETE students begin working with Home School PE students in a PE setting
		KIN 1007	Fitness Component: Cardiovascular Endurance	2	
		HLED 1006	Personal Health	3	
		HLTK 1210	Human Body Systems	3	
OC	✓	COMM 2010	Public Speaking	3	
NS		BIO 1002	Discovering Science	4	
			Semester Total:	16	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		PEPR 2470	PETE Practicum II	1	<b>Milestone-</b> PETE students design and teach PE lessons to Home School students.
		HOEC 1140	Nutrition	2	
		KIN 1008	Fitness Component: Muscular Strength/Muscular Endurance	2	<b>Milestone-</b> PETE students observe PETE professionals in the field.
		ZOO 2010	Anatomy & Physiology I	4	<b>Milestone-</b> Completion of Drugs & Behavior is required for Health Certification.
HC		PSYC 1000	Psychology 1000	3	
		PSYC 2210	Drugs & Behavior	3	<b>Choice Point-</b> Begin working with the four-year university regarding transfer upon degree completion.
			Semester Total:	15	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HSI	✓		Choose an approved U.S./ Wyoming Constitution course	3	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.
CE		THEA 1100	Beginning Acting	3	
		PEPR 2475	PETE Practicum III	1	<b>Milestone-</b> PETE students teach PE units to Home School students.
		ZOO 2020	Anatomy & Physiology II	4	<b>Milestone-</b> Completion of AS degree in Exercise Science – Physical Education Teacher Education.
PS		STAT 2050	Fundamentals of Statistics	4	
			Semester Total:	17	

Program credit hour total	64
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## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

The AS in Exercise Science – Physical Education Teacher Education is intended for students who are wishing to transfer to a university and obtain a Bachelor's or Master's degree. Most of the potential careers listed below require a student to transfer and continue their education at the next level. Potential careers include athletic training, physical education teacher education (PETE), coach, or recreation manager.

Additional information on careers in Exercise Science – Physical Education Teacher Education is available through [Career Coach](#).

## Transfer Information

The AS Exercise Science – Physical Education Teacher Education degree is well suited for transfer to a Bachelor degree program. LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Health Sciences & Wellness

### Associate of Science, Exercise Science – Sport Management

The Exercise Science program is concerned with the many aspects of human movement and its application to physical activity and the quality of one's life. Sport Management is intended for students who are interested in positions within sport and recreation such as coach, athletic administrator, sports information director, compliance, intramural director, athletic academic advisor, recreation director, community recreation, and many other sport and recreation related fields. Students must complete the general education core and the Sport Management core courses. Students should carefully study the specific requirements of the institutions to which they plan to transfer. Based on student transfer needs, course substitutions are possible; however, the degree requirements must be met. Please speak with an Exercise Science advisor or faculty member to finalize your program of study.

Upon completion of all coursework, the student will earn an Associate of Science degree in Exercise Science – Sport Management. Students may find employment with their associate's degree. A Bachelor's degree or higher may be required for other positions within sport.

### Contact Information

Contact information is available on the [Exercise Science](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Articulate professional codes of ethics to sport or recreation settings
2. Use professional communication skills in a variety of settings such as with supervisor, advertisers, potential sponsors/donors, and peers.
3. Explain how external factors such as state and federal regulations, the judicial system, and collective bargaining affect sports operations.
4. Articulate how the various agencies that govern the professional, collegiate, high school and amateur levels impact sport.
5. Describe the historical development of sport

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		KIN 1010	Introduction to Sport Management	3	<b>Milestone-</b> Completion of ENGL 1010 and MATH 1400 as prerequisites for other courses.  <b>Choice Point-</b> Students explore the many areas of sport in which careers may be developed.
SS	✓	STRT 1000	Strategies for Success	3	
OC	✓	COMM 2010	Public Speaking	3	
WC	✓	ENGL 1010	English I: Composition	3	
QL	✓	MATH 1400	College Algebra	3	
			Semester Total	15	



## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		BADM 1000	Introduction to Business	3	<b>Milestone-</b> Students explore sport and relatedness to business.
		SOC 1150	Sociology of Sport	3	
		HLED 1006	Personal Health	3	
NS			Choose from AECL 1000 OR GEOL 1200 or BIO 1002	4	
HSI	✓		Choose an approved U.S./ Wyoming Constitution course – ECON 1200 Recommended	3	
			Semester Total:	16	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		CMAF 1200	Computer Information Systems	3	<b>Choice Point-</b> Explore careers specific to recreation.
		ECON 1010	Principles of Macroeconomics	3	
		KIN 2200	Recreation & Leisure in Modern Society	2	<b>Choice Point-</b> Begin working with the four-year university regarding transfer upon degree completion.
		HLED 1221	Standard First Aid & Safety	2	
PS		SOC 1000	Sociological Principles	3	<b>Choice Point-</b> See listing of approved PEAC courses in the Approved Electives section below.
			Choose an approved PEAC course	1	
			Semester Total:	14	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		MGT 2100	Principles of Management	3	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.
		MKT 2100	Principles of Marketing	3	
CE		MMMM 2400	Introduction to Photography	3	
HC		MMMM 1000	Introduction to Mass Media	3	<b>Milestone-</b> Completion of AS degree in Exercise Science – Sport Management.
		KIN 2490	History & Philosophy of Sport	3	
			Semester Total:	15	

Program credit hour total	60
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## Program Approved Electives

Students may choose from the following approved PEAC courses: PEAC 1012, PEAC 1046, PEAC 1047, PEAC 1245, or PEAC 1294.

## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

The AS in Exercise Science – Sport Management is intended for students who are wishing to transfer to a university and obtain a Bachelor's or Master's degree. Most of the potential careers listed below require a student to transfer and continue their education at the next level. Potential careers include coach, recreation manager, sports agent, athletic public relations manager and athletic events manager.

Additional information on careers in Exercise Science – Sport Management is available through [Career Coach](#).

## Transfer Information

The AS Exercise Science – Sport Management degree is well suited for transfer to a Bachelor degree program. LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Health Sciences & Wellness

### Bachelor of Applied Science, Healthcare Administration

The Bachelor of Applied Science in Healthcare Administration is designed for students who have completed an Associate of Applied Science degree from a regionally accredited institution of higher education or technical training provider. The degree is intended for students who have expertise within a specific technical area, experience working within that field, and who seek to further their education and move into management or administrative roles by completing the requirements for a baccalaureate degree. Note: although previous work experience within a specific technical field is not required for entry into the program, it is highly encouraged.

A minimum of 60 credits from a completed AAS will be applied to the Bachelor of Applied Science degree, however additional lower-division coursework may be required as a part of the Bachelor of Applied Science requirements. A minimum of 45 upper-division credits are required for completion of the Bachelor degree.

### Contact Information

Contact information is available on the [Healthcare Administration](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Evaluate the impact of human behavior on the economy and an organization
2. Employ professional communication skills essential to the management of a complex organization
3. Demonstrate strategic decision making within an organization
4. Evaluate essential functions of managing resources necessary to a successful organization
5. Evaluate the essential functions necessary to establish, to develop, and to manage human resources within a successful organization
6. Assemble strategies consistent with the professional, ethical, and legal standards of the health care industry
7. Improve healthcare system performance by leveraging data and technology
8. Formulate research-based solutions to solve problems that impact health delivery systems

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

Associates of Applied Science degree: Prior to enrolling in the Bachelor of Applied Science coursework, students must have completed an Associate of Applied Science (AAS) degree from a regionally accredited institution. Students new to LCCC who have not completed an AAS degree should first enroll in and complete one of the many program offerings available by the College.

Requirements	Credits	Achievements and Next Steps
Associate of Applied Science degree	60+	<b>Milestone-</b> Completion of Associate of Applied Science degree <b>Choice Point-</b> Students choosing to pursue a Bachelor of Applied Science degree would need to apply for admission during their last semester of the Associate of Applied Science degree

General Education: Students must complete a minimum of 30 General Education credits and satisfy the Wyoming Statutory Requirement for United States and Wyoming constitutional knowledge prior to or as a part of their bachelor's degree. Most students with a completed AAS degree will bring a significant number of general education credits from their previous coursework. Some general education courses are included in the bachelor's degree program. However, students may need to take additional courses to satisfy the general education requirements. Please work with your advisor on determining general education requirements and building them into your academic plan.



Requirements	Credits	Achievements and Next Steps
As a part of their associate degree, bachelor degree, or additional coursework, students must complete a minimum of 30 credits of general education to fulfill the requirements for a Bachelor of Applied Science degree at LCCC. General Education coursework must demonstrate proficiency in Oral Communication, Written Communication, Quantitative Literacy, Natural Sciences, Human Cultures, Creative Expression, Human Society and the Individual, and the Wyoming Statutory Requirement for constitutional knowledge.	30+	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
PS		ECON 1010	Principles of Macroeconomics	3	<b>Milestone-</b> Completion of ECON 1010, ACCT 3080, BADM 3010, and MGT 3210 as prerequisites for other courses.
		ACCT 3080	Accounting for Decision Makers	3	
UDGE		BADM 3010	Business and Professional Writing (Satisfies Upper Division General Education Requirement)	3	
		MGT 3210	Management and Organization	3	
		HCA 3010	Foundations of Healthcare Management	3	
			Semester Total	15	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		BADM 2010	Legal Environment for Business	3	<b>Milestone-</b> Completion of IMGT 3020 and BADM 2010 as prerequisites for other courses.
		BADM 3020	Data Analysis for Managers	3	
		MGT 3410	Human Resources Management	3	
		IMGT 3020	Information Management and Security	3	
		HLTK 2300	Healthcare Ethics	3	
			Semester Total	15	

### Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		HCA 3040	Public Health	3	<b>Milestone-</b> Completion of MGT 3420 as prerequisites for other courses.
		HCA 3020	Health Informatics	3	
		HCA 3030	Healthcare Law	3	
		MKT 3210	Introduction to Marketing	3	
		MGT 3420	Organizational Behavior and Leadership	3	
			Total Semester Credits	15	



## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		DSCI 4260	Project Management	3	<b>Milestone-</b> Graduation with BAS in Healthcare Administration.
		HCA 4010	Healthcare Quality and Performance Improvement	3	
		HCA 4020	Finance for Healthcare	3	
		HCA 4030	Healthcare Policy and Regulation	3	
		HCA 4395	Healthcare Administration Capstone	3	
			Total Semester Credits	15	
Program credit hour total				120+	

## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. The Bachelor of Applied Science, Healthcare Administration degree is intended to give students the academic coursework and experience helpful in obtaining administrative positions in hospitals, clinics, public health, and a variety of other healthcare facilities.

Additional information on careers in Healthcare Administration is available through [Career Coach](#).

## Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Health Sciences & Wellness

### **Associate of Applied Science, Health Information Technology and Management**



The Health Information Technology and Management (HITM) program combines coding in health care with health information management. Health information technologists serve the health care industry and the public consumer by managing, analyzing, and reporting health data required for the delivery of patient care, reimbursement, and quality management. Health information technologists specialize in managing and protecting medical records; administering health information management systems; and coding for reimbursement, research, and quality care.

The program of study contains courses from both the Medical Office Essentials credit diploma and the Medical Claims Coding Associate certificate of completion with the addition of health information technology and leadership courses that students need to advance their careers on the administrative side of the medical field. The courses for the Medical Office Essentials Credit Diploma and the Medical Claims Coding Associate Certificate of Completion are embedded within the AAS degree.

The Health Information Technology and Management program is a fully online program with an online lab component. Acceptance into the program is required prior to course registration. The Associate Degree Health Information Management Program is in Candidacy Status, pending accreditation review by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). Prospective students interested in the program may contact the program director for details about the admission process and timeline.

All allied health students are required to submit a pre-clinical urine drug screen according to the policy of the Allied Health Programs at LCCC. The drug screen is completed at the student's expense and must be paid for at the time of application. In addition to drug screening, for the safety of patients and health care workers, allied health workers must also undergo a background check performed at the student's expense.

Acceptance into the program is conditional based upon satisfactory completion of a criminal background check and drug screen. The student's acceptance will not be final until LCCC has received background check information from the reporting agencies, and the background check is clear of disqualifying offenses. Instructions for completion will be provided once a student is accepted into the program. Testing positive on the drug screening or evidence of tampering with a specimen will disqualify a student from participation in the program. Certain criminal activity, as evidenced by a criminal background check, may also disqualify a student from program participation. See school policy at [lccc.wy.edu/academics/divisions/HSW](http://lccc.wy.edu/academics/divisions/HSW). These circumstances may prevent acceptance into and/or continuance in the program.

### **Contact Information**

Contact information is available on the [Health Information Technology and Management](#) program website.

### **Competencies**

Upon successful completion of this program, students will be able to:

1. Demonstrate proficiency by integrating reimbursement methods and coding regulations creating a complete and clean claim.
2. Ethically use electronic health records by following industry standards and laws.
3. Analyze electronic data for its appropriate use in medical reporting processes.
4. Validate protected data for reporting and analysis using computer applications and health care delivery systems.
5. Use computer applications for data gathering and quality improvement projects in order to enhance the quality of patient care.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

## Prerequisite

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		HLTK 1210	Human Body Systems	3	<b>Milestone-</b> Students are eligible to apply to the HITM program upon completion of the course in this semester.

## First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	√	STRT 1000	Strategies for Success	3	
		HIT 1500	Introduction to Health Care Careers and Workplace Preparedness	4	
		HIT 1510	Computer Software for Medical Office Professionals	4	
		HIT 1550	Medical Office Procedural Skills	3	
		HLTK 1200	Medical Terminology	2	
			Semester Total	16	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		HIT 1600	Introduction to Health Information	2	<b>Milestone-</b> Completion of ENGL 1010 as prerequisites for other courses.
		MEDC 1500	Basic ICD-10-CM/PCS Coding	3	
		MEDC 1600	Basic CPT Coding	3	<b>Milestone-</b> Students earn the Medical Office Essentials Credit Diploma upon completion of ENGL 1010.
		MEDC 1750	Disease Processes in Coding	3	
WC	√	ENGL 1010	English I: Composition	3	
			Semester Total	14	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		MEDC 1675	Advanced Coding	4	<b>Milestone-</b> Completion of MATH 1000 as a gateway course.
		MEDC 1700	Reimbursement Methodologies	3	
		MEDC 1970	Professional Practice Experience (Coding)	2	<b>Milestone-</b> Students earn the Medical Claims Coding Associate (MCCA) Certificate upon completion of this semester.
QL		MATH 1000	Problem Solving	3	
OC	√	COMM 2010	Public Speaking	3	
			Semester Total	15	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HSI	√		Choose an approved U.S./ Wyoming Constitution course	3	<b>Milestone-</b> Completion of AAS degree in Health Information Technology and Management (HITM) degree
		HIT 2500	Health Data Management	2	
		HIT 2550	Health Care Quality and Performance Improvement	2	
		HIT 2600	Health Information Application Skills	3	
		HIT 2700	Health Information Management	3	
		HIT 2970	Professional Practice Experience (HIM)	2	
			Semester Total	15	

Program credit hour total				63
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## **Program Comments**

Students planning to apply to the Health Information Technology and Management program should work closely with their Advising Team regarding course sequence options required for completion prior to program application.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Students will be able to work in their chosen field upon graduation. The Certified Coding Associate (CCA) certification, a national exam offered by the American Health Information Management Association (AHIMA) assists with upward mobility but is not required.

Additional information on careers in Health Information Technology and Management is available through [Career Coach](#).

## **Transfer Information**

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Health Sciences & Wellness

### Credit Diploma, Medical Office Essentials

The Medical Office Essentials (MOE) credit diploma provides students with the necessary skills to perform successfully in entry-level administrative positions in the health care field. These support skills cover managing day-to-day medical office operations, understanding legal and ethical issues in health care operations, HIPAA, customer service, professionalism and computer fundamentals customized for medical offices.

Once students have completed the Medical Office Essentials credit diploma they may take additional specialized courses in coding and health information technology and management to attain the Medical Claims Coding Associate certificate or complete the AAS in Health Information Technology and Management.

### Contact Information

Contact information is available on the [Health Information Technology and Management](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Demonstrate accurate and productive computer office skills.
2. Explain the key elements for personal success in a medical environment.
3. Demonstrate proficiency with the technical skills required in a medical office environment.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
WC	✓	ENGL 1010	English I: Composition	3	<b>Milestone-</b> Students earn the Medical Office Essentials Credit Diploma upon completion of this semester.
		HIT 1500	Introduction to Health Care Careers and Workplace Preparedness	4	
		HIT 1510	Computer Software for Medical Office Professionals	4	
		HIT 1550	Medical Office Procedural Skills	3	
		HLTK 1200	Medical Terminology	2	
			Semester Total	16	
Program Total				16	

### Program Comments

Students planning to apply to the Health Information Technology and Management program should work closely with their Advising Team regarding course sequence options required for completion prior to program application.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Students will be able to work in their chosen field upon graduation. The Certified Coding Associate (CCA) certification, a national exam offered by the American Health Information Management Association (AHIMA) assists with upward mobility but is not required.



Additional information on careers in Health Information Technology and Management is available through [Career Coach](#).

### **Transfer Information**

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.



## Pathway: Health Sciences & Wellness

### Certificate of Completion, Medical Claims Coding Associate

The Medical Claims Coding Associate certificate of completion builds on the Medical Office Essentials credit diploma and addresses specialized skills in medical coding and reimbursement, including advanced techniques in medical insurance, reimbursement methodologies, basic health information management, electronic health records and basic and advanced coding, emphasizing CPT/HCPCS and ICD coding. The coding courses prepare students for a national coding exam through the American Health Information Management Association (AHIMA) or the American Association of Professional Coders (AAPC). The courses for the Medical Office Essentials credit diploma are embedded in the Medical Claims Coding Associate certificate.

Once students have completed the Medical Claims Coding Associate certificate, they may take additional specialized courses in coding and health information technology and management to complete the AAS in Health Information Technology and Management.

### Contact Information

Contact information is available on the [Health Information Technology and Management](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Demonstrate proficiency required for a medical office environment to ensure appropriate reimbursement in a variety of health care settings.
2. Apply the guidelines for effective coding to ethically maximize the reimbursement levels in a health care environment.
3. Assign appropriate CPT/HCPCS and ICD-10-CM/PCS codes based on analysis of the documentation provided in the medical record.
4. Develop an effective revenue cycle system to be used in the medical office to include effective reimbursement methods, coding and analysis of the systems and how they work.
5. Conduct an analysis of both paper and electronic health records to assure that the documentation supports the diagnosis and procedure codes used for proper reimbursement.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### Prerequisite

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		HLTK 1210	Human Body Systems	3	<b>Milestone-</b> Students are eligible to apply to the HITM program upon completion of the course in this semester.



## First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	
		HIT 1500	Introduction to Health Care Careers and Workplace Preparedness	4	
		HIT 1510	Computer Software for Medical Office Professionals	4	
		HIT 1550	Medical Office Procedural Skills	3	
		HLTK 1200	Medical Terminology	2	
			Semester Total	16	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		HIT 1600	Introduction to Health Information	2	<b>Milestone-</b> Completion of ENGL 1010 as prerequisites for other courses.
		MEDC 1500	Basic ICD-10-CM/PCS Coding	3	
		MEDC 1600	Basic CPT Coding	3	
		MEDC 1750	Disease Processes in Coding	3	
WC	✓	ENGL 1010	English I: Composition	3	
			Semester Total	14	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	✓	MATH 1000	Problem Solving	3	<b>Milestone-</b> Completion of MATH 1000 as a gateway course.
OC	✓	COMM 2010	Public Speaking	3	
		MEDC 1675	Advanced Coding	4	<b>Milestone-</b> Students earn the Medical Claims Coding Associate (MCCA) Certificate upon completion of this semester.
		MEDC 1700	Reimbursement Methodologies	3	
		MEDC 1970	Professional Practice Experience (Coding)	2	
			Semester Total	15	

Program credit hour total	48
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## Program Comments

Students planning to apply to the Health Information Technology and Management program should work closely with their Advising Team regarding course sequence options required for completion prior to program application.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Students will be able to work in their chosen field upon graduation. The Certified Coding Associate (CCA) certification, a national exam offered by the American Health Information Management Association (AHIMA) assists with upward mobility but is not required.

Additional information on careers in Health Information Technology and Management is available through [Career Coach](#).

## Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## **Pathway: Health Sciences & Wellness**

### **Associate Degree, Nursing**



The LCCC Nursing Program is designed for students new to patient care. This intensive four-semester program not including prerequisite courses is a balance of general education and nursing courses that provide students with the knowledge and skills needed to function as beginning practitioners of nursing. Students receive classroom instruction and clinical experience in the nursing care of patients in health care settings under the supervision and guidance of the nursing faculty. Clinical sites are in a variety of communities and travel may be required.

Admission into the LCCC Nursing Program is competitive. Applications are accepted twice a year. Students must have a minimum 2.5 cumulative GPA and be in satisfactory academic standing. Prerequisite courses must be completed with at least a "C" or better. More information on the application process is available on the [Nursing](#) webpage.

The nursing curriculum at Laramie County Community College is a leveled educational program to facilitate career mobility. The first two semesters provide a foundation for progression in the field of nursing and prepare the student to enter the second level of the nursing curriculum. At this point, after completion of the prerequisites and the first two semesters of the program, a student may choose to take the optional PN Exploration course, which will give them the ability to earn a certificate of completion and provide eligibility to take the National Council Licensure Exam (NCLEX-PN) and attain licensure as a Licensed Practical Nurse (LPN).

The LCCC Nursing Program is part of the Statewide ReNEW consortium. As a member of this consortium, LCCC nursing students are automatically accepted into the University of Wyoming's ReNEW baccalaureate program. Students can take online courses for their baccalaureate in nursing (BSN) degree while earning their associate degree in nursing (ADN). Students also have the option to apply for other RN-BSN programs, once they graduate from this program and pass the National Council Licensure Exam-RN (NCLEX-RN).

Students are eligible to take the National Council Licensure Exam-RN (NCLEX-RN) in order to become a Registered Nurse after successfully completing the four semesters of the LCCC Nursing Program.

This program is approved by the Wyoming State Board of Nursing and accredited by the Accredited Commission for Education in Nursing (ACEN).

### **Contact Information**

Contact information is available on the [Nursing](#) program website.

### **Competencies**

Upon successful completion of this program, students will be able to:

1. Provide safe care within the healthcare system.
2. Incorporate prior knowledge, current research, and clinical experience in decision-making.
3. Demonstrate leadership skills as part of an inter-professional team to promote desired outcomes
4. Use effective communication and advocacy to provide individualized care
5. Practice within the core values, principles, and standards of the nursing profession.
6. Utilize the nursing process and a broad knowledge base to maximize health.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

## Prerequisites

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Students are eligible to apply to the Nursing program upon completion of this semester.
WC	✓	ENGL 1010	English Composition	3	
QL	✓	MATH 1400	College Algebra	3	
		ZOO 2010	Anatomy & Physiology I OR human Physiology	4	
			Semester Total	13	

## First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		NURS 1100	Professional Nursing Care in Health Promotion	5	<b>Milestone-</b> Students begin clinical learning.
		NURS 1115	Clinical 1: Professional Nursing Care in Health Promotion	5	
		ZOO 2020	Anatomy & Physiology II or Human Physiology	4	
			Semester Total	14	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		NURS 1200	Professional Nursing Care of Patients with Chronic Illness	5	<b>Choice Point-</b> Students interested in becoming a Licensed Practical Nurse (LPN) should take NURS 1980 at the end of this semester. <b>Milestone-</b> Students who complete NURS 1980 during this semester earn a Certificate of Completion in Nursing. <b>Milestone-</b> Students are eligible to take the NCLEX-PN and become a Licensed Practical Nurse upon completion of NURS 1980.
		NURS 1215	Clinical 2: Professional Nursing Care of Patients with Chronic Illness	5	
HC		PSYC 1000	General Psychology	3	
		MICR 2240	Medical Microbiology	4	
			Semester Total	17	
<i>Optional</i>		NURS 1980	PN Exploration	2	
			Semester Total	19	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		NURS 2300	Professional Nursing Care of Patients with Acute Illness	5	
		NURS 2315	Professional Nursing Care of Patients with Acute Illness	5	
OC	✓	COMM 2010	Public Speaking	3	
			Semester Total	13	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		NURS 2400	Professional Nursing Care of Patients with Complex Illness	5	<b>Milestone-</b> Completion of AD in Nursing. <b>Milestone-</b> Students are eligible to take the NCLEX-RN to become a Registered Nurse.
		NURS 2415	Professional Nursing Care of Patients with Complex Illness	5	
HSI	✓		Choose any HSI approved course	3	
			Semester Total	13	

Program credit hour total				70
Program credit hour total with Optional LPN				72

## **Program Comments**

Students planning to apply to a specific closed program should work closely with their Advising Team regarding course sequence options required for completion prior to program application. Some program applications are points based.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Nurses work in hospitals, physicians' offices, home healthcare services, and nursing care facilities. Others work in outpatient clinics and schools, or serve in the military. Students are required to pass the National Council Licensure Exam-RN (NCLEX-RN) licensure as Registered Nurse (RN).

Additional information on careers in Nursing is available through [Career Coach](#).

## **Transfer Information**

The Associate Degree in Nursing is well suited for transfer to a Bachelor of Science in Nursing. LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Health Sciences & Wellness

### Associate of Applied Science, Physical Therapist Assistant



Physical Therapist Assistants (PTAs) work under the direction of physical therapists to help people of all ages who have health-related conditions that limit their ability to move and perform daily activities. Physical therapist assistants help patients reach their maximum performance and level of functioning while learning to live within the limits of their rehabilitation goals. Physical therapist assistants may assist in the development of treatment plans, treatment documentation, and modification of specific treatments that have been established by the physical therapist.

The Associate of Applied Science degree in the Physical Therapist Assistant professional curriculum is a five-semester sequence, with the first semester coursework the pre-requisites. Students must maintain a minimum grade of a "C" in each course, in addition to graduation requirements, to progress and graduate. Upon completion, graduates of the Physical Therapist Assistant program are eligible to apply for the national licensing exam administered by the Federation of State Boards of Physical Therapy (FSBPT).

The Physical Therapist Assistant (PTA) at Laramie County Community College (LCCC) is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 1111 North Fairfax Street, Alexandria, Virginia 22314; telephone: 703.706.3245; email: [accreditation@apta.org](mailto:accreditation@apta.org); website: [www.capteonline.org](http://www.capteonline.org).

**Additional Requirements:** Each program has specific admission requirements—see program website for detailed information or meet with a health science academic advisor or faculty mentor for specifics.

### Contact Information

Contact information is available on the [Physical Therapist Assistant](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Perform physical therapist assistant procedures professionally under the direction and supervision of a physical therapist.
2. Implement a comprehensive treatment plan under the direction and supervision of a physical therapist (PT).
3. Implement PT interventions based on treatment outcomes for patients in a variety of settings.
4. Demonstrate effective communication skills with the patient, Physical Therapist, health care personnel, and others in a competent manner.
5. Integrate concepts from the pre-requisite course work, basic sciences and PTA programming with the use of critical thinking skills into physical therapy practice.
6. Use evidence-based research to guide treatment interventions within the physical therapy field.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.



## Prerequisites

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
WC	✓	ENGL 1010	English I: Composition	3	<b>Choice Point-</b> Students pursuing the Physical Therapist Assistant (PTA) program should complete the prerequisite courses listed here during their first semester to avoid losing credits and to stay on track to apply to the program.
OC	✓	COMM 2010	Public Speaking	3	
QL	✓	MATH 1400	College Algebra	3	
		HLTK 1200	Medical Terminology	2	<b>Milestone-</b> Students are eligible to apply to the PTA program upon completion of this semester.
		ZOO 2010 OR ZOO 2015	Anatomy & Physiology I OR Human Anatomy	4	
			Semester Total	15	

## First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	The PTA program typically begins during the spring semester.
		HLTK 2510	Pathophysiology	2	
		ZOO 2020 OR ZOO 2025	Anatomy & Physiology II OR Human Physiology	4	
		PTAT 1600	Introduction to Physical Therapist Assistant	3	
		PTAT 2030	Functional Kinesiology for the Physical Therapist Assistant	4	
			Semester Total	16	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		PTAT 1650	Therapeutic Procedures I	4	The PTA program has classes during the summer semester.
		PTAT 1720	Therapeutic Exercise	4	
		PTAT 1740	Cardiac Rehabilitation	2	
			Semester Total	10	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EDST 2420	Human Lifespan Development	3	<b>Milestone-</b> Students begin an approved Clinical Practicum based on successful completion of academic coursework during this semester.
		PTAT 1660	Therapeutic Procedures II	3	
		PTAT 1820	Orthopedics	4	
		PTAT 2970	PTA Clinical Practicum I	7	
			Semester Total	17	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HSI	√		Choose an approved U.S./ Wyoming Constitution course	3	<b>Milestone-</b> Students begin an approved Clinical Practicum based on successful completion of academic coursework during this semester. <b>Milestone-</b> Completion of AAS degree, Physical Therapist Assistant. <b>Milestone-</b> Students are eligible to apply for the national licensing exam, administered by the Federation of State Boards of Physical Therapy (FSBPT).
		PTAT 1800	Neurology	3	
		PTAT 1840	Specialty Rehabilitation	1	
		PTAT 2971	PTA Clinical Practicum II	7	
			Semester Total	14	
Program credit hour total				72	

## Program Comments

Students planning to apply to the Physical Therapist Assistant program should work closely with their Advising Team regarding course sequence options required for completion prior to program application. STRT 1000 is a general education requirement, but is not a prerequisite course requirement prior to program application. Students may apply to the program while enrolled in or completing the last semester of prerequisites. Students should closely review the program application for specific information and requirements prior to applying to the program.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Employment opportunities are available in a variety of settings including outpatient physical therapy offices and clinics, hospitals, skilled nursing facilities, and school districts. Upon completion, graduates of the Physical Therapist Assistant program are eligible to apply for the national licensing exam, administered by the Federation of State Boards of Physical Therapy (FSBPT).

Additional information on careers in Physical Therapist Assistant is available through [Career Coach](#) and career specific related links below.

## Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/ university and program to which they plan to transfer.

## **Pathway: Health Sciences & Wellness**

### **Associate of Applied Science, Radiography**

The radiography program offers the student the knowledge and skills for utilizing radiation in the diagnosis of disease under the direction of a physician. Most radiographers work in hospitals, medical clinics, and private medical offices, while some are employed in industrial, sales, governmental, and educational institutions.

The five semester program (which does not include the prerequisite courses) combines academic study with supervised clinical experience. Graduates of the program will receive an Associate of Applied Science degree and be eligible to take the national certifying examination of the American Registry of Radiologic Technologists. Upon passing the examination, a student is certified as a registered radiologic technologist.

The Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 2850, Chicago, IL 60606-3182 ([www.jrcert.org](http://www.jrcert.org)), through its accreditation of the program in radiography at LCCC, has established a maximum number of students selected each year for the program based on clinical site availability. Most students are employed immediately upon graduation from the program. Bachelor's and master's degrees are also available in the field. The program begins a new class each fall.

A student interested in applying for the radiography program may contact the Radiography Program Director, Clinical Coordinator, or the Admissions Office for specific procedures, including placement tests, which must be completed in the early spring for admission to the program in the fall semester. Selection of new students will be completed by early April and is based on a student's grade point average, prerequisites completed, the date of receipt of application, and other criteria as noted in the program application materials.

Laramie County Community College does not discriminate on the basis of race, color, national origin, sex, age, religion, political affiliation, or disability in admission or access to, or treatment or employment in, its education programs or activities.

Additional Requirements: Each program has specific admission requirements—see program website for detailed information or meet with a health science academic advisor or faculty mentor for specifics.

### **Contact Information**

Contact information is available on the [Radiography](#) program website.

### **Competencies**

Upon successful completion of this program, students will be able to:

1. Be technically proficient, being able to consistently produce radiographs of high diagnostic quality, on any given part of the human body. This includes proper positioning techniques and the proper setting of all exposure factors.
2. Demonstrate problem solving and critical thinking skills.
3. Demonstrate communication skills.
4. Consistently employ principals of safety including radiation protection and safety, and electrical safety, to avoid hazards to both patients and themselves.
5. Consistently exhibit a professional attitude and honor the ARRT Code of Ethics.
6. Have a high potential for advancement and leadership.
7. Gain employment as an entry-level radiographer.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.



## Prerequisites

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		HLTK 1200	Medical Terminology	2	<b>Milestone-</b> Students are eligible to apply to the Radiography program upon completion of the courses in this semester.
		ZOO 2010 OR ZOO 2015	Anatomy and Physiology I OR Human Anatomy	4	
		ZOO 2020 OR ZOO 2025	Anatomy and Physiology II OR Human Physiology	4	
QL	✓	MATH 1400	College Algebra	3	
SS	✓	STRT 1000	Strategies for Success	3	
			Semester Total	16	

## First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HSI	✓		Choose an approved U.S./ Wyoming Constitution course	3	<b>Choice Point-</b> Students may choose to take general education courses prior to entering the program.
OC	✓	COMM 2010	Public Speaking	3	
WC	✓	ENGL 1010	English I: Composition	3	
		RDTK 1503	Introduction to Radiography	4	
		RDTK 1520	Radiographic Patient Skills	1	
		RDTK 1620	Radiation Biology and Protection	3	
			Semester Total	17	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		RDTK 1610	Radiographic Imaging I	3	<b>Milestone-</b> Students are eligible for clinical education.
		RDTK 1611	Radiographic Imaging I Lab	1	
		RDTK 1583	Radiographic Procedures I	3	
		RDTK 1584	Radiographic Lab I	1	
		RDTK 1590	Clinical Education I	4	
			Semester Total	12	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		RDTK 1683	Radiographic Procedures II	3	The Radiography program has classes during the summer semester.
		RDTK 1684	Radiographic Lab II	1	
		RDTK 1713	Clinical Education II	4	
			Semester Total	8	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		RDTK 2583	Radiographic Procedures III	3	<b>Milestone-</b> Students are eligible to apply for a Special License from the Wyoming Board of Radiologic Technologist Examiners upon successful completion of this semester.
		RDTK 2584	Radiographic Lab III	1	
		RDTK 2623	Radiographic Equipment, Digital Imaging, and Quality Assurance	3	
		RDTK 2624	Radiographic Lab IV	1	
		RDTK 2510	Clinical Education III	7	
			Semester Total	15	

## Fifth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		RDTK 2630	Radiographic Pathology	1	<b>Milestone-</b> Completion of AAS in Radiography.  <b>Milestone-</b> Upon successful completion of the program, students are eligible to take the national certification exam, American Registry of Radiologic Technologists (ARRT).
		RDTK 2603	Survey of Technical Specialties	2	
		RDTK 2900	Radiography Seminar	4	
		RDTK 2613	Clinical Education IV	7	
			Semester Total	14	
Program credit hour total				82	

## Program Comments

Students planning to apply to the Radiography program should work closely with their Advising Team regarding course sequence options required for completion prior to program application. STRT 1000 is a general education requirement, but is not a prerequisite course requirement prior to program application. Students may apply to the program while enrolled in or completing the last semester of prerequisites. Students should closely review the program application for specific information and requirements prior to applying to the program.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Students are required to pass a licensure examination to work as a radiographic technologist.

Most radiographers work in hospitals, medical clinics and private medical offices. Additional information on careers in Radiography is available through [Career Coach](#).

## Transfer Information

Graduates may wish to continue their education with a bachelor degree in Radiologic Sciences, or train in advanced modalities such as computed tomography, magnetic resonance imaging, mammography, and bone densitometry.

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/ university and program to which they plan to transfer.

## Pathway: Health Sciences & Wellness

### Associate of Applied Science, Speech-Language Pathology Assistant



The Speech-Language Pathology Assistant (SLPA) program is an online program - is designed to provide comprehensive academic education along with practical experiential training for Speech-Language Pathology Assistants. An SLPA works under the direct supervision of licensed or certified speech-language pathologists to provide speech and language therapy services following a documented treatment plan, assist with documentation of speech-language pathology services in educational or healthcare settings, provide clerical support, administer speech, language and hearing screenings, and report information to the speech language pathologist. The program content is based upon the recommendations of the American Speech-Language-Hearing Association (ASHA). The program provides training in working with speech and language disordered adults and children while providing students with the opportunity to gain practical experience in working with clients/patients in a variety of settings.

The program has limited enrollment and admits one class each fall. The prerequisite courses must be completed with a "C" or higher prior to entry into the program. Prospective students interested in the program should contact the SLPA Program Director for details about the admission and application process.

### Contact Information

Contact information is available on the [Speech-Language Pathology Assistant](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Demonstrate critical thinking relevant to speech-language pathology.
2. Distinguish the differences between normal and disordered speech-language communication and hearing.
3. Comply with professional/ethical standards related to the field of speech-language pathology.
4. Demonstrate effective communication skills across various work settings.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### Prerequisites

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
WC	✓	ENGL 1010	English I: Composition	3	<b>Milestone-</b> Completion of ENGL 1010 as prerequisites for other courses.
OC	✓	COMM 2010	Public Speaking	3	<b>Milestone-</b> Students are eligible to apply to the SLPA program upon completion of the course in this semester.
			Prerequisite Total	6	



## First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	√	STRT 1000	Strategies for Success	3	
		SLPA 1500	Introduction to Speech Language Pathology Assistant	3	
		SLPA 1504	Anatomy & Physiology of Speech and Hearing	3	
		SLPA 1505	Introduction to Speech and Language Development	3	
		SLPA 1511	Introduction to Communication Disorders and Treatment	3	
			Semester Total	15	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL		MATH 1000	Problem Solving	3	<b>Milestone-</b> Completion of MATH 1000 as a gateway course.
		SLPA 1502	Field Observation I	1	
		SLPA 1506	Introduction to Phonetics	3	
		SLPA 1600	Introduction to Audiology & Aural Rehabilitation	2	
		SLPA 1605	Adult Communication Disorders	3	
		SLPA 1630	Child Language Disorders and Intervention	3	
			Semester Total	15	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		SLPA 2540	Speech Disorders	3	
		SLPA 2502	Field Observation II	2	
		SLPA 2520	Speech Sound Disorders and Intervention	3	
		SLPA 2535	Special Populations for SLPA	2	
		SLPA 2601	Screening Processes	3	
HSI	√		Choose an approved U.S./ Wyoming Constitution course	3	
			Semester Total	16	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		SLPA 2503	SLPA Seminar	1	<b>Milestone-</b> Completion of AAS degree in Speech-Language Pathology Assistant.
		SLPA 2600	Alternative and Augmentative Communication	2	
		SLPA 2602	Internship Management & Procedures	4	
		SLPA 2970	SLPA Internship	6	
			Semester Total	13	

Program credit hour total				65
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## Program Comments

Students planning to apply to the Speech-Language Pathology Assistant program should work closely with their Advising Team regarding course sequence options required for completion prior to program application.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Speech-Language Pathology Assistants are skilled support personnel who perform speech and language therapy, and related clinical tasks, under the direction of a Speech-Language Pathologist (SLP). Certified SLPAs are most often employed in private or public school settings and healthcare.

Additional information on careers in Speech-Language Pathology Assistant is available through [Career Coach](#).

### **Transfer Information**

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Health Sciences & Wellness

### Associate of Applied Science, Surgical Technology

The goal of the Surgical Technology Associate of Applied Science degree program is to prepare competent, entry-level surgical technologists in the cognitive (knowledge), psychomotor (skills) and affective (behavior) learning domains. Graduates of the program will be able to apply fundamental theoretical knowledge in the practice of surgical technology; acquire and evaluate emerging surgical knowledge; effectively and safely manipulate surgical equipment, instruments and supplies; consistently maintain sterile technique; and demonstrate the formation of a strong sterile conscience.

The program has limited enrollment and admits one class each fall. The prerequisite courses must be completed or in progress prior to application for program admission. Prospective students should contact the Surgical Technology Program director for admission deadlines.

Once the student has been accepted, the intensive 11-month surgery core program combines classroom lectures and discussions, laboratory demonstrations with hands-on practice, and supervised clinical experiences in actual patient care settings to provide students with a variety of learning opportunities.

This program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 1361 Park Street, Clearwater, FL 33756, which allows graduates to take the national certifying examination sponsored by the National Board for Surgical Technology and Surgical Assisting (NBSTSA).

This degree offers coursework intended to develop entry-level surgical technologists. Students are employable in the profession upon graduation from the program.

### Contact Information

Contact information is available on the [Surgical Technology](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Demonstrate multiple forms of communication across a wide range of surgical specialties.
2. Employ safe practices in the surgical setting.
3. Demonstrate the principles of asepsis and surgical conscience.
4. Apply professional standards appropriate to surgical technologists.
5. Utilize appropriate technology as it relates to surgery.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Health Sciences & Wellness pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester – Prerequisites

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL		MATH 1000	Problem Solving	3	<b>Choice Point-</b> Student pursuing Surgical Technology should complete the prerequisite courses listed here during their first semester to avoid losing credits and to stay on track to apply to the program.
WC	✓	ENGL 1010	English Composition	3	
SS	✓	STRT 1000	Strategies for Success	3	
OC	✓	COMM 2010	Public Speaking	3	
		ZOO 2010 OR ZOO 2015	Anatomy & Physiology I OR Human Anatomy	4	
			Semester Total	16	



## Second Semester – Prerequisites

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ZOO 2020 OR ZOO 2025	Anatomy & Physiology II OR Human Physiology	4	<b>Milestone-</b> Students are eligible to apply to the Surgical Technology program upon completion of the courses in this semester.
		HLTK 2510	Pathophysiology	2	
		MICR 2240	Medical Microbiology	4	
		HLTK 1200	Medical Terminology	2	
HSI	✓		Choose an approved U.S./ Wyoming Constitution course	3	
			Semester Total	15	

## First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		SURG 1600	Introduction to Surgical Technology	4	
		SURG 1610	Surgical Technology Theory	3	
		SURG 1620	Surgical Technology Skills Lab I	3	
		SURG 1685	Surgical Pharmacology	2	
		HLTK 2300	Health Care Ethics	3	
			Semester Total	15	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		SURG 1630	Surgical Technology Skills Lab II	1	<b>Milestone-</b> Students are eligible for clinical learning.
		SURG 1750	Surgical Procedures I	4	
		SURG 2750	Surgical Procedures II	4	
		SURG 1850	Surgical Technology Clinical I	5	
		SURG 2810	Surgical Technology Clinical Synthesis I	1	
			Semester Total	15	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		SURG 2850	Surgical Technology Clinical II	7	The Surgical Technology program meets during the summer semester. <b>Milestone-</b> Completion of AAS degree in Surgical Technology. <b>Milestone-</b> Students are eligible to take the CST exam. This certification is recommended for employment in the field.
		SURG 2895	Surgical Technology Clinical Synthesis II	1	
			Semester Total	8	

Program credit hour total	69
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## Program Comments

Students planning to apply to the Surgical Technology program should work closely with their Advising Team regarding course sequence options required for completion prior to program application. Students may apply to the program while enrolled in or completing the last semester of prerequisites. Students should closely review the program application for specific information and requirements prior to applying to the program.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Students may be required to pass the Certified Surgical Technologist exam sponsored by the National Board Surgical Technology and Surgical Assisting (NBSTSA).

Graduates with a degree in Surgical Technology typically start in entry-level positions in hospitals and medical clinics. Additional information on careers in Surgical Technology is available through [Career Coach](#).

### **Transfer Information**

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.



# Human & Public Services Pathway

The Human & Public Services Pathway is designed for students who wish to explore coursework within this broad field. Students wanting to study Anthropology, Criminal Justice, Education, History, Psychology, Sociology, and other related fields can start here and transfer to a four-year university to continue their education.

This program is also great option for students who are unsure which Human & Public Services program is best for them. Students can easily transfer into a specific Human & Public Services program after starting here.

- Human & Public Services
- Criminal Justice
- Elementary & Early Childhood Education
- Paralegal
- Psychology
- Secondary Education



## Pathway: Human & Public Services



### Associate of Arts, Human & Public Services

The Human & Public Services program is designed for students who wish to explore options within government, social services, education, and law. This program offers coursework to transfer to a four-year university, allowing students to pursue a baccalaureate degree or further education in related fields.

### Contact Information

Contact information is available on the [Human & Public Services](#) website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply discipline-specific methodological approaches to examine the contributions and impacts of human interaction on cultural diversity and society.
2. Analyze the effects of discipline-specific historical contexts on the development of the discipline and its current practice.
3. Analyze how diverse cultural contexts influence human behavior at the individual, societal or cultural level.
4. Evaluate discipline-specific theoretical approaches that impact human interactions and cultural diversity of society.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Human & Public Services pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion ENGL 1010 as a prerequisite for other courses. <b>Choice Point-</b> Students pursuing an AA in Criminal Justice, AAS in Paralegal, AA in Education, or AS in Psychology should change programs of study following their first semester to ensure their total credits and time to graduation are minimized.
WC	✓	ENGL 1010	English I: Composition	3	
OC	✓	COMM 2010	Public Speaking	3	
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course, POLS 1000 recommended	3	
		EDST 2450 OR CRMJ 2120 OR PSYC 1000	Foundation of Development and Learning OR Introduction to Criminal Justice OR General Psychology	3	
			Semester Total	15	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	✓	STAT 2070	Introductory Statistics for the Social Sciences	4	<b>Milestone-</b> Completion STAT 2070 completes the math general education requirement in the first year  <b>Choice Point-</b> Students pursuing Elementary Education must take MATH 1100 instead of STAT 2070.  <b>Choice Point-</b> Students choosing to pursue a bachelor's degree in Anthropology, History, or Political Science should work with their advising team to select from approved electives.
HC	✓		Choose an approved Human Culture course	3	
NS		BIOL 1002	Discovering Science	4	
CE	✓		Choose an approved Creative Expression course	3	
			Semester Total	14-15	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ECON 1010	Principles of Macroeconomics	3	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.
		ENGL 1020	Composition II	3	
			Choose a World Language course	4	
PS			Choose an approved General Education course with a prefix of ANTH, ECON, GEOG, HIST, POLS, PSYC, or SOC.	3	
			Choose an approved Human and Public Service elective with a prefix of ANTH, CRMJ, ECON, EDFD, EDEX GEOG, HIST, POLS, PSYC, or SOC.	3	
			Semester Total	16	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		GEOG 1020	Human Geography	3	<b>Milestone-</b> Completion of AA, Human & Public Services
			Choose an approved Human and Public Service elective with a prefix of ANTH, CRMJ, ECON, EDFD, EDEX GEOG, HIST, POLS, PSYC, or SOC.	3	
			Choose an approved Human and Public Service elective with a prefix of ANTH, CRMJ, ECON, EDFD, EDEX GEOG, HIST, POLS, PSYC, or SOC.	3	
			Choose an approved Human and Public Service elective with a prefix of ANTH, CRMJ, ECON, EDFD, EDEX GEOG, HIST, POLS, PSYC, or SOC.	3	
			Choose an approved Human and Public Service elective with a prefix of ANTH, CRMJ, ECON, EDFD, EDEX GEOG, HIST, POLS, PSYC, or SOC.	3	
			Semester Total	15	

Program Credit Hour Total	60-61
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## **Approved Program Electives**

The approved Human & Public Services subject prefixes that students may choose from for their HPS elective include ANTH, CRMJ, ECON, EDFD, EDEX GEOG, HIST, POLS, PSYC, or SOC.

## **Program Comments**

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

Additional information on careers in Human & Public Services is available through [Career Coach](#).

## **Transfer Information**

The Human & Public Services program is intended for students who are wishing to transfer to a university and obtain a Bachelor's or Master's degree. Most of the potential jobs in the fields of government, social services, education, and law require you to transfer and continue your education at the next level.

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Human & Public Services



### Associate of Arts, Criminal Justice

The Criminal Justice program is designed for students who wish to prepare for careers within the Criminal Justice field, including Law Enforcement, Correctional Institutions, Probation and Parole and Pre-Law. This program offers coursework intended to transfer to a four-year university allowing students to pursue a baccalaureate degree in Criminal Justice or various related degrees. Students are also eligible for immediate employment.

### Contact Information

Contact information is available on the [Criminal Justice](#) website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Identify the nature of crime.
2. Recognize the differences between crimes and other types of legal (and moral) wrongs.
3. Analyze the concepts/perspectives of criminology.
4. Apply criminal justice vocabulary.
5. Identify the structure of the federal and state courts within the United States judicial system.
6. Compare and contrast the rights provided by the fourth, fifth, sixth, eighth, and fourteenth amendments as they pertain to the criminal justice system.
7. Recognize the differences between substantive and procedural law.
8. Identify the historical and philosophical foundations of law enforcement agencies, criminal courts, and correctional institutions.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Human & Public Services pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion ENGL 1010 as a prerequisite for other courses.
WC	✓	ENGL 1010	English I: Composition	3	
OC	✓	COMM 2010	Public Speaking	3	
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course, POLS 1000 recommended	3	
		CRMJ 2120	Introduction of Criminal Justice	3	
			Semester Total	15	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	√	STAT 2070	Introductory Statistics for the Social Sciences	4	<b>Milestone-</b> Completion STAT 2070 completes the math general education requirement in the first year
		CRMJ/SOC 2400	Criminology	3	
NS		BIOL 1002	Discovering Science	4	
		CRMJ 2220	Criminal Law II	3	
			Semester Total	14-15	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		CRMJ 2210	Criminal Law I	3	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.  <b>Choice Point-</b> Students interested in law enforcement should take CRMJ 1510; students interested in Corrections/Pre-Law should take CRMJ 2350.
		CRMJ 2350 OR CRMJ 1510	Introduction to Corrections OR Police Science	3	
HC	√		Choose an approved Human Culture course, ANTH 1200 recommended	3	
PS		PSYC 1000	General Psychology	3	
CE	√		Choose an approved Creative Expression course	3	
			Semester Total	15	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		SOC 1000	Sociological Principles	3	<b>Choice Point-</b> Students interested in law enforcement should take CRMJ 1320; students interested in Corrections/Pre-Law should take CRMJ 2380.  <b>Milestone-</b> Completion of AA, Criminal Justice
		CRMJ 2380 OR CRMJ 1320	Probation and Parole OR Criminal Investigation II	3	
		CRMJ 1310	Criminal Investigation I	3	
		CRMJ 2420	Juvenile Justice	3	
		PSYC 2000	Research Methods in Psychology	4	
			Semester Total	16	

Program Credit Hour Total	60-61
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## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

Additional information on careers in Criminal Justice is available through [Career Coach](#).

## Transfer Information

The Criminal Justice program is intended for students who are wishing to transfer to a university and obtain a Bachelor's or Master's degree. Most of the potential careers within the Criminal Justice field, including Law Enforcement, Correctional Institutions, Probation and Parole and Pre-Law require you to transfer and continue your education at the next level.

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Human & Public Services



### Associate of Arts, Elementary & Early Childhood Education

The Elementary & Early Childhood Education program is designed for students who wish to explore coursework within the early childhood and elementary education fields. This program offers coursework intended to transfer to a four-year college or university allowing students to pursue a baccalaureate degree in Elementary & Early Childhood Education for a career in a public or private school setting for young children. This program requires that students successfully pass a criminal background check.

Completing this program may qualify students for employment as a childcare worker, preschool teacher, substitute teacher, childcare center director, nanny, or elementary (K-6) teacher in a public or private school setting.

### Contact Information

Contact information is available on the [Education](#) programs website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Examine how diverse learners develop in cognitive, linguistic, social, emotional, and physical capacities.
2. Formulate developmentally appropriate instructional strategies through the creation of authentic, meaningful learning experiences.
3. Create formative and summative assessment applications to improve both student learning and teacher decision-making.
4. Appraise one's professional commitment, leadership ability, collaborative role, and ethical responsibility in order to improve pedagogical practice.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Human & Public Services pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion ENGL 1010 as a prerequisite for other courses.  <b>Choice Point-</b> Students must pass a background check and maintain a minimum GPA to continue in the program. See Program Comments for more information.
WC	✓	ENGL 1010	English I: Composition	3	
OC	✓	COMM 2010	Public Speaking	3	
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course	3	
		EDEC 1020	Intro to Early Childhood	3	
			Semester Total	15	



## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		MATH 1100	Numbers & Operations for Elementary School Teachers	3	<b>Milestone-</b> Completion of MATH 1100 as a prerequisite for MATH 1105.  <b>Choice Point-</b> Students must pass a background check and maintain a minimum GPA to continue in the program. See Program Comments for more information.
NSL		BIOL 1003	Current Issues in Biology	4	
CE	✓		Choose an approved Creative Expression course	3	
		EDEL 2280	Literature for Children	3	
		EDST 2450	Foundations of Development & Learning	3	
			Semester Total	16	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ITEC 2360	Teaching with Technology	3	<b>Milestone-</b> Completion of gateway English (ENGL 1010) and gateway math (MATH 1105).  <b>Choice Point-</b> Students must pass a background check and maintain a minimum GPA to continue in the program. See Program Comments for more information.
		EDST 2550	Education Assessment	3	
QL		MATH 1105	Data, Probability, and Algebra for Elementary School Teachers	3	
HC	✓	GEOG 1000	World Geography	3	
		EDEL 2140	Teaching Literacy in the Elementary School	3	
			Semester Total	15	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EDEX 2484	Intro to Special Education	3	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.  <b>Milestone-</b> Completion of AA, Elementary & Early Childhood Education.
		EDUC 2100	Practicum in Teaching	2	
		EDEC 2000	Engaging Families in the Early Childhood Setting	3	
		POLS 1000	American and Wyoming Government	3	
		OR	OR		
		HIST 1211	US to 1865		
		OR	OR		
		HIST 1221	US from 1865		
		OR	OR		
		PSYC 1000	General Psychology		
PS/NSP		GEOG 1010	Introduction to Physical Geography	4	
		OR	OR		
		GEOL 1100	Physical Geology		
			Semester Total	15	

Program Credit Hour Total	61
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## Program Comments

Students must successfully pass a criminal background check and maintain a minimum GPA of 2.5 each semester to continue in the Elementary & Early Childhood Education program.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

The following careers are based on a career path which starts with the Elementary & Early Childhood Education program at Laramie County Community College. Possible careers in or related to Elementary & Early Childhood Education include Camp Counselors, Career/Technical Education, Coaches, College Faculty, Directors, Elementary Teachers, Guidance Counselors, Paraprofessionals, Principal, Preschool Teachers, Special Education Teachers, Substitute Teachers, and Tutors.

Students should be aware that many education career options might require additional licensure examinations as determined by each state.

Additional information on careers in Elementary & Early Childhood Education is available through [Career Coach](#).

## **Transfer Information**

The Elementary & Early Childhood Education program is intended for students who are wishing to transfer to a university and obtain a Bachelor's or Master's degree. Most of the potential careers within the field of Education require you to transfer and continue your education at the next level.

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## **Pathway: Human & Public Services**



### **Associate of Applied Science, Paralegal**

Paralegals or legal assistants are “persons who, although not members of the legal profession, are qualified through education, training, or work experience, who are employed or retained by a lawyer, law office, governmental agency, or other entity in a capacity or function which involves the performance, under the ultimate direction and supervision of an attorney, of specifically delegated substantive legal work, which work, for the most part, requires a sufficient knowledge of legal concepts that, absent that paralegal, the attorney would perform the task.” (Definition provided by the American Bar Association.)

As such, paralegals are not allowed to practice law. In Wyoming it is illegal for anyone who is not a licensed attorney to practice law. The practice of law refers to the rendition of services for others that call for the professional judgment of a lawyer. Therefore, nonlawyers may not, at a minimum, represent others in court, draft legal documents for someone, or give someone legal advice. A paralegal's duties are many and varied depending on the individual's capabilities and the needs of the employer. A person interested in a paralegal career must be a good communicator who is willing and able to accept significant responsibility while assisting an attorney in a modern law practice. The primary goal of the paralegal program is to provide students with the technical skills and knowledge necessary for them to perform successfully and ethically as paralegals under the supervision of attorneys in a variety of legal settings. Upon completion of the program, graduates will be able to perform legal research in a variety of fields using both traditional and computer-assisted methods; to draft pleadings, discovery and other legal documents, legal correspondence, and legal memoranda; to demonstrate substantive knowledge of at least three areas of practice; to demonstrate an understanding of the ethical rules governing both attorneys and paralegals in the jurisdiction; and to demonstrate the analytical and judgmental abilities necessary for ethical decision-making in a legal environment.

Program objectives include providing students with appropriate general education to meet state statutory requirements and to develop the student's communication, quantitative, analytical, and technological skills; preparing students to perform legal and factual research using traditional and computer-assisted methods; preparing students to draft a variety of legal documents and correspondence; preparing students to effectively interview clients and witnesses; providing students with an understanding of the evolving paralegal field and career opportunities within that field; providing students with the skills needed to assist an attorney with the investigation and litigation process; providing students with an understanding of the legal system and the modern practice of law; and providing students with an understanding of the ethical rules governing the practice of law and the behaviors and judgment necessary to perform paralegal duties in a manner ethically consistent with those rules.

The following program of study is designed to develop the specific skills and abilities required for success in the paralegal career field. Completion of this program leads to the Associate of Applied Science degree.

The paralegal program also offers a certificate. The certificate program is reserved for individuals who have already earned a bachelor's degree in another discipline and now desire to work as a paralegal. The paralegal program is approved by the American Bar Association (ABA).

### **Contact Information**

Contact information is available on the [Paralegal](#) programs website.

### **Competencies**

Upon successful completion of this program, students will be able to:

1. Effectively draft a variety of legal documents.
2. Conduct legal research.
3. Apply legal research to legal writing.
4. Demonstrate effective interviewing skills.
5. Demonstrate organizational skills.
6. Recognize the ethical rules governing the practice of law.
7. Apply legal concepts to factual scenarios.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Human & Public Services pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion ENGL 1010 as a prerequisite for other courses.  <b>Milestone-</b> Completion of LEGL 1500 as a pre or co-requisite of all other LEGL courses.
WC	✓	ENGL 1010	English I: Composition	3	
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course	3	
		LEGL 1500	Introduction to Paralegal Studies	3	
		LEGL 1710	Legal Research and Writing I	3	
			Semester Total	15	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	✓	STAT 2070	Introductory Statistics for the Social Sciences	4	<b>Milestone-</b> Completion STAT 2070 completes the math general education requirement in the first year  <b>Choice Point-</b> See listing of approved program LEGL electives and offering rotation in the Approved Electives section below.  <b>Choice Point-</b> Students may choose to complete a LEGL elective during the summer semester.
		LEGL 1720	Legal Research and Writing II	3	
		LEGL 2550	Evidence and Investigation	4	
			Choose an approved LEGL elective	3	
			Choose an approved LEGL elective	3	
			Semester Total	16	

### Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		LEGL 2500	Civil Procedure and Litigation	3	<b>Choice Point-</b> See listing of approved program LEGL electives and offering rotation in the Approved Electives section below.  <b>Choice Point-</b> See listing of faculty approved electives and offering rotation in the Approved Electives section below.
		CMAP 1200	Computer Information Systems	3	
			Choose an approved LEGL elective	3	
	✓	BIOL 1002 OR BIOL 1003 OR GEOG 1010	Discovering Science OR Current Issues in Biology OR Intro to Physical Geography	4	
			Choose a faculty approved elective	3	
			Semester Total	16	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
OC	√	COMM 2010	Public Speaking	3	<b>Choice Point-</b> See listing of approved program LEGL electives and offering rotation in the Approved Electives section below.  <b>Choice Point-</b> See listing of faculty approved electives and offering rotation in the Approved Electives section below.  <b>Milestone-</b> Completion of AAS, Paralegal
			Choose an approved LEGL elective	3	
			Choose an approved LEGL elective	3	
			Choose a faculty approved elective	3	
			Choose a faculty approved elective	4	
			Semester Total	15	
Program Credit Hour Total				62	

## Approved Program Electives

The Paralegal program requires LEGL and faculty approved elective.

Below is a listing of LEGL electives and the scheduled rotations in which the courses are offered. Students should be prepared to take the LEGL elective(s) scheduled in that particular semester.

## LEGL Courses

BADM 2010 (fall, spring, summer – online only in summer)

LEGL 1800 (summer only, odd years)

LEGL 2560 (fall only, every three years)

LEGL 2570 (spring only, even years)

LEGL 2610 (fall only, every three years)

LEGL 2630 (spring only, odd years)

LEGL 2650 (spring only, odd years)

LEGL 2670 (spring only, even years)

LEGL 2680 (fall only, every three years)

LEGL 2830 (summer only, even years)

LEGL 2990 (fall, spring)

## Faculty Approved Electives

Students must complete nine credit hours (3 courses) of faculty approved elective courses. Human Cultures and Creative Expression general education courses should be taken to meet six of the nine credit (2 of the 3 courses) requirement. The remaining three credits should be a balance of different disciplines. Students may choose from the following: ACCT, ANTH, ART, BADM, BUSN, COMM, COSC, CRMJ, EDUC, ENGL, HIST, HUMN, MGT, MKT, PHIL, POLS, PSYC, SOC, THEA, SPAN.

## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Paralegal graduates may work in law firms, state or federal government offices, financial institutions, or title companies.

Additional information on careers in the Paralegal field available through [Career Coach](#).

## Transfer Information

The Paralegal program offers coursework intended to prepare students for immediate employment; however, coursework may transfer to a four-year university or BAS program.

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Human & Public Services



### Certificate of Completion, Paralegal

The Paralegal Certificate of Completion is designed for students who wish to prepare for a career in the Paralegal field. Paralegal graduates can work in a variety of areas including but not limited to: government services, government or private law firms, financial institutions, etc. This program offers coursework intended to prepare students for immediate employment, however, coursework may transfer to a four-year university or BAS program.

The Paralegal Certificate of Completion is available only to students who have completed a bachelor's degree.

### Contact Information

Contact information is available on the [Paralegal](#) programs website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Effectively draft a variety of legal documents.
2. Conduct legal research.
3. Apply legal research to legal writing.
4. Demonstrate organizational skills.
5. Demonstrate effective interviewing skills.
6. Recognize the ethical rules governing the practice of law.
7. Apply legal concepts to factual scenarios.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Human & Public Services pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		LEGL 1500	Introduction to Paralegal Studies	3	<b>Milestone-</b> Completion of LEGL 1500 as a pre or co-requisite of all other LEGL courses.
		LEGL 1710	Legal Research and Writing I	3	
		BADM 2010 OR LEGL elective	Legal Environment for Business OR an approved LEGL elective	3	<b>Choice Point-</b> See listing of approved program LEGL electives and offering rotation in the Approved Electives* section below.  <b>Choice Point-</b> Students may choose to complete a LEGL elective during the summer semester.
			Choose an approved LEGL elective	3	
			Semester Total	12	



## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		LEGL 1720	Legal Research and Writing II	3	<b>Choice Point-</b> See listing of approved program LEGL electives and offering rotation in the Approved Electives section below. <b>Choice Point-</b> Students may choose to complete a LEGL elective during the summer semester.
		LEGL 2550	Evidence and Investigation	4	
			Choose an approved LEGL elective	3	
			Choose an approved LEGL elective	3	
			Semester Total	12	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		LEGL 2500	Civil Procedure and Litigation	3	<b>Choice Point-</b> See listing of approved program LEGL electives and offering rotation in the Approved Electives* section below.
			Choose an approved LEGL elective	3	
			Semester Total	6	

Program Credit Hour Total	30
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## Approved Program Electives

The Paralegal certificate program requires faculty approved LEGL electives. Below is a listing of LEGL electives and the scheduled rotations in which the courses are offered. Students should be prepared to take the LEGL elective(s) scheduled in that particular semester.

### LEGL Courses

BADM 2010 (fall, spring, summer – online only in summer)

LEGL 1800 (summer only, odd years)

LEGL 2560 (fall only, every three years)

LEGL 2570 (spring only, even years)

LEGL 2610 (fall only, every three years)

LEGL 2630 (spring only, odd years)

LEGL 2650 (spring only, odd years)

LEGL 2670 (spring only, even years)

LEGL 2680 (fall only, every three years)

LEGL 2830 (summer only, even years)

LEGL 2990 (fall, spring)

## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The Paralegal program is intended for students to enter the workforce after graduation. Graduates may work in law firms, state or federal government offices, financial institutions, or title companies.

Additional information on careers in the Paralegal field available through [Career Coach](#).

## Transfer Information

The Paralegal program offers coursework intended to prepare students for immediate employment; however, coursework may transfer to a four-year university or BAS program.

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Human & Public Services



### Associate of Science, Psychology

The AS Psychology program is designed for students who wish to explore and prepare for a wide range of career options in social and human services fields. Students explore a broad range of psychological fields, including child development, abnormal behavior, human social functioning, the study of the brain, and research methods. Students also engage in an array of assignments and activities designed to bring course concepts to the real world, including writing case studies of abnormal behavior, engaging in child observations, and performing an original research study. Completing this AS degree may qualify students for an entry-level position.

### Contact Information

Contact information is available on the [Psychology](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Demonstrate a knowledge base in psychology
2. Demonstrate scientific inquiry and critical thinking
3. Demonstrate ethics and social responsibility in a diverse world
4. Demonstrate communication skills
5. Demonstrate professional development

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Human & Public Services pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion ENGL 1010 as a prerequisite for other courses. <b>Choice Point-</b> Students planning to articulate to a Bachelor of Social Work program should take POLS 1000.
WC	✓	ENGL 1010	English I: Composition	3	
OC	✓	COMM 2010	Public Speaking	3	
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course, POLS 1000 recommended	3	
		PSYC 1000	General Psychology	3	
			Semester Total	15	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	✓	STAT 2070	Introductory Statistics for the Social Sciences	4	<b>Milestone-</b> Completion STAT 2070 completes the math general education requirement in the first year <b>Choice Point-</b> BIOL 1003 is the recommended National Sciences/Life Science course
NSL		BIOL 1003 OR BIOL 1010	Current Issues in Biology OR General Biology	4	
		PSYC 2300	Developmental Psychology	3	
		PSYC 2340	Abnormal Psychology	3	
			Semester Total	14	

### Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HC			Choose an approved Human Culture course	3	<b>Choice Point-</b> Students planning to pursue a bachelor degree in Social Work should take SOWK 2000.
		SOWK 2000 OR CNSL 2300	Introduction to Social Work OR Counseling Skills	3	
		PSYC 2000	Research Psychological Methods	4	
PS/NSP			Choose an approved Natural Science/Physical Science course	4	
		PSYC 2380	Social Psychology	3	
			Semester Total	17	

### Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
CE			Choose an approved Creative Expression course	3	<b>Choice Point-</b> Students planning to pursue a bachelor degree in Social Work should take PYSC 2080.  <b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.  <b>Milestone-</b> Completion of AS, Psychology
		ECON 1010	Principles of Macroeconomics	3	
		PSYC 2080 OR PSYC 2210	Biological Psychology OR Drugs and Behavior	3	
		SOC 1000	Sociological Principles	3	
	√		Choose an approved Psychology elective course from EDST, CNSL, CRMJ, or PSYC	3	
		PSYC 2395	Psychology Capstone	1	
			Semester Total	16	

Program Credit Hour Total	62
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### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. People who study psychology most often become employed in the helping professions such as counseling, social work and therapy.

Additional information on careers in Psychology is available through [Career Coach](#).

### Transfer Information

The AS Psychology program offers coursework intended to transfer to a four-year university, allowing students to pursue a bachelor degree in Psychology or Social Work. For optimal employment opportunities, bachelor and graduate level degree attainment is recommended.

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Human & Public Services



### Associate of Arts, Secondary Education

The Secondary Education program is designed for students who wish to explore the education field. This program offers coursework intended to transfer to a four-year college or university. Students can pursue a baccalaureate degree in Secondary Education for a teaching career in a public or private school setting at the junior high and high school level. This program requires that students successfully pass a criminal background check.

### Contact Information

Contact information is available on the [Education](#) programs website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Examine how diverse learners develop in cognitive, linguistic, social, emotional, and physical capacities. (Based on InTASC "The Learner and Learning" competencies #1, #2, & #3)
2. Formulate developmentally appropriate instructional strategies through the creation of authentic, meaningful learning experiences.
3. Create formative and summative assessment applications to improve both student learning and teacher decision-making.
4. Appraise one's professional commitment, leadership ability, collaborative role, and ethical responsibility in order to improve pedagogical practice.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Human & Public Services pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion ENGL 1010 as a prerequisite for other courses.  <b>Choice Point-</b> Students must pass a background check and maintain a minimum GPA to continue in the program. See Program Comments for more information.
WC	✓	ENGL 1010	English I: Composition	3	
OC	✓	COMM 2010	Public Speaking	3	
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course	3	
		EDFD 1010	Introduction to Teaching	3	
			Semester Total	15	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	✓	STAT 2070	Introductory Statistics for the Social Sciences	4	<b>Milestone-</b> Completion English and math in the first year.  <b>Choice Point-</b> Students must pass a background check and maintain a minimum GPA to continue in the program. See Program Comments for more information.
NSL		BIOL 1003	Current Issues in Biology	4	
CE	✓		Choose an approved Creative Expression course	3	
HC		GEOG 1000	World Geography	3	
		EDST 2450	Foundations of Development & Learning	3	
			Semester Total	17	

### Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ITEC 2360	Teaching with Technology	3	<b>Choice Point-</b> See listing of approved content specific program electives in the Program Information section below.
		EDST 2550	Education Assessment	3	
		EDCI 2440	Classroom Management	2	
			Choose an approved Program Elective	3	<b>Choice Point-</b> Students must pass a background check and maintain a minimum GPA to continue in the program. See Program Comments for more information.
			Choose an approved Program Elective	3	
			Semester Total	14	

### Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		EDEX 2484	Intro to Special Education	3	<b>Choice Point-</b> See listing of approved content specific program electives in the Program Information section below.
		EDUC 2100	Practicum in Teaching	2	
			Choose an approved Program Elective	3	
			Choose an approved General Education course	3	
PS/NSP		GEOG 1010	Introduction to Physical Geography	4	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport. <b>Milestone-</b> Completion of AA, Secondary Education.
		OR	OR		
		GEOL 1100	Physical Geology		
			Semester Total	15	

Program Credit Hour Total	61
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### Approved Program Electives

The approved Secondary Education courses that students may choose from for the content area in which they choose to teach include:

Agriculture: AECL 1000, AECL 2010, AGECE 1010, ANSC 1010, ANSC 2020, RGMG 2000

Art: ART 1050, ART 110, ART 1120, ART 1130, ART 2010, ART 2020, ART 2210, ART 2410, ART 2420

English: ENGL 2020, ENGL 2210, Foreign Language (take 8 credits in the same language)

World Language: SPAN 1010, SPAN 1020, SPAN 2030

Math: MATH 2200, MATH 2205, MATH 2210, MATH 2250, MATH 2310

Science: CHEM 1020, PHYS 1110

Social Studies: HIST 1251, HIST 1211, HIST 1221, HIST 2290, HIST 1110 or HIST 1120, POLS 1000, ECON 1010 or ECON 1020, ANTH 1100 or 1300, World Language – 8 credits in the same language

### Program Comments

Students must successfully pass a criminal background check and maintain a minimum GPA of 2.5 each semester to continue in the Secondary Education program.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program.

The following careers are based on a career path which starts with the Secondary Education degree at Laramie County Community College. Possible careers in or related to Secondary Education include Agriculture Extension Agents, Camp Counselors, Career/Technical Education, Coaches, College Faculty, Directors, Guidance Counselors, Paraprofessionals, Principal, Special Education Teachers, Substitute Teachers, Teachers – Middle and Secondary, and Tutors.

Students should be aware that many education career options might require additional licensure examinations as determined by each state.

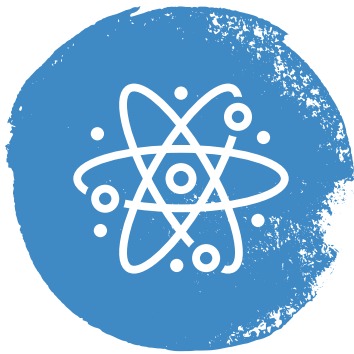
Additional information on careers in Secondary Education is available through [Career Coach](#).

## **Transfer Information**

The Secondary Education program is intended for students who are wishing to transfer to a university and obtain a Bachelor's or Master's degree. Most of the potential careers within the field of Education require you to transfer and continue your education at the next level.

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.





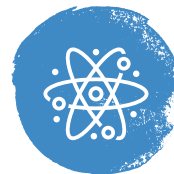
# STEM Pathway

The STEM Pathway is designed for students who wish to explore a wide range of career options in science, technology, engineering, or mathematics in anticipation of selecting a degree in one of these specific fields. After the first semester of this degree, students will either branch off into a specific STEM program or work closely with their advising team to select appropriate electives.

This program offers necessary course work to transfer to a four-year university, allowing students to pursue a general baccalaureate degree or further education in STEM. Many careers in STEM will require advanced degrees.

- Science, Technology, Engineering & Math (STEM)
- Biology
- Biomedical Sciences
- Computer Science
- Engineering
- Physical Science

## Pathway: Science, Technology, Engineering, & Math (STEM)



### Associate of Science, STEM

The STEM program is designed for students who wish to explore a wide range of career options in science, technology, engineering, or mathematics in anticipation of selecting a degree in one of these specific fields.

After the first semester of this program, students will either branch off into a specific STEM program or work closely with their advising team to select appropriate courses. Students will have the opportunity to accomplish their individual career/academic goals and interests and ensure their credits/time to graduation are minimized. This degree offers necessary course work to transfer to a four-year university, allowing students to pursue a general baccalaureate degree or further education in STEM. Many careers in STEM will require advanced degrees.

### Contact Information

Contact information is available on the [Science, Technology, Engineering, & Math](#) website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Solve problems in the fields of STEM
2. Follow ethical standards in STEM
3. Effectively communicate in the STEM fields
4. Examine STEM fields in historical and contemporary contexts

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the STEM pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion MATH 1400 or higher as a prerequisite for other courses.
QL	✓	MATH 1400	College Algebra or higher	3-4	
NSP	✓	CHEM 1020	General Chemistry I	4	<b>Choice Point-</b> Students choosing to pursue an Associate degree in Computer Science, Engineering, or Natural Sciences will need to change programs of study following their first semester. Students should work with their Advising Team when making that change.
	✓	COSC 1010 OR ES 1060 OR BIOL 1010	Choose one: Intro to Computer Science OR Intro to Engineering Computing OR General Biology	3-4	
			Semester Total	13-15	<b>Choice Point-</b> See Program Comments below regarding Math course options if students place higher than MATH 1400.

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
WC	✓	ENGL 1010	English Composition	3	<b>Milestone-</b> Completion of college level English  <b>Choice Point-</b> Students who did not take BIOL 1010 in the 1st semester need to take BIOL 1010.  <b>Choice Point-</b> If you completed BIOL 1010 in the first semester please choose two courses from the list.  <b>Choice Point-</b> Students choosing to pursue a bachelor's degree in Math should work with their advising team to select from approved electives.  <b>Choice Point-</b> See Program Comments below regarding Math course options if students place higher than MATH 1405.
	✓	MATH 1405	Pre-Calculus Trigonometry or higher	3-4	
PS/NSL	✓	BIOL 1010	General Biology	4*	
			Choose two:	3-8	
		COSC 1010	Intro to Computer Science		
		COSC 2409	Programming		
		ES 1060	Introduction to Engineering Computing		
		BIOL 2022	Animal Biology		
		BIOL 2023	Biology of Plants and Fungi		
		PHYS 1110	General Physics I		
		PHYS 1310	College Physics I		
		CHEM 1030	General Chemistry II		
		MICR 2240	Medical Microbiology		
		ES 2110	Statics		
		MATH 22XX	MATH higher than 2200		
			Semester Total	12-15	

## Third Semester (Generally Summer)

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course	3	
		STAT 2050	Fundamentals of Statistics	4	
			Semester Total	7	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	✓	MATH 2200	Calculus 1	4	
OC	✓	COMM 2010	Public Speaking	3	
			Choose an approved STEM elective course.	3-4	
HC	✓	ANTH 1200	Introduction to Cultural Anthropology	3	
		OR	OR		
		GEOG 1000	World Geography		
		OR	OR		
		ECON 1000	Global Economic Issues		
			Semester Total	13-14	

## Fifth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
CE	√		Choose an approved Creative Expression course.	3	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.
			Choose an approved STEM elective course.	3-4	
			Choose an approved STEM elective course.	3-4	
			Choose an elective	3	
			Choose an elective	3	
			Semester Total	15-17	
Program credit hour total				60-68	

## Approved Program Electives

Students may choose from the following approved STEM elective subjects: ASTR, BIOL, CHEM, COSC, ES, GEOG, GEOL, MATH, MICR, PHYS, STAT, and ZOO.

Recommended electives: ECON 1000, AECL 1000, HIST 2290

## Program Comments

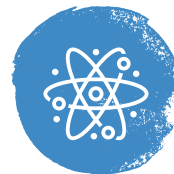
The STEM program may take longer than two years for students whose initial math course is not Calculus I due to the prerequisites of the math courses. Students should enroll in the highest-level math course for which they qualify. Starting in a course above MATH 1400 will reduce the credit hours needed to complete this degree, and may not require a summer semester. Students should work closely with their Advising Team.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Additional information on careers in STEM is available through [Career Coach](#).

## Transfer Information

The STEM program is well suited for transfer to a Bachelor degree. LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Science, Technology, Engineering, & Math (STEM)



### Associate of Science, Biology

The Biology program prepares students for careers in the dynamic and rapidly changing fields of life science. This program covers a wide spectrum of disciplines from wildlife and conservation to molecular biology and human medicine. Recent advancements in molecular, cellular and computational biology have led to expanded employment opportunities for biological and life scientists. Students planning careers in biology, biochemistry, botany, conservation, ecology, forestry, medicine, microbiology, wildlife or zoology should complete this curriculum. The successful completion of this program leads to an Associate of Science degree with anticipated transfer to a four-year program. Through the Biology program, students will explore a range of biological science fields and can participate in authentic scientific research. Due to the diversity of opportunities, we encourage students to contact Biology program faculty for more information about how this program aligns with student's career goals.

### Contact Information

Contact information is available on the [Science](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply scientific principles to solve problems.
2. Evaluate primary scientific or technical literature.
3. Examine the role science plays in historical or contemporary issues.
4. Communicate scientific information.
5. Explain ethical scientific behavior.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the STEM pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion MATH 1400 or higher as a prerequisite for other courses.  <b>Choice Point-</b> See Program Comments below regarding Math course options if students place higher than MATH 1400.
QL	✓	MATH 1400	College Algebra or higher	3-4	
NSP	✓	CHEM 1020	General Chemistry I	4	
PS/NSL	✓	BIOL 1010	General Biology	4	
			Semester Total	14	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
WC	✓	ENGL 1010	English I: Composition	3	<b>Milestone-</b> Completion ENGL 1010 as a prerequisite for other courses.  <b>Choice Point-</b> Students should consult with their Advising Team before choosing Animal Biology or Microbiology.  <b>Choice Point-</b> See Program Comments below regarding Math course options if students place higher than MATH 1405.
		CHEM 1030	General Chemistry II	4	
		BIOL 2022 OR MICR 2240	Animal Biology OR Medical Microbiology	4	
		MATH 1405	Pre-calculus Trigonometry or higher	3	
optional		BIOL 1390	Scientific Research I	4	
			Semester Total	14-18	

## Third Semester – Summer Session

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
OC	✓	COMM 2010	Public Speaking	3	<b>Choice Point-</b> Students can switch this course option with another course from the 4th semester. For example, students could instead take MATH 2200 in the 3rd semester and COMM in the 4th semester.
			Semester Total	3	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HC	✓	ANTH 1200 OR GEOG 1000 OR ECON 1000	Introduction to Cultural Anthropology OR World Geography OR Global Economic Issues	3	<b>Choice Point-</b> Consult with your Advising Team prior to choosing Science Electives. See the list of approved electives below.
		MATH 2200	Calculus I	4	
			Choose an approved Science elective	4	
			Choose an approved Science elective	4	
			Semester Total	15	

## Fifth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
CE	✓		Choose an approved Creative Expression course	3	<b>Choice Point-</b> Consult with your Advising Team prior to choosing Science Electives. See the list of approved electives below.  <b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.  <b>Milestone-</b> Completion of AS Biology degree.
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course	3	
			Choose an approved Science elective	4	
		STAT 2050	Fundamentals of Statistics	4	
Optional <sup>A</sup>			Choose an approved Science elective	4	
			Semester Total	14-18	

Program credit hour total	60-68
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## Approved Program Electives

Students may choose from the following approved Biology approved electives:

BIOL 2022, BIOL 2023, BIOL 1390, BIOL 2390, BIOL 2465, CHEM 2420, CHEM 2440, COSC 1010, GEOL 1100, GEOL 1200, MICR 2240, PHYS 1110, PHYS 1120, PHYS 1310, PHYS 1320, ZOO 2010, ZOO 2015, ZOO 2020, ZOO 2025, and ZOO 2450. ES 1060 will be accepted as a science elective for the AS Biology if taken during enrollment in the STEM program; however, it is not a recommended elective.

## Program Comments

The Biology program may take longer than two years for students whose initial math course is not Calculus I due to the prerequisites of the math courses. Students should enroll in the highest-level math course for which they qualify. Starting in a course above MATH 1400 will reduce the credit hours needed to complete this degree, and may not require a summer semester. Students should work closely with their Advising Team.

^Optional courses are not eligible for Federal Financial Aid funding.

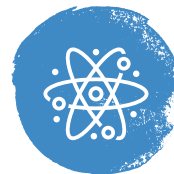
The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Possible careers in or related to Biology include Biological or Life Scientist.

Additional information on careers in Biology is available through [Career Coach](#).

## Transfer Information

The Biology program is well suited for transfer to a Bachelor's level degree in Biology, Biochemistry, Botany, Conservation, Ecology, Forestry, Microbiology, or Zoology. LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Science, Technology, Engineering, & Math (STEM)



### Associate of Science, Biomedical Sciences

The Biomedical Sciences program is designed for students who wish to improve the lives and health of their community by serving as a doctor of medicine, veterinary, pharmacy or dentistry. Students who complete this program achieve an Associate of Science degree with the necessary course work to apply to a four-year university or medical-related professional school. Each university and professional school have specific course requirements; consultations with LCCC's network of advisors and faculty mentors is highly recommended to plan coursework that meets the requirements of the student's transfer school of choice. Students in the Biomedical Science program have the opportunity to explore a range of medical professional fields and can participate in disease-centered biomedical research on our campus.

### Contact Information

Contact information is available on the [Science](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply scientific principles to solve problems.
2. Communicate scientific information.
3. Explain ethical scientific behavior.
4. Evaluate primary scientific or technical literature.
5. Examine the role science plays in historical or contemporary issues.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the STEM pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion MATH 1400 or higher as a prerequisite for other courses. <b>Choice Point-</b> See Program Comments below regarding Math course options if students place higher than MATH 1400.
QL	✓	MATH 1400	College Algebra or higher	3	
NSP	✓	CHEM 1020	General Chemistry I	4	
PS/NSL	✓	BIOL 1010	General Biology	4	
			Semester Total	14	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
WC	✓	ENGL 1010	English I: Composition	3	<b>Milestone-</b> Completion ENGL 1010 as a prerequisite for other courses. <b>Choice Point-</b> See Program Comments below regarding Math course options if students place higher than MATH 1405.
		CHEM 1030	General Chemistry II	4	
		BIOL 2022	Animal Biology	4	
		MATH 1405	Pre-calculus Trigonometry	3	
HC	✓	ANTH 1200 OR PYSC 1000 OR SOC 1000	Cultural Anthropology OR Introduction to Psychology OR Introduction to Sociology	3	
			Semester Total	17	

### Third Semester (Summer)

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
OC	✓	COMM 2010	Public Speaking	3	
CE	✓		Choose a Creative Expression course	3	
			Semester Total	6	

### Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course	3	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.
		MATH 2200	Calculus I	4	
		ZOO 2010 OR PHYS 1110 OR CHEM 2420	Choose two of the following courses: Anatomy & Physiology I OR General Physics I (Fall Only) OR Organic Chemistry I (Fall Only)	8	
			Semester Total	15	

### Fifth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ECON 1010 OR ECON 1020 OR STAT 2050	Choose one of the following: Principles of Macroeconomics OR Principles of Microeconomics OR Fundamentals of Statistics	3	<b>Choice Point-</b> Students should complete courses from previous semester's sequence.  <b>Milestone-</b> Completion of AS Biomedical Sciences degree.
		ZOO 2020 OR PHYS 1120 OR CHEM 2440	Choose two of the following courses: Anatomy & Physiology II OR General Physics II (Spring Only) OR Organic Chemistry II (Spring Only)	8	
	✓	MICR 2240 OR BIOL 1390 OR COSC 1010 OR ES 1060	Medical Microbiology OR Scientific Research I OR Introduction to Computer Science OR Introduction to Engineering Computing	3-4	
			Semester Total	14-16	

Program credit hour total	66-68
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## Program Comments

The Biomedical Sciences program may take longer than two years for students whose initial math course is not Calculus I due to the prerequisites of the math courses. Students should enroll in the highest-level math course for which they qualify. Starting in a course above MATH 1400 will reduce the credit hours needed to complete this degree, and may not require a summer semester. Students should work closely with their Advising Team.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Some careers in or related to Biomedical Sciences will require a Bachelor's or Master's degree.

Additional information on careers in Biomedical Sciences is available through [Career Coach](#).

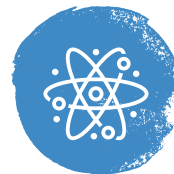
## Transfer Information

The Biomedical Sciences program prepares students to apply to professional schools, including but not limited to pharmacy, medical, veterinary, and dental schools. Students must work closely with their Advising Team to choose proper prerequisite courses for the school to which they intend to apply.

Various professional schools have different requirements. Students are recommended to check the specific requirements of the school(s) to which they intend to apply when choosing these courses in their program of study. For example, students going to pharmacy schools should take Organic Chemistry I and II, and Anatomy & Physiology I and II. Students going to medical, veterinary, and dental schools should take General Physics I and II and Organic Chemistry I and II. Additionally, many dental schools are requiring students to take major prerequisites at four-year institutions; students should check with their advising team and the dental school they intend to apply to before registering for courses.

The Biomedical Services program is well suited for transfer to a Bachelor's level degree. LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Science, Technology, Engineering, & Math (STEM)



### Associate of Science, Computer Science

There are more software jobs than can be filled with current graduates, with this remaining true for the foreseeable future. These are high-paying jobs housed in rich working environments. Software-related work is a highly creative endeavor and interesting design problems arise in every project. The creative aspect of the work is stimulating and can sustain an entire career. Traditional areas of computer science such as graphics, software engineering, networks, databases, multimedia, and artificial intelligence remain strong, with job growth being driven by advances in robotics and the fundamental impact of computer science in nearly every industry. There are many challenging problems remaining for computer scientists to solve. The Associate of Science in Computer Science provides a foundation for students to complete their baccalaureate degree at a four-year institution in the many specialized concentrations in the broad category of Computer Science.

### Contact Information

Contact information is available on the [Computer Science](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Design algorithms to solve a variety of problems using programming constructs and data structures.
2. Implement previously designed algorithms into computer code.
3. Test computer code for accuracy and completeness.
4. Document computer programs.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the STEM pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion MATH 1400 or higher as a prerequisite for other courses.
QL	✓	MATH 1400	College Algebra or higher	3	
NSP	✓	CHEM 1020	Chemistry I	4	<b>Choice Point-</b> See Program Comments below regarding Math course options if students place higher than MATH 1400.
	✓	COSC 1010	Introduction to Computer Science	4	
			Semester Total	14	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
			Choose an elective course – COSC 2409 Recommended	3	<b>Choice Point-</b> See Program Comments below regarding Math course options if students place higher than MATH 1405.
	✓	MATH 1405	Trigonometry or higher	3	
WC	✓	ENGL 1010	English 1: Composition	3	
PS/NSL	✓	BIOL 1010	Biology	4	
OC	✓	COMM 2010	Public Speaking	3	
			Semester Total	16	

### Third Semester (Summer)

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
	√	MATH 2200	Calculus I	4	<b>Choice Point-</b> Students who start below Calculus I should take Calc I during the summer to stay on track.

### Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HSI	√		Choose from an approved U.S./ Wyoming Constitution course	3	
		COSC 1030	Computer Science I	4	
		MATH 2205	Calculus II	4	
	√	STAT 2050	Fundamentals of Statistics	4	
			Semester Total	15	

### Fifth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		COSC 2300	Discreet Structures	3	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.  <b>Milestone-</b> Completion of AS Computer Science degree.
		COSC 2030	Computer Science II	4	
		MATH	Choose any Math above MATH 2205 (except STAT or MATH 2300)	3-4	
HC	√	ANTH 1200 OR GEOG 1000 OR ECON 1000	Introduction to Cultural Anthropology OR World Geography OR Global Economic Issues	3	
CE	√		Choose a Creative Expression course	3	
			Semester Total	16-17	

Program credit hour total	65-66
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### Program Comments

The Computer Science program may take longer than two years for students whose initial math course is not Calculus I due to the prerequisites of the math courses. Students should enroll in the highest-level math course for which they qualify. Starting in a course above MATH 1400 will reduce the credit hours needed to complete this degree, and not require a summer semester. Students should work closely with their Advising Team.

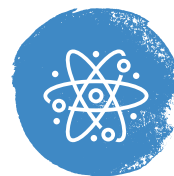
The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Some careers in or related to Computer Science will require a Bachelor's or Master's degree. Typical job titles for graduates with a degree in Computer Science include Programmer, Software Engineer, IT consultant, Cybersecurity consultant, Information systems manager, Database administrator, multimedia programmer, Systems analyst, and Games developer.

Additional information on careers in Computer Science is available through [Career Coach](#).

### Transfer Information

The Computer Science program is well suited for transfer to a Bachelor's in Computer Science. LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/ university and program to which they plan to transfer.

## Pathway: Science, Technology, Engineering, & Math (STEM)



### Associate of Science, Engineering

A degree in engineering enables the students to pursue a variety of career paths toward high-paying, in-demand jobs. Engineering is an exacting applied science that requires a broad background of analytical skills. Many branches of engineering require specialization at the junior and senior levels. The Engineering program at Laramie County Community College provides students a general, transferable background in mathematics and engineering science necessary for later specialization. The program's transferable coursework is conducted in small classes, with more individual attention than at research-oriented institutions. The length of the program depends on the student's initial math placement, with each student's path planned by an advising team. With an Associate of Science in Engineering, students acquire a strong foundation in mathematics and engineering science which enables them to transfer and successfully complete a Bachelor of Science in engineering at a four-year institution.

### Contact Information

Contact information is available on the [Engineering](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply mathematical foundations to engineering science
2. Describe the scientific background required for engineering science
3. Solve engineering problems
4. Evaluate problem solutions with experiments
5. Evaluate engineering problem solutions with computer software

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the STEM pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion MATH 1400 or higher as a prerequisite for other courses. <b>Choice Point-</b> See Program Comments below regarding Math course options if students place higher than MATH 1400.
QL	✓	MATH 1400	College Algebra	3	
NSP	✓	CHEM 1020	General Chemistry I	4	
		ES 1060	Introduction to Engineering Computing	3	
			Semester Total	13	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
WC	✓	ENGL 1010	English I: Composition	3	<b>Milestone-</b> Completion ENGL 1010 as a prerequisite for other courses. <b>Choice Point-</b> See Program Comments below regarding Math course options if students place higher than MATH 1405.
	✓	MATH 1405	Trigonometry	3	
PS/NSL	✓	BIOL 1010	General Biology	4	
HSI	✓		Choose from an approved U.S./ Wyoming Constitution course	3	
			Semester Total	13	



### Third Semester (Summer)

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		MATH 2200	Calculus I	4	<b>Choice Point-</b> Students who start below Calculus I should take Calc I during the summer to stay on track. <b>Milestone-</b> Completion of MATH 2200, a prerequisite for all ES courses higher than ES 1060
			Semester Total	4	

### Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		MATH 2205	Calculus II	4	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.
		ES 2110	Statics	3	
OC	✓	COMM 2010	Public Speaking	3	
CE	✓		Choose a Creative Expression course	3	
HC		ANTH 1200	Introduction to Cultural Anthropology	3	
			Semester Total	16	

### Fifth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		MATH 2210	Calculus III	4	<b>Milestone-</b> Completion of AS Engineering degree.
		ES 2120	Dynamics	3	
		ES 2410	Mechanics of Materials	3	
		MATH 2310	Applied Differential Equations	3	
		PHYS 1320	College Physics II	4	
			Semester Total	17	
Program credit hour total				63	

### Program Comments

The Engineering program may take longer than two years for students whose initial math course is not Calculus I due to the prerequisites of the math courses. Students should enroll in the highest-level math course for which they qualify. Starting in a course above MATH 1400 will reduce the credit hours needed to complete this degree, and not require a summer semester. Students should work closely with their Advising Team.

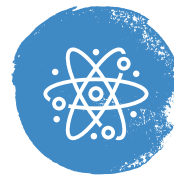
The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Some careers in or related to Engineering will require a Bachelor's or Master's degree. Typical job titles for graduates with a degree in Engineering include agricultural engineers, automotive engineers, chemical engineers, civil engineers, computer engineers and drafting/design engineers.

Additional information on careers in Engineering is available through [Career Coach](#).

### Transfer Information

The Engineering program is well suited for transfer to a Bachelor of Science in Engineering. LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Science, Technology, Engineering, & Math (STEM)



### Associate of Science, Physical Science

The Physical Science program prepares students for careers in a dynamic spectrum of fields, including but not limited to physics, chemistry, and geoscience. Recent advancements have led to expanded employment opportunities for scientists in a field of physical science. Students who complete this program achieve an Associate of Science degree with anticipated transfer to a four-year university. Students interested in a physical science field may choose to follow the curriculum outlined in this program as recommended by their advising team. Through the Physical Science program, students have the opportunity to explore a range of physical science fields and can participate in research on our campus.

### Contact Information

Contact information is available on the [Physical Science](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Apply scientific principles to solve problems.
2. Evaluate primary scientific or technical literature.
3. Examine the role science plays in historical or contemporary contexts.
4. Communicate scientific information.
5. Explain ethical scientific behavior.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the STEM pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion MATH 1400 or higher as a prerequisite for other courses.
QR	✓	MATH 1400	College Algebra	3	
NSP	✓	CHEM 1020	General Chemistry I	4	
PS/NSL	✓	BIOL 1010	General Biology	4	<b>Choice Point-</b> See Program Comments below regarding Math course options if students place higher than MATH 1400.
		OR GEOL 1200	OR History of Earth		
			Semester Total	14	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
WC	✓	ENGL 1010	English I: Composition	3	<b>Milestone-</b> Completion ENGL 1010 as a prerequisite for other courses.  <b>Choice Point-</b> See Program Comments below regarding Math course options if students place higher than MATH 1405.  <b>Choice Point-</b> Students should consult with their Advising Team before choosing Fundamentals of Statistics, Physical Geology, or History of Earth.
	✓	MATH 1405	Pre-Calculus Trigonometry	3	
		CHEM 1030	General Chemistry II	4	
		STAT 2050 OR GEOL 1100 OR GEOL 1200	Fundamentals of Statistics OR Physical Geology OR History of Earth	4	
			Semester Total	14	

## Third Semester (Summer)

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
OC	✓	COMM 2010	Public Speaking	3	<b>Choice Point-</b> Students who start below Calculus I should take Calc I during the summer to stay on track.
	✓	MATH 2200	Calculus I	4	
HC	✓	ANTH 1200 OR GEOG 1000 OR ECON 1000	Introduction to Cultural Anthropology OR World Regional Geography OR Global Economic Issues	3	
			Choose from an approved U.S./ Wyoming Constitution course	3	
			Semester Total	13	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
CE	✓		Pick any Creative Expression course	3	<b>Milestone-</b> Completion of the LCCC general education core and eligible for the Interstate Passport.  <b>Choice Point-</b> Students interested in Physics should take MATH 2250.  Students interested in Chemistry should take CHEM 2420.  Students interested in Geology should take STAT 2050.
		MATH 2205	Calculus II	4	
		PHYS 1310	College Physics I (not offered every semester)	4	
		MATH 2250 OR CHEM 2420 OR STAT 2050	Linear Algebra or OR Organic Chemistry I (fall only) OR Fundamentals of Statistics	3-4	
			Semester Total	14-15	

## Fifth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		PHYS 1320	College Physics II	4	<b>Choice Points-</b> A student interested in physics should choose combination (1); a student interested in chemistry should choose combination (2); and a student interested in geosciences should choose combination (3).  Students may choose to take Scientific Research I in addition to the required courses if it falls within the credit and time constraints.  <b>Milestone-</b> Completion of AS Physical Science degree.
		ES 1060	Introduction to Engineering Computation	3-4	
		OR COSC 1010	OR Introduction to Computer Science		
		1. MATH 2210 AND MATH 2310 OR 2. CHEM 2440 AND MATH 2210 OR BIOL 1390 OR 3. GEOG 1010 OR GEOG 1050 OR GEOG 1100 OR GEOG 1220 OR ASTR 1050	Choose one of the three combinations:  1. Calculus III AND Differential Equations  OR 2. Organic Chemistry II AND Calculus III OR Scientific Research I  OR 3. Choose two of the following:  Introduction to Physical Geography OR Introduction to Natural Resources OR Introduction to Geographic Information Systems OR Introduction to Geospatial Technology OR Survey of Astronomy	6-8	
Optional^		BIOL 1390	Scientific Research I	4	
			Semester Total	13-20	
Program credit hour total				68-76	

## Program Comments

The Physical Science program may take longer than two years for students whose initial math course is not Calculus I due to the prerequisites of the math courses. Students should enroll in the highest-level math course for which they qualify. Starting in a course above MATH 1400 will reduce the credit hours needed to complete this degree, and not require a summer semester. Students should work closely with their Advising Team.

<sup>A</sup>Optional courses are not eligible for Federal Financial Aid funding.

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Some careers in or related to Physical Science will require a Bachelor's or Master's degree. Typical job titles for graduates with a degree in Physical Sciences include work in quality control, technical sales & marketing, or research & development in a wide-variety of fields (such as engineering, pharmaceuticals, and new-product development). Many chemists work in lab-related settings, but employment is also available in education, consulting, publishing and other fields.

Additional information on careers in Physical Science is available through [Career Coach](#).

## Transfer Information

The Physical Science program is well suited for transfer to a Bachelor of Science program. LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.



# Trades & Technical Studies Pathway

The Trades & Technical Studies Pathway is designed for students who want to pursue a basic academic foundation. This program prepares individuals to apply technical knowledge and skills to repair and maintain an assortment of equipment across numerous careers.

This program is a great option for students who want a broad understanding of this area, those who like to build upon their apprenticeship or credit diploma for job growth, as well as those who are unsure which Trades & Technical Studies program is best for them. Students can easily transfer into a specific Trades & Technical Studies program after starting here.

- Trades & Technical Studies
- Automotive Body Repair
- Automotive Technology
- Computer Information Systems
- Cybersecurity
- Diesel Technology
- Electrical Technology
- HVAC/R
- Industrial Maintenance
- Industrial Systems Technology
- Plumbing Technology
- Welding
- Wind Energy

## Pathway: Trades & Technical Studies



### Associate of Applied Science, Trades & Technical Studies

The Trades & Technical Studies degree is designed for students who are undecided of which trade industry they would like to enter but want to gain valuable industry knowledge and pursue a basic academic foundation. Students may choose from a number of industry courses to either help them decide on a specialty area (automotive, auto body, diesel, electrical, HVAC, plumbing, wind energy, welding, etc.) or provide them a broad background of skills to enter the workforce.

The Trades & Technical Studies degree is also intended for individuals who desire to build upon prior learning: a Department of Labor-recognized apprenticeship training program, United States military training and degrees, or the LCCC Trades & Technical Studies Credit Diplomas; all of which bring demonstrated knowledge, skills, and competencies in their field as the technical foundation of the degree. Industry specific qualification training (e.g. Automotive Service Excellence (ASE), COMP-TIA, American Welding Society (AWS), etc.) will also be considered as a foundation for this degree. Students complete course work in the general education core and a selection of management courses to complete the degree program. Student's apprenticeship and training hours will be evaluated for awarding of credit on an individual basis.

### Contact Information

Contact information is available on the [Trades & Technical Studies](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Implement key human resource functions using industry-standard HR tools.
2. Relate business concepts to daily lives and careers through a general introduction of basic business concepts and principles.
3. Examine the modern supervisory environment and acquire techniques to establish themselves as first-line supervisors.
4. Apply basic management principles in solving problems encountered by first-line supervisors.
5. Demonstrate problem-solving skills in the context of their specific technical study program.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion of three general education courses, including ENGL 1010 as a prerequisite for other courses.
WC	✓	ENGL 1010	English I: Composition	3	
HSI	✓		Choose an approved U.S./ Wyoming Constitution course	3	<b>Milestone-</b> Introduction to Trades & Technical Studies courses and safety.
		IST 1520	Introduction to Industrial Safety OR Approved Trades & Technical Studies Course	3-5	
			Choose an Approved Trades & Technical Studies Course	3-5	<b>Choice Point-</b> Students interested in pursuing Diesel, Welding, HVAC, Industrial Maintenance, Plumbing, or Electrical coursework should take IST 1520.
					<b>Choice Point-</b> See Program Comments below for approved Trades & Technical Studies courses for each program.
			Semester Total	15-19	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	✓	MATH 1000	Problem Solving or higher	3-4	<b>Milestone-</b> Completion of remaining general education courses for AAS degree.
		MGT 1200	Human Resources Management	3	
		MGT 1000	Introduction to Supervision	3	
OC	✓	COMM 2010	Public Speaking	3	<b>Choice Point-</b> See Program Comments below for approved Trades & Technical Studies courses for each program.
			Approved Trades & Technical Studies Course	3-5	<b>Choice Point-</b> Students should choose a Credit Diploma in a specific trade by the end of this semester.
			Semester Total	15-18	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
			Approved Trades & Technical Studies Course	3-5	<b>Choice Point-</b> See Program Comments below for approved Trades & Technical Studies courses for each program.
			Approved Trades & Technical Studies Course	3-5	
			Approved Trades & Technical Studies Course	3-4	<b>Milestone-</b> Possible completion of the first Credit Diploma, dependent upon trade chosen. <b>Choice Point-</b> Enter the workforce or continue work on credit diploma
			Approved Trades & Technical Studies Course	3-4	
			Approved Trades & Technical Studies Course	3	
			Semester Total	15-21	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
			Approved Trades & Technical Studies Course	3-4	<b>Milestone-</b> Completion of one or more Credit Diplomas in a specific trade and the AAS in Trades & Technical Studies. <b>Choice Point-</b> Enter the workforce or continue to the Bachelors of Applied Science, Applied Management.
			Approved Trades & Technical Studies Course	3-4	
			Approved Trades & Technical Studies Course	3-4	
			Approved Trades & Technical Studies Course	3	
			Approved Trades & Technical Studies Course	3	
			Semester Total	15-18	

Program credit hour total	60-76
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## Approved Program Courses

### Fall Courses

**Automotive Body Repair:** AUBR 1500, AUBR 1540, AUBR 1550, AUBR 1910, AUBR 1920

**Automotive Technology:** AUTO 1510, AUTO 1765, AUTO 1500

**Computer Information Systems:** CMAP 1615, CMAP 1920

**Diesel Technology:** DESL 1501, DESL 1540, DESL 1610, DESL 1650

**Heating, Ventilation & Air Conditioning:** HVAC 1610

**Integrated Systems Technology:** IST 1660, IST 1661, IST 1710, IST 1711 DC, IST 1712, IST 1713

**Welding:** WELD 1755, WELD 1756, WELD 1771, WELD 2650

**Wind Energy:** WTT 1000, WTT 1100



### **Spring Courses**

**Automotive Body Repair:** AUBR 1710

**Automotive Technology:** AUTO 1740, AUTO 1500

**Computer Information Systems:** CMAP 1615, CMAP 1920

**Diesel Technology:** DESL 1700, DESL 1755, DESL 2950

**Electrical Technology:** ELTR 1516, ELTR 1600, ELTR 1611, ELTR 1621, ELTR 1631, ELTR 1641

**Heating, Ventilation & Air Conditioning:** HVAC 1600, HVAC 1610

**Integrated Systems Technology:** IST 1610, IST 1611

**Plumbing Technology:** FMT 1700, FMT 1710, FMT 1720, FMT 1730, HVAC 1600, CMGT 1520

### **Program Comments**

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. The Trades & Technical Studies degree is intended to give students the academic coursework helpful in obtaining the potential jobs. Possible careers in or related to Trades & Technical Studies include automotive, auto body, diesel, computer information systems, cybersecurity, electrical, HVAC, plumbing, wind energy or welding. Others use this program to help advance their existing technical current career, such as to move up to a first-line supervisor.

Additional information on careers in Trades & Technical Studies is available through [Career Coach](#).

### **Transfer Information**

This degree is well suited for those who may be interested in pursuing a Bachelor of Applied Science, Applied Management degree at Laramie County Community College.

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Trades & Technical Studies

### Credit Diploma, Automotive Body Repair

The Automotive Body Repair program is designed to prepare the student for employment in the automotive body repair business as well as to meet the needs of those who want to upgrade their skills or meet personal objectives in auto repair. This program is designed to prepare the student for entry into the workforce.



### Contact Information

Contact information is available on the [Automotive Body Repair](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Demonstrate use of safety measures and Personal Protective Equipment (PPE) selection for daily tasks in the Collision Repair/Refinishing shop, which comply with OSHA and EPA standards.
2. Demonstrate appropriate surface preparation, paint mixing and matching procedures for automotive painting and refinishing.
3. Repair and replace body panels and provide adjustments to non-structural automotive damage.
4. Repair structural automotive damage using inspection, accurate measurements, welding, cutting, alignment, and replacement.
5. Apply problem-solving skills to develop and execute an all-inclusive repair plan for a collision damaged vehicle, including task analysis, application, execution and reflection.
6. Apply collaborative skills in the context of auto body repair to accomplish a specific vehicle repair while meeting a specified deadline.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		AUBR 1500	Auto Body Hand/Hydraulic Tools	3	<b>Milestone-</b> Completion of the first semester of the Automotive Body Repair Credit Diploma.
		AUBR 1540	Auto Body Welding	3	
		AUBR 1550	Auto Body Repair I	3	
		AUBR 1910	Auto Paint I	3	
		AUBR 1920	Auto Paint II	4	
			Semester Total	16	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		AUBR 1560	Auto Body Repair II	3	<b>Milestone-</b> Completion of the Automotive Body Repair Credit Diploma.
		AUBR 1710	Frame and Chassis I	3	
		AUBR 1720	Frame and Chassis II	3	
		AUBR 1810	Collision Damage Repair I	3	<b>Choice Point-</b> Enter the job market or continue working on the Trades & Technical Studies AAS.
		AUBR 1930	Auto Paint III	4	
			Semester Total	16	

Program credit hour total	32
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## **Program Comments**

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Possible careers in or related to automotive body repair include Auto Body Repair Technician, Auto Body Repairman, Auto Body Technician, Body Technician, Collision Repair Technician, and Refinish Technician.

Additional information on careers in Automotive Body Repair is available through [Career Coach](#).

## **Transfer Information**

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Trades & Technical Studies



### Credit Diploma, Automotive Technology – Engine Management/Drivability

The Automotive Technology Engine Management/Drivability program is designed as the first in a series of two credit diplomas to prepare the student for employment in the automotive repair business as well as to meet the needs of those who want to advance their skills in automotive repair.

Completion of the Automotive Technology – Engine Management/Drivability Credit Diploma is required for enrollment in the Automotive Technology – Under Car/HVAC credit diploma courses.

### Contact Information

Contact information is available on the Automotive Technology program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Examine engine operation, design, and service procedures.
2. Demonstrate precision measuring, engine disassembly and reassembly.
3. Explore the basic theory of electricity: how to read and interpret wiring diagrams and how to diagnose and repair individual circuits.
4. Diagnose and repair various computerized and non-computerized ignition systems using ignition theory.
5. Develop a comprehensive understanding of all electrical components and systems with emphasis on problem diagnosis.
6. Analyze emission control as it applies to the fuel system.
7. Determine the nature of fuel and emission system problems leading to air pollutants from automobiles.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		AUTO 1510	Engine System Fundamentals	4	<b>Milestone-</b> Completion of Automotive Technology – Engine Management/ Drivability Credit Diploma.  <b>Choice Point-</b> Enter the job market or continue work on the Automotive Technology – Under Car/HVAC Credit Diploma or Trades & Technical Studies AAS.
		AUTO 1600	Fuel Systems I	4	
		AUTO 1765	Automotive Electrical	5	
		AUTO 2560	Automotive Ignition Systems	3	
			Semester Total	16	

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. Possible careers in or related to Automotive Technology include automotive technicians in dealerships as well as independent and franchise shops.

Additional information on careers in Automotive Technology is available through [Career Coach](#).

### Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/ university and program to which they plan to transfer.

## Pathway: Trades & Technical Studies

### Credit Diploma, Automotive Technology – Under Car/HVAC

The Automotive Technology – Under Car/HVAC program is designed as the second of two Credit Diplomas to prepare the student for employment in the automotive repair business as well as to meet the needs of those who want to upgrade their skills or meet personal objectives in auto repair. This program is designed to prepare the student for entry into the workforce.

Completion of the Automotive Technology – Engine Management/Drivability Credit Diploma is required for enrollment in the Automotive Technology – Under Car/HVAC credit diploma courses.



### Contact Information

Contact information is available on the [Automotive Technology](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Explore the theory, service, and repair of automotive braking systems.
2. Investigate anti-lock brake theory; the repair of service booster units, master cylinders, and wheel cylinders; caliper rebuilds; and drum and rotor service.
3. Investigate suspension and alignment theory: suspension systems will be diagnosed, measured, and repaired to Original Equipment Manufacturer (OEM) specifications. Wheel alignments will be performed on vehicles and adjusted to OEM specifications.
4. Assess 4-wheel center point adjustments/alignments.
5. Assess the theory of automatic transmissions.
6. Demonstrate the overhaul of automatic transmissions in popular use today.
7. Demonstrate the proper use of hand tools and specialized equipment and safety.
8. Investigate the theory of 3-speed and 4-speed manual transmissions.
9. Investigate basic heating and air conditioning theory.
10. Diagnose, repair, and recharge air conditioning systems to OEM specifications.
11. Diagnose and repair heating and air conditioning automatic systems.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		AUTO 1690	Manual Power Train Fundamentals	3	<b>Milestone-</b> Completion of Automotive Technology – Under Car/HVAC Credit Diploma.
		AUTO 1730	Automatic Transmissions	4	
		AUTO 1740	Brake Systems	3	<b>Milestone-</b> Eligible to sit for the Automotive Service Excellence (ASE) certification exam.
		AUTO 1760	Heating and Air Conditioning	3	
		AUTO 2550	Auto Alignment and Suspension	4	<b>Choice Point-</b> Enter the job market or continue work on the Trades & Technical Studies AAS.
			Semester Total	17	

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require

some work experience after graduation. Possible careers in or related to Automotive Technology include automotive technicians in dealerships as well as independent and franchise shops.

Additional information on careers in Automotive Technology is available through [Career Coach](#).

### **Transfer Information**

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Trades & Technical Studies

### Associate of Applied Science, Computer Information Systems

The Computer Information Systems program is specifically designed to prepare students for entry-level positions in fields related to Information Technology. The curriculum offers flexibility in meeting students' career needs. This program of study leads to an Associate of Applied Science degree in Computer Information Systems. Students can earn various credit diplomas and stackable industry certifications while concurrently earning this AAS.



### Contact Information

Contact information is available on the [Computer Information Systems](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Demonstrate appropriate use of system software in computer technology.
2. Design system software for a defined user group.
3. Select hardware and software applications specific to the needs of various user groups.
4. Identify needed changes in hardware and/or software use necessary for efficiency.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		CMAP 1615	Operating Systems	3	<b>Milestone-</b> Completion of Datacenter Technician Credit Diploma
		CMAP 1920	Computer Hardware Maintenance	4	
		CMAP 1960	Server Installation and Configuration	3	<b>Milestone-</b> Eligible to sit for CompTIA A+ Operating Systems, A+ PC Hardware, and Server+ certifications.
		CSCO 2000	Cisco: Internetworking I	3	
		HMDV 1510	Success in the Workplace: Soft Skills	3	<b>Choice Point-</b> Enter the job market or continue working on AAS in Computer Information Systems or AAS in Cybersecurity.
			Semester Total	16	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		CSCO 2010	Cisco: Advanced Internetworking	3	<b>Milestone-</b> Completion of Network Administrator (CCNA) Credit Diploma.
		CSCO 2020	Cisco: Advanced Internetworking II	3	
		CSEC 1500	Network Security Fundamentals	3	<b>Milestone-</b> Eligible to sit for COMPTIA Security + and CCNA (Cisco Certified Network Associate) industry certifications.
		CSEC 1510	Network Defense Principles	3	
		CSEC 1520	Network Attack Principles	3	<b>Choice Point-</b> Enter the job market or continue working on AAS in Computer Information Systems or AAS Cybersecurity.
		COSC 2409	Programming	3	
			Semester Total	18	



### Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Eligible to sit for Microsoft MCSA Server 2019 Part 1 and CompTIA Linux+ industry certifications.
WC	✓	ENGL 1010	English I: Composition	3	
		MSFT 2700	Microsoft Systems Associate I	4	
		LINX 2500	Linux Administration I	4	<b>Choice Point-</b> Enter the job market or continue working on AAS in Computer Information Systems
		LINX 2510	Linux Administration II	4	
			Semester Total	18	

### Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	✓	MATH 1400	College Algebra	3	<b>Milestone-</b> Eligible to sit for Microsoft MCSA parts 2 & 3.
OC	✓	COMM 2010	Public Speaking	3	
		MSFT 2710	Microsoft Systems Associate II	4	<b>Milestone-</b> Completion of Systems Administrator Credit Diploma.
		MSFT 2715	Microsoft Systems Associate III	4	
HSI	✓		Choose from Approved U.S./ Wyoming Constitution Courses	3	<b>Milestone-</b> Completion of AAS in Computer Information Systems
			Semester Total	17	

Program credit hour total	69
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### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. The Computer Information Systems degree is intended to give students the academic coursework helpful in obtaining the potential jobs. Possible careers in or related to Computer Information Systems include Computer Support Specialist, User Support Technician, Information Technology Specialist/Technician, Systems Administrator, Network Administrator, and Infrastructure Administrator.

Additional information on careers in Computer Information Systems is available through [Career Coach](#).

### Transfer Information

This degree is well suited for those who may be interested in pursuing a Bachelor of Applied Science, Applied Management degree at Laramie County Community College.

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/ university and program to which they plan to transfer.

## Pathway: Trades & Technical Studies

### Credit Diploma, CIS – Datacenter Technician

The CIS – Datacenter Technician program prepares students for entry-level employment in datacenters or other businesses that have need of computer technicians with training and/or certifications in basic computer repair, server installation, and networking. This program prepares students to take the industry certification CompTia exams A+ and Server+, as well as acquire the soft skills needed to be successful in an IT career.



### Contact Information

Contact information is available on the [Computer Information Systems](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Demonstrate essential knowledge and skills needed to design, configure, manage, and troubleshoot any wired and wireless network.
2. Support IT infrastructures through understanding of the most common hardware and software.
3. Plan, secure, and maintain IT environments using a variety of server equipment.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		CMAP 1615	Operating Systems	3	<b>Milestone-</b> Completion of CIS- Datacenter Technician Credit Diploma
		CMAP 1920	Computer Hardware Maintenance	4	
		CMAP 1960	Server Installation and Configuration	3	
		CSCO 2000	Cisco: Internetworking I	3	<b>Choice Point-</b> Enter the job market or continue working on AAS in Computer Information Systems or AAS in Cybersecurity.
		HMDV 1510	Success in the Workplace: Soft Skills	3	
			Semester Total	16	

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. Possible careers in or related to CIS – Datacenter Technician include data center technicians, network technicians, service center technicians, and field network technicians.

Additional information on careers in Computer Information Systems or Cybersecurity is available through [Career Coach](#).

### Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Trades & Technical Studies

### Credit Diploma, CIS – Network Administrator (CCNA)

The CIS – Network Administrator (CCNA) credit diploma is designed to provide students with the necessary skills in Cisco Networking Technology and to prepare students to take the Cisco certification for CCNA. Students must complete the Datacenter Technician Credit Diploma or have a minimum of (3) years industry experience and the CompTIA A+ certification.



### Contact Information

Contact information is available on the [Computer Information Systems](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Explain the role and function of network components and network topology architectures.
2. Configure and verify VLANs spanning multiple switches, layer 2 and layer 3 protocols, and wireless architecture.
3. Configure and verify IPv4 and IPv6 static routing.
4. Configure and verify NTP operating in client and server mode.
5. Define key security concepts (threats, vulnerabilities, exploits and mitigation techniques).

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		CSCO 2010	Cisco: Advanced Internetworking	3	<b>Milestone-</b> Completion of Network Administrator (CCNA) Credit Diploma. <b>Milestone-</b> Eligible to sit for COMPTIA Security + and CCNA (Cisco Certified Network Associate) industry certifications. <b>Choice Point-</b> Enter the job market or continue working on AAS in Computer Information Systems or AAS Cybersecurity.
		CSCO 2020	Cisco: Advanced Internetworking II	3	
		CSEC 1500	Network Security Fundamentals	3	
		CSEC 1510	Network Defense Principles	3	
		CSEC 1520	Network Attack Principles	3	
		COSC 2409	Programming	3	
			Semester Total	18	

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. Possible careers in or related to CIS – Network Administration include network engineers, network administrators, and information technology (IT) manager and systems administrators.

Additional information on careers in Computer Information Systems or Cybersecurity is available through [Career Coach](#).

### Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Trades & Technical Studies

### Credit Diploma, CIS – Systems Administrator

Students develop the knowledge and skills necessary to plan, install, configure, secure, update, monitor, and administer Microsoft and Linux server environments. Students learn to administer user accounts, data storage, backups, disaster recovery, network infrastructure, virtualization, high availability, and clustering as well as directory services. Students write system scripts in Microsoft PowerShell and Linux BASH shell. Students' subnet networks (IPv4 and IPv6) and configure basic networks and network infrastructure services. Students also experience configuring Microsoft services and Linux daemons. Successful completion of this program will help students be prepared to take the Cisco ICND1, CompTIA Linux+ (LPIC-1), Microsoft MCP, and the Microsoft Certified Systems Associate (MCSA) certifications.



### Contact Information

Contact information is available on the [Computer Information Systems](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Analyze IP-Based network devices, IP Subnetting and infrastructure configuration
2. Apply Linux and Microsoft administration knowledge and skills in accordance with industry standards, as measured by the Cisco, CompTIA, Microsoft, and Linux certification examinations.
3. Analyze server hardening and security techniques
4. Deploy network infrastructure services and configurations utilizing a multitude of resources, to include: scripting, automation, service utilization, and group policies.
5. Demonstrate installation and imaging Linux-based and Microsoft-based systems and server functions/roles, troubleshooting, and recovery methodologies.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		LINX 2500	Linux Administration I	4	
		LINX 2510	Linux Administration II	4	
		MSFT 2700	Microsoft Systems Associate I	4	
			Semester Total	12	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		CSCO 2000	Cisco: Internetworking I	3	<b>Milestone-</b> Completion of Systems Administrator Credit Diploma.  <b>Milestone-</b> Eligible to sit for Cisco ICND1, CompTIA Linux+ (LPIC-1), Microsoft MCP, and the Microsoft Certified Systems Associate (MCSA) certifications.
		CSCO 2010	Cisco: Advanced Internetworking I	3	
		MSFT 2710	Microsoft Systems Associate II	4	
		MSFT 2715	Microsoft Systems Associate III	4	
			Semester Total	14	

Program credit hour total	26
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## **Program Comments**

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. Possible careers in or related to CIS – Systems Administration include database administrators, network administrators, security administrators and web administrators.

Additional information on careers in this field is available through [Career Coach](#).

## **Transfer Information**

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Trades & Technical Studies

### Associate of Applied Science, Cybersecurity

The Associate of Applied Science in Cybersecurity degree prepares students for a career as a cybersecurity professional by providing them the knowledge and skills needed to defend information technology assets. Students develop and apply skills in intrusion prevention, analysis, response, and remediation to safeguard information while earning industry recognized certifications by vendors such as CompTIA, Cisco, and Microsoft.



### Contact Information

Contact information is available on the [Cybersecurity](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Demonstrate problem-solving skills in the context of computer technology.
2. Apply information security techniques to defend business assets from loss.
3. Demonstrate effective management of operating systems in relation to security techniques and considerations.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		CMAP 1615	Operating Systems	3	<b>Milestone-</b> Completion of Datacenter Technician Credit Diploma
		CMAP 1920	Computer Hardware Maintenance	4	
		CMAP 1960	Server Installation and Configuration	3	
		CSCO 2000	Cisco: Internetworking I	3	<b>Choice Point-</b> Enter the job market or continue working on AAS in Computer Information Systems or AAS in Cybersecurity.
		HMDV 1510	Success in the Workplace: Soft Skills	3	
			Semester Total	16	

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		CSCO 2010	Cisco: Advanced Internetworking	3	<b>Milestone-</b> Completion of Network Administrator (CCNA) Credit Diploma.
		CSCO 2020	Cisco: Advanced Internetworking II	3	
		CSEC 1500	Network Security Fundamentals	3	
		CSEC 1510	Network Defense Principles	3	<b>Choice Point-</b> Enter the job market or continue working on AAS in Computer Information Systems or AAS Cybersecurity.
		CSEC 1520	Network Attack Principles	3	
		COSC 2409	Programming	3	
			Semester Total	18	

### Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		LINX 2500	Linux Administration I	4	<b>Milestone-</b> Eligible to sit for PenTest+ (Hacker Certification) and Managing and Maintaining Microsoft Servers industry certifications
		CSEC 1530	Computer Forensics	3	
SS	✓	STRT1000	Strategies for Success	3	
		MSFT 2700	Microsoft Systems Associate I	4	<b>Choice Point-</b> Enter the job market or continue working on AAS in Cybersecurity
WC	✓	ENGL 1010	English Composition I	3	
			Semester Total	17	

### Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	✓	MATH 1400	College Algebra	3	<b>Milestone-</b> Eligible to sit for CISCO CCNA Cyber Operations Certification
OC	✓	COMM 2010	Public Speaking	3	
HSI	✓		Choose from Approved U.S./ Wyoming Constitution Courses	3	
		CSEC 1540	Incident Response	3	<b>Milestone-</b> Completion of AAS in Cybersecurity
		CSEC 1550	Malware Analysis	3	
		CSEC 1560	CyberSecurity Analysis	3	
			Semester Total	18	
Program credit hour total				69	

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. The Cybersecurity degree is intended to give students the academic coursework helpful in obtaining the potential jobs. Possible careers in or related to Cybersecurity include computer security consultant, computer support specialist, computer security analyst, penetration tester (ethical hacker), and security engineer.

Additional information on careers in Cybersecurity is available through [Career Coach](#).

### Transfer Information

This degree is well suited for those who may be interested in pursuing a Bachelor of Applied Science, Applied Management degree at Laramie County Community College.

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/ university and program to which they plan to transfer.



## Pathway: Trades & Technical Studies

### Credit Diploma, Diesel Technology

The Diesel Technology credit diploma is designed to prepare students for employment in the diesel industry. This one year program is the foundation toward employment in the diesel industry. Semesters are not sequential and may be taken in any order. Safety must be taken in the first semester.



### Contact Information

Contact information is available on the [Diesel Technology](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Prepare for ASE student testing as step one of professional level certification.
2. Develop diagnostic troubleshooting techniques using information systems.
3. Reassemble diesel systems using informational technology and comprehensive failure analysis
4. Demonstrate standard shop operations.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		IST 1520	Introduction to Industrial Safety	3	<b>Milestone-</b> Completion of Intro to Industrial Safety and the first semester of the Diesel Technology Credit Diploma.
		DESL 1540	Diesel Electrical	5	
		DESL 1610	Engine Rebuilding I	5	
		DESL 1650	Diesel Fuel Systems and Tuning I	5	
			Semester Total	18	

### First or Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		DESL 1700	Diesel Drivetrain	5	<b>Milestone-</b> Completion of the Diesel Technology Credit Diploma.
		DESL 1755	Heating, Air Conditioning, and Refrigeration	5	
		DESL 2950	Air Brakes, Suspension and Steering	5	<b>Choice Point-</b> Enter the job market or continue working on the Trades & Technical Studies AAS.
			Semester Total	15	

Program credit hour total	33
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### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Possible careers in or related to diesel technology include Diesel Repair Technician, Diesel Repairman, and Diesel Technician.

Additional information on careers in Diesel Technology is available through [Career Coach](#).

### Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Trades & Technical Studies

### Credit Diploma, Electrical Technology

The Electrical Technology program prepares students to construct, install, maintain, troubleshoot, and repair electrical circuits and systems. Basic knowledge, fundamental skills and industry standards will be emphasized as students learn to work in the field of electrical technology. Completion of the Industrial Systems Technology credit diploma is required for enrollment in Electrical Technology credit diploma courses.



### Contact Information

Contact information is available on the [Electrical Technology](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Plan layout and installation of electrical wiring, equipment, or fixtures, based on job specifications and local codes.
2. Connect wires to circuit breakers or other components.
3. Repair or replace wiring, equipment, or fixtures, using hand tools or power tools.
4. Install equipment, machines, wiring, or programs to meet specifications.
5. Install ground leads and connect power cables to equipment.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Completion of the Industrial Systems Technology Credit Diploma – 18 credits

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		ELTR 1516	Electrical Skills and Practices	3	<b>Milestone-</b> Completion of the Electrical Technology Credit Diploma.  <b>Choice Point-</b> Enter the job market with an apprenticeship to continue education or continue to work on the Trades & Technical Studies AAS.
		ELTR 1600	National Electrical Code 1	3	
		ELTR 1611	Electrical Calculations	3	
		ELTR 1621	Electrical Conductors and Cables	3	
		ELTR 1631	Electrical Wiring Methods	3	
		ELTR 1641	Special Location Wiring Methods	3	
			Semester Total	18	

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The Electrical Technology program provides a route into an electrical apprenticeship with the International Brotherhood of Electrical Workers or independent electrical contractors. Electricians may work for construction companies, government entities, in manufacturing or be self-employed.

Additional information on careers in Electrical Technology is available through [Career Coach](#).

### Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Trades & Technical Studies



### Associate of Applied Science, Heating, Ventilation, & Air Conditioning/Refrigeration (HVAC/R)

The energy efficient Heating, Ventilation, & Air Conditioning/Refrigeration (HVAC/R) program is designed for students who want to gain industry skills and pursue a basic academic foundation in HVAC/R. The Associate of Applied Science degree includes general education requirements; as well as advanced HVAC/R courses installation, repair, and maintenance knowledge and skills: thermodynamics, fluid dynamics, and electrical topics. Students will graduate with two credit diplomas (Industrial Systems Technology and HVAC/R) and an Associate of Applied Science degree. The HVAC/R AAS is designed for students working in a registered Department of Labor apprenticeship and those who want to go directly into the workforce. Students must complete the Industrial Systems Technology Credit Diploma and the HVAC/R Credit Diploma prior to enrolling in the HVAC/R AAS.

### Contact Information

Contact information is available on the [HVAC/R](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Analyze the performance of a refrigeration system using pressure and temperature.
2. Build a mechanical piping system in accordance with technical specifications.
3. Create a mechanical refrigeration system capable of transferring a specified heat load.
4. Verify that an air conditioning system is operating at capacity.
5. Evaluate a residential furnace using the commissioning process.
6. Design an air conditioning system.
7. Repair a malfunctioning air conditioning system in accordance with Section 608 of the Clean Air Act.
8. Design a heating and cooling system for a given structure.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		HMDV 1510	Success in the Workplace: Soft Skills	3	<b>Milestone-</b> Completion of the Industrial Systems Technology Credit Diploma.  <b>Choice Point-</b> Enter the job market with an apprenticeship to continue education in HVAC/R, or continue work on the Heating, Ventilation, & Air Conditioning/Refrigeration AAS.
		IST 1520	Introduction to Industrial Safety	3	
		IST 1560	Trade Skills Fundamentals	3	
		IST 1660	Mechanical Drives	1	
		IST 1661	Mechanical Drives Assemblies	1	
		IST 1710	DC Electricity	2	
		IST 1711	DC Electricity Circuits	1	
		IST 1712	AC Electricity	2	
		IST 1713	AC Electricity Circuits	1	
			Semester Total	17	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		HVAC 1600	Mechanical Piping	3	<b>Milestone-</b> Completion of the HVAC/R Credit Diploma. <b>Choice Point-</b> Enter the job market with an apprenticeship to continue education in HVAC/R, or continue work on the Heating, Ventilation, & Air Conditioning/Refrigeration AAS.
		HVAC 1610	Heating & Air conditioning Principles	3	
		HVAC 1630	Energy Efficient Residential Heating Systems	3	
		HVAC 1650	Residential Air Conditioning Systems	3	
		IST 1770 and IST 1771 OR SMAP 1910	Complete one of the following groups:		
			Motor Control and Motor Control Circuits	2	
			OR	1	
		SMAP 1910	Introduction to Sheet Metal Duct and Duct Fabrication	3	
			Complete one of the following groups:		
			Electric Motor and Electric Motor Circuits	2	
			OR	1	
		SMAP 1920	Sheet Metal Field Measurements and Duct Design	3	
			Semester Total	18	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion of three general education courses, including ENGL 1010 as a prerequisite for other courses.
WC	✓	ENGL 1010	English I: Composition	3	
HSI	✓		Choose an approved U.S./Wyoming Constitution course	3	
		HVAC 1620	Refrigerant Circuit Components	3	
		HVAC 1670	Light Commercial Refrigeration Systems	3	
			Semester Total	15	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
OC	✓	COMM 2010	Public Speaking	3	<b>Milestone-</b> Completion of remaining general education courses for AAS degree.
QL	✓	MATH 1000	Problem Solving or higher	3	
		CMGT 1520	Introduction to Blueprint Reading and Building Codes	3	<b>Milestone-</b> Completion of AAS in Heating, Ventilation, & Air Conditioning/Refrigeration.
		HVAC 1640	Automatic Building Controls	3	
		HVAC 1660	HVAC Distribution Systems	3	<b>Choice Point-</b> Enter the workforce or continue to the Bachelors of Applied Science, Applied Management.
			Semester Total	15	

Program credit hour total	65
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## **Program Comments**

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require completion of an apprenticeship and certification. Possible careers in or related to HVAC/R include HVAC/R Technicians.

Additional information on careers in HVAC/R is available through [Career Coach](#).

## **Transfer Information**

This degree is well suited for those who may be interested in pursuing a Bachelor of Applied Science, Applied Management degree at Laramie County Community College.

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## **Pathway: Trades & Technical Studies**

### ***Credit Diploma, Heating, Ventilation, & Air Conditioning/Refrigeration (HVAC/R)***

The energy efficient Heating, Ventilation, and the Air Conditioning/Refrigeration (HVAC/R) Credit Diploma is designed for students who want to gain valuable industry skills and prepare for a career in the construction trades as an HVAC technician. Upon completion of the HVAC/R Credit Diploma, students may choose to enter the workforce or continue into the AAS program. Students must complete the Industrial Systems Technology (IST) Credit Diploma prior to entering the HVAC/R Credit Diploma.



### **Contact Information**

Contact information is available on the [HVAC/R](#) program website.

### **Competencies**

Upon successful completion of this program, students will be able to:

1. Use safety rules and regulations that characterize responsible behavior in an HVAC/R workplace.
2. Evaluate the electrical characteristics of HVAC/R equipment.
3. Demonstrate the various uses of motors and motor control circuits in HVAC/R equipment.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

## First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		HVAC 1600	Mechanical Piping	3	<b>Milestone-</b> Completion of the HVAC/R Credit Diploma. <b>Choice Point-</b> Enter the job market with an apprenticeship to continue education in HVAC/R, or continue work on the Heating, Ventilation, & Air Conditioning/Refrigeration AAS.
		HVAC 1610	Heating & Air conditioning Principles	3	
		HVAC 1630	Energy Efficient Residential Heating Systems	3	
		HVAC 1650	Residential Air Conditioning Systems	3	
		IST 1770 and IST 1771 OR SMAP 1910	Complete one of the following groups:		
			Motor Control and and Motor Control Circuits	2	
			OR	1	
		SMAP 1910	Introduction to Sheet Metal Duct and Duct Fabrication	3	
			Complete one of the following groups:		
			IST 1780 and IST 1781	2	
		OR SMAP 1920	Electric Motor and Electric Motor Circuits	1	
			OR		
			Sheet Metal Field Measurements and Duct Design	3	
			Semester Total	18	

## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require completion of an apprenticeship and certification. Possible careers in or related to HVAC/R include HVAC/R Technicians.

Additional information on careers in HVAC/R is available through [Career Coach](#).

## Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.



## Pathway: Trades & Technical Studies



### Credit Diploma, Industrial Systems Technology (IST)

The Industrial Systems Technology (IST) credit diploma is intended to provide the opportunity for students to explore a professional career in industrial systems technology. The credit diploma program teaches skills in several areas of industrial maintenance including electronics, safety and mechanical maintenance fundamentals. The IST credit diploma program is designed for the student who wishes to prepare for a career as a HVAC technician, industrial electrician, maintenance technician, plumbing technician, or electrical controls technician. Completion of the Industrial Systems Technology credit diploma is required for enrollment in Electrical Technology, HVAC/R, Industrial Maintenance, and Plumbing Technology credit diplomas.

### Contact Information

Contact information is available on the [Trades & Technical Studies](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Demonstrate the importance of safety in the workplace.
2. Describe the safe work requirements for elevated work.
3. Convert units of length, weight, volume, and temperature between the imperial and metric systems of measurement.
4. Decide where and how to connect basic electrical components correctly.
5. Decide if it is safe to use mechanical equipment correctly.
6. Evaluate personal skills, strengths, and attributes.
7. Select interviewing techniques that highlight personal skills.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		HMDV 1510	Success in the Workplace: Soft Skills	3	<b>Milestone-</b> Completion of the Industrial Systems Technology Credit Diploma.  <b>Choice Point-</b> Enter the job market for additional on the job training or continue work on the Industrial Maintenance, HVAC/R, Electrical, or Plumbing Credit Diplomas, which could lead to an apprenticeship.
		IST 1520	Introduction to Industrial Safety	3	
		IST 1560	Trade Skills Fundamentals	3	
		IST 1660	Mechanical Drives	1	
		IST 1661	Mechanical Drives Assemblies	1	
		IST 1710	DC Electricity	2	
		IST 1711	DC Electricity Circuits	1	
		IST 1712	AC Electricity	2	
		IST 1713	AC Electricity Circuits	1	
			Semester Total	17	

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require completion of an apprenticeship and certification. Possible careers in or related to industrial systems

technology include Lubricator, Machine Repairer, Maintainer, Maintenance Person, Maintenance Technician, Maintenance Worker, Oiler, and Overhauler.

Additional information on careers in Industrial Systems Technology is available through [Career Coach](#).

### **Transfer Information**

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Trades & Technical Studies

### Credit Diploma, Industrial Maintenance

The Industrial Maintenance program is designed for students who want to gain valuable industry knowledge and also want to pursue a basic academic foundation. Students gain knowledge and skills in fluid dynamics, mechanical and electrical topics; all of which are combined to provide the groundwork for direct industry employment. This program prepares individuals to apply technical knowledge and skills to repair and maintain industrial equipment such as pumps, motors, conveyor systems, production machinery, refinery and pipeline systems.

Completion of the Industrial Systems Technology credit diploma is required for enrollment in Industrial Maintenance credit diploma courses.

### Contact Information

Contact information is available on the [Industrial Maintenance](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Use safety regulations that characterize responsible behavior.
2. Utilize test equipment to determine proper system operation.
3. Demonstrate proper mechanical component installation.
4. Demonstrate proper electrical component installation.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Completion of the Industrial Systems Technology Credit Diploma – 18 credits

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		IST 1610	Fluid Power	1	<b>Milestone-</b> Completion of the Industrial Maintenance Credit Diploma.  <b>Choice Point-</b> Enter the job market or continue working on the Trades & Technical Studies AAS.
		IST 1611	Fluid Power Circuits	1	
		CMGT 1520	Introduction to Blueprint Reading and Building Codes	3	
		HVAC 1600	Mechanical Piping Systems	3	
		IST 1770	Motor Controls	2	
		IST 1771	Motor Control Circuits	1	
		IST 1780	Electric Motors	2	
		IST 1781	Electric Motor Circuits	1	
		IST 1810	Programmable Logic Controllers	2	
		IST 1811	PLC Circuits I	1	
			Semester Total	17	

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. Possible careers in or related to industrial maintenance include Lubricator, Machine Repairer, Maintainer, Maintenance Person, Maintenance



Technician, Maintenance Worker, Oiler, Overhauler, Building Maintenance Mechanic, Building Mechanic, Facilities Manager, Maintenance Mechanic, and Maintenance Supervisor.

Additional information on careers in Industrial Maintenance is available through [Career Coach](#).

### **Transfer Information**

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Trades & Technical Studies



### Credit Diploma, Plumbing Technology

The Plumbing Technology credit diploma is designed to give individuals the opportunity to acquire skills to assist with the installation and repair of plumbing systems in residential and small buildings. Students are introduced to diagrams, interpretation of blueprints, and practices in plumbing assembly. Students will gain knowledge of state codes and requirements.

Completion of the Industrial Systems Technology credit diploma is required for enrollment in Plumbing Technology credit diploma courses.

### Contact Information

Contact information is available on the [Plumbing Technology](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Assemble pipe sections, tubing, or fittings, using various techniques in accordance with national standards.
2. Demonstrate installation of pipe assemblies, fittings, valves, and appliances.
3. Demonstrate knowledge of design techniques, tools, and principles involved in production of blueprints and drawings.
4. Detect and locate leaks in plumbing.
5. Accurately document detailed records of work assignments.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Completion of the Industrial Systems Technology Credit Diploma – 18 credits

### Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		FMT 1700	Introduction to Plumbing	3	<b>Milestone-</b> Completion of the Plumbing Technology Credit Diploma.  <b>Choice Point-</b> Enter the job market or continue working on the Trades & Technical Studies AAS.
		FMT 1710	Plumbing Pipefitting	3	
		FMT 1720	Plumbing Piping, Water	3	
		FMT 1730	Plumbing Installation	3	
		HVAC 1600	Mechanical Piping Systems	3	
		CMGT 1520	Introduction to Blueprint Reading and Building Codes	3	
			Semester Total	18	

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The Plumbing Technology program provides a route into a plumbing apprenticeship. Possible careers in or related to plumbing technology include Plumbing Repair Technician, Plumbing Technician and Installer.

Additional information on careers in Plumbing Technology is available through [Career Coach](#).

### Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Trades & Technical Studies



### Credit Diploma, Welding Technology – Combination Welding

The Welding Technology – Combination Welding credit diploma prepares students for structural steel work and fabrication work in the field of welding technology. In addition, to gaining an understanding of welding machines, weld processes, and hands-on welding proficiency, students develop skills in the areas of print reading, welding symbols, weld inspection, destructive and non-destructive testing, along with precision machine tool operation. Students gain knowledge and skills necessary to prepare them for weld qualifications according to American Welding Society D1.1 Structural Welding Code specifications.

Completion of the Welding Technology (Combination Welding) credit diploma is required for enrollment in the Welding Technology (Advanced Pipe Welding) credit diploma courses.

### Contact Information

Contact information is available on the [Welding](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Describe governmental agencies and regulations that address safety.
2. Describe good safety habits
3. Develop basic welding drawings
4. Operate Plasma Arc cutting equipment
5. Demonstrate proper bead placement.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		IST 1520	Introduction to Industrial Safety	3	<b>Milestone-</b> Completion of Combination Welding Certificate Diploma.  <b>Choice Point-</b> Enter the job market or continue working on the Advanced Pipe Welding Credit Diploma or the Trades & Technical Studies AAS.
		WELD 1655	Allied Cutting Processes	2	
		WELD 1755	Shielded Metal Arc Welding 1	4	
		WELD 1756	Shielded Metal Arc Welding 2	4	
		WELD 2650	Gas Tungsten Arc Welding	4	
		WELD 1771	Gas Metal Arc Welding/Flux Cored Arc Welding	4	
		WELD 1650	Print Reading And Welding Symbols	3	
			Semester Total	24	

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. Possible careers in or related to Combination Welding include Welder Fabricator, Welder Technician, and Structural Welder.

Additional information on careers in Combination Welding is available through [Career Coach](#).

### Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.

## Pathway: Trades & Technical Studies



### Credit Diploma, Welding Technology – Advanced Pipe Welding

The Welding Technology – Advanced Pipe Welding credit diploma builds upon the Welding Technology – Combination Welding credit diploma program of study and prepares students for work in the field of welding technology. In addition to gaining an overall understanding of welding machines, weld processes, and hands-on welding proficiency, students develop skills in the areas of print reading, welding symbols, weld inspection, destructive and non-destructive testing, along with precision machine tool operation. Students gain knowledge and skills necessary to prepare them for welding qualification to code specification(s).

Completion of the Welding Technology – Combination Welding credit diploma is required for enrollment in the Welding Technology – Advanced Pipe Welding credit diploma courses.

### Contact Information

Contact information is available on the [Welding](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Operate shielded metal arc welding equipment
2. Make groove welds in the 5G positions using 6010 root and 7018 electrode fill and cap on plain carbon steel pipe
3. Make groove welds in the 6G position using 6010 root and 7018 electrode fill and cap on plain carbon steel pipe
4. Construct welds designed to pass a guided bend test
5. Demonstrate groove welds in the 6G position using GTAW root and 7018 electrode fill and cap on plain carbon steel pipe.
6. Define practical applications of metallurgy.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
		WELD 1760	Advanced Shielded Metal Arc Welding	4	<b>Milestone-</b> Completion of Advanced Pipe Welding Certificate Diploma.
		WELD 1805	Pipe Welding I	4	
		WELD 1810	Pipe Welding II	4	<b>Choice Point-</b> Enter the job market or continue working the Trades & Technical Studies AAS.
		WELD 1815	Pipe Welding III	4	
		WELD 2680	Welding Metallurgy	2	
			Semester Total	18	

### Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. Possible careers in or related to Combination Welding include Welder Fabricator, Welder Technician, and Structural Welder.

Additional information on careers in Advanced Pipe Welding is available through [Career Coach](#).

### Transfer Information

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/university and program to which they plan to transfer.



## Pathway: Trades & Technical Studies

### Associate of Applied Science, Wind Energy

The Wind Energy program provides students with the critical skills needed to become successful technicians in the rapidly growing wind industry. A balanced combination of classroom instruction and hands-on training allow students to quickly turn concepts into valuable work experience. Throughout the program, students learn basic and advanced electrical, mechanical and fluid power system theory. In turn, this knowledge is used to interpret detailed mechanical drawings and schematic diagrams to determine system operation and troubleshoot complex faults. In addition, students perform preventative maintenance tasks on an actual wind turbine nacelle and rotor housed in the college's Wind Energy Lab. Students develop effective climb safety techniques and perform rescues at height using the program's Fall Protection Lab. After successful completion of this program, students are prepared for direct industry employment as entry-level wind turbine technicians.



### Contact Information

Contact information is available on the [Wind Energy](#) program website.

### Competencies

Upon successful completion of this program, students will be able to:

1. Describe how wind turbine system components are integrated to convert energy from the wind into electrical energy.
2. Interpret information contained in technical drawings, manuals, data sheets and service bulletins to determine system operation.
3. Apply sound troubleshooting techniques to quickly find and fix electrical, mechanical and fluid power system faults.
4. Perform wind turbine service and preventative maintenance per manufacturer's specifications and common industry practices.
5. Demonstrate the technical communication skills required to accurately and concisely document all activities associated with servicing and maintaining wind turbines.
6. Demonstrate proper handling and safe usage of industrial tools, electrical meters and diagnostic equipment commonly used in the wind industry.
7. Demonstrate compliance with general and specific industry safety laws, standards and procedures.

Map your individual academic plan of courses with your College Advisor.

Students may need to take prerequisite courses before beginning college level math and English courses or moving through a program's course sequence. Check the [Course Descriptions](#) section of the catalog to see the course prerequisites. Students should work with their advising team on determining prerequisite requirements.

Certain courses may only be offered in Fall or Spring semester. Students who are part time or have unique circumstances should work with their Academic Advisors to develop their customized academic plan.

If students choose to transition to another program within the Trades & Technical Studies pathway, they should be particularly aware of the choice points that indicate when a decision to branch off into another program must be made to ensure credits and time are not lost.

Coursework common to all degrees within this pathway is indicated by the ✓ in the Common Academic Coursework (CAC) column below.

### First Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
SS	✓	STRT 1000	Strategies for Success	3	<b>Milestone-</b> Completion of two general education courses, including ENGL 1010 as a prerequisite for other courses.  <b>Milestone-</b> Introduction to Wind Energy and technical courses and safety.
WC	✓	ENGL 1010	English 1: Composition	3	
		WTT 1000	Introduction to Wind Energy	3	
		WTT 1100	Climb Safety and Tower Rescue Training	2	
		IST 1660	Mechanical Drives	1	
		IST 1661	Mechanical Drives Assemblies	1	
		IST 1710	DC Electricity	2	
		IST 1711	DC Electricity Circuits	1	
		IST 1712	AC Electricity	2	
		IST 1713	AC Electricity Circuits	1	
			Semester Total	19	

## Second Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
QL	√	MATH 1000	Math 1000 or higher	3-4	<b>Milestone-</b> Completion of college-level math
		IST 1610	Fluid Power	1	
		IST 1611	Fluid Power Circuits	1	
		IST 1770	Motor Controls	2	
		IST 1771	Motor Control Circuits	1	
		WTT 1200	Wind Turbine Mechanical Systems	3	
		WTT 2500	Advanced AC Electricity	3	
			Semester Total	14-15	

## Third Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
OC	√	COMM 2010	Public Speaking	3	
		PHYS 1050 OR GEOG 1010	Concepts of Physics OR Introduction to Physical Geography	4	
		IST 1810	Programmable Logic Controllers	2	
		IST 1811	PLC Circuits	1	
		WTT 1300	Theoretical Concepts of Rotating Machines	3	
		WTT 2200	Advanced Wind Turbine Generator Mechanical Systems	3	
			Semester Total	16	

## Fourth Semester

Gen Ed	CAC	Course code	Course name	Credits	Milestones and Choice Points
HSI	√		Choose an approved U.S./ Wyoming Constitution course	3	<b>Milestone-</b> Completion of remaining general education courses for AAS degree.
		WTT 2300	Wind Turbine Data Acquisition	2	<b>Milestone-</b> Completion of AAS in Wind Energy. <b>Choice Point-</b> Enter the workforce or continue to the Bachelors of Applied Science, Applied Management.
		WTT 2400	Power Generation, Transmission, and Distribution	3	
		WTT 2600	Advanced Industrial Motor Control Applications	4	
			Semester Total	12	

Program credit hour total	61-62
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## Program Comments

The information below is intended to be a guide, and does not guarantee regional job placement, job availability, or a specific wage after completion of the program. The potential jobs listed below may require some work experience after graduation. The Wind Energy degree is intended to give students the academic coursework helpful in obtaining the potential jobs. Possible careers in or related to Wind Energy include Wind Turbine Technician, Wind Energy Technician, and Wind Turbine Mechanic.

Additional information on careers in Wind Energy is available through [Career Coach](#).

## Transfer Information

This degree is well suited for those who may be interested in pursuing a Bachelor of Applied Science, Applied Management degree at Laramie County Community College.

LCCC courses may transfer to institutions in addition to those with formal articulation agreements. Students are strongly encouraged to determine the degree requirements and transfer policy of the specific college/ university and program to which they plan to transfer.

# Prerequisites

A prerequisite is designed to help students be successful. Prerequisites also inform prospective students what body of knowledge is necessary to be successful in a particular course.

If a prerequisite course is listed for a subsequent course, the student must have completed satisfactorily (grade of C or better) the prerequisite course, scored at an equivalent level of placement using with high school GPA or ACT, or completed an equivalent course at a college/university with regional accreditation. Equivalent courses must be demonstrated by submitting an official transcript, and final determination will be made by the Office of the Registrar. For additional information, please refer to the "Academic Skills Assessment and Placement Policy" on Page 17.

The college has designated English and math prerequisite skill levels for many of the courses in the curriculum. The table below equates placement test levels with a specific developmental course.

This sample course description identifies how to determine the prerequisites for a given course.

## **PHYS 1050                      4 CREDITS**

### **CONCEPTS OF PHYSICS**

In this introductory course, students become familiar with the science of matter interacting with energy in a variety of fields. Students demonstrate their competencies in the scientific method, properties of matter, mechanics, heat, sound, light, electricity and magnetism, radiation, and atomic and nuclear interactions. This course is recommended for students in the paramedical sciences-medical terminology, radiographic technology, sonography, exercise science, applied technology, and other non-science majors requiring a lab science course. Student receiving credit for PHYS 1110 cannot receive credit for PHYS 1050 or PHYS 1310. Prerequisite: Completion of MATH 0975 or higher and completion of ENGL 0810.

Students registering for PHYS 1050 must have completed successfully:

- MATH 0975
- ENGL 0810 – Fundamentals of Reading and Writing

# Course Descriptions

## Accounting

### **ACCT 2010 3 CREDITS** **PRINCIPLES OF ACCOUNTING I**

Students examine the role of accounting information in business and society. Utilizing critical thinking and decision-making skills, students prepare and analyze financial information using Generally Accepted Accounting Principles (GAAP). Students evaluate how financial information is used in making business decisions. Prerequisites: ENGL 0810 and MATH 0965 (or equivalent placement)

### **ACCT 2020 3 CREDITS** **PRINCIPLES OF ACCOUNTING II**

ACCT 2020 is a continuation of ACCT 2010. Students analyze and prepare accounting transactions for partnerships and prepare a Statement of Cash Flow in accordance with Generally Accepted Accounting Principles. Students are introduced to managerial accounting concepts including creating and evaluating reports and information needed by management for decision-making and monitoring purposes. Prerequisite: Completion of ACCT 2010.

### **ACCT 2110 3 CREDITS** **QUICKBOOKS ACCOUNTING**

Students demonstrate the practical application of accounting utilizing current software. Students create accounting records for businesses and utilize fundamental accounting concepts within the computerized system to address problem-solving situations. Topics covered include the general ledger, accounts receivable, accounts payable, job costing, and payroll. Prerequisite: Completion of ACCT 2010 or equivalent preparation.

### **ACCT 2230 3 CREDITS** **INTERMEDIATE ACCOUNTING I**

Students acquire knowledge of the principles and theory of accounting relating to financial statements, accounting information systems, the Income Statement and related information, Statement of Cash Flows, cash, receivables, and valuation of inventories. Prerequisite: Completion of ACCT 2020.

### **ACCT 2430 3 CREDITS** **INCOME TAX**

A study of the fundamentals of individual federal income taxation designed to help students acquire an understanding of federal income tax determination, personal and dependency exemptions, gross income concepts, inclusions and exclusions, and general deductions and losses. Emphasis is placed on form completions. Prerequisite: Completion of ACCT 2010, or instructor approval.

### **ACCT 2450 3 CREDITS** **COST ACCOUNTING**

Students apply the fundamental principles of managerial cost accounting including the accumulation and reporting of accounting information needed for product and standard costing as well as information for planning, decision making and control activities. Prerequisite: Completion of ACCT 2020.

### **ACCT 2460 3 CREDITS** **PAYROLL ACCOUNTING**

Students examine employment legislature and tax laws that affect a company's payroll structure. Students acquire a practical working knowledge in maintaining payroll records, computing gross pay, calculating payroll taxes, analyzing and journalizing payroll transactions, utilizing a computerized payroll system, and payroll reporting requirements and forms. Prerequisite: Completion of or concurrent enrollment in ACCT 2010.

### **ACCT 2470 3 CREDITS** **ACCOUNTING INTERNSHIP I**

Students integrate academic experiences with professional experience under the supervision of an accounting professional in a cooperating organization. Students engage in the daily operations of the organization as an entry level accounting intern. Prerequisite: Completion of BADM 1020 and instructor consent.

### **ACCT 2471 3 CREDITS** **ACCOUNTING INTERNSHIP II**

Students integrate academic experiences with professional experience under the supervision of an accounting professional in a cooperating organization. Students engage in the daily operations of the organization as an entry level accounting intern. Prerequisite: Completion of ACCT 2470 and instructor consent.

### **ACCT 2800 3 CREDITS** **CERTIFIED BOOKKEEPER EXAM REVIEW**

A capstone course designed for students within the Accounting Services program who wish to acquire a professional bookkeeping certification credential. Students will acquire knowledge and skills needed to carry out all key accounting functions through adjusting entries and financial statements including payroll. Students will be prepared to take the Certified Bookkeeper exam administered by the American Institute of Professional Bookkeepers. Prerequisite: Completion of ACCT 2020.

### **ACCT 2895 3 CREDITS** **CERTIFIED BOOKKEEPER EXAM CAPSTONE**

A capstone course designed for students within the Accounting Services program who wish to acquire a professional bookkeeping certification credential. Students will acquire knowledge and skills needed to carry out all key accounting functions through adjusting entries and financial statements including payroll. Students will be prepared to take the Certified Bookkeeper exam administered by the American Institute of Professional Bookkeepers. Prerequisite: Completion of ACCT 2020.

### **ACCT 3080 3 CREDITS** **ACCOUNTING FOR DECISION MAKERS**

Students consider the use of accounting information by external users and management. Students develop skills in interpreting and utilizing earnings statements, balance sheets, and cash flow reports to effectively manage strategic operations for their business. Students will work with internal and external stakeholders to apply product and service costing to the development of a budget. Prerequisite: Completion of or concurrent enrollment in MGT 3210.

## Addictionology

### **ADDN 1000 3 CREDITS** **INTRODUCTION TO ADDICTION STUDIES**

Students explore the field of addiction studies through examining the nature of addiction and biological, psychological, and social aspects of addiction and addiction studies as a career choice. Prerequisite: Completion of ENGL 0810 or equivalent placement.

### **ADDN 1015 2 CREDITS** **RELAPSE PREVENTION**

Students review basic philosophy and techniques of relapse prevention for addiction and the ongoing process that involves all aspects of the person's wellness and culture. Students learn to recognize the warning signs for relapse, the 12-step approach to recovery and general wellness concepts. Prerequisite: Completion of ENGL 0810 or equivalent placement.

### **ADDN 1016 2 CREDITS** **PHYSIOLOGICAL ACTIONS OF DRUG AND ALCOHOL ABUSE**

Students identify the classifications of drugs and the physiological effects of these psychoactive substances on the user. Management of chronic and acute conditions, drug interactions, prevention and treatment are covered. This course provides six hours of communicable disease training in the areas of transmission, occupational safety, and standard precautions. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**ADDN 2010** **2 CREDITS**  
**ADDICTIONS ASSESSMENT AND MOTIVATIONAL INTERVIEWING**  
 Students explore the use of screening, evaluation and assessment techniques as well as being able to determine client's readiness for treatment and change, and determining an appropriate level of care for the client. Prerequisite: Completion of ENGL 0810 or equivalent placement, and ADDN 1000, ADDN 1016 and CNSL 2300.

**ADDN 2970** **2 CREDITS**  
**FIELD EXPERIENCE IN ADDICTIONOLOGY**  
 Students gain practical knowledge and experience in the field and of Addictionology by participating in on-the-job training. This 90 hour field experience is scheduled, structured, and supervised by a certified or licensed professional in the addictions field. In addition to the field experience, students meet for a weekly seminar with their instructor. Students perform other job duties as assigned. Instructor permission is required for site choice. Prerequisite: Completion of ENGL 0810 or equivalent placement, and completion of ADDN 1000, ADDN 1016, CNSL 2300.

## **Agriculture**

**AGRI 1500** **2 CREDITS**  
**INTRODUCTION TO RODEO**  
 Students are introduced to the history, culture, and business of rodeo. Students acquire knowledge about rodeo organizations, rough stock, timed events, rodeo production, and professional rules and policies.

**AGRI 1510** **2 CREDITS**  
**RODEO LIVESTOCK**  
 A course that introduces the student to the business of rodeo livestock. Students acquire practical, hands-on experience with livestock leasing, purchasing, sorting, training, and management. Students also gain rodeo production experience from the stock contractor's point of view and in accordance with NIRA rules regarding rodeo livestock.

**AGRI 2470** **8 CREDITS**  
**AGRICULTURE INTERNSHIP I**  
 Students engage in supervised work experience in an agriculture related business or production operation with emphasis on technical and employable skill development. Students employ academic knowledge in real world application. Students develop a stronger skill set and resume for future agricultural employment. Prerequisite: Instructor consent.

**AGRI 2471** **8 CREDITS**  
**AGRICULTURE INTERNSHIPS II**  
 Students engage in supervised work experience in an agriculture related business or production operation with emphasis on technical and employable skill development. Students employ academic knowledge into real world application. Students develop a stronger skill set and resume for future agricultural employment. Prerequisite: AGRI 2470.

## **Agriculture—Agricultural Economics**

**AGEC 1010** **3 CREDITS**  
**AGRICULTURE ECONOMICS I**  
 Students explore the impact of governmental policy on society and the agriculture industry in this introductory course which focuses on the role of agriculture in a market based on economy. Students develop an understanding of how the U.S. food and fiber system is influenced by the economic problem of scarcity. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**AGEC 1020** **3 CREDITS**  
**AGRICULTURAL ECONOMICS II**  
 An introductory course in which students will practice and apply contemporary microeconomic principles to navigate the economic problem of resource scarcity. The primary focus of this course is on the decision-making of producers and consumers in agricultural and natural resource markets. Market structure and market failure are explored to justify the role of government to protect health, culture, and nature.

**AGEC 2010** **2 CREDITS**  
**FARM-RANCH BUSINESS RECORDS**  
 Students apply economic principles and accounting methods to organizational decision-making and operations. Students create farm enterprise and cash flow budgets, income statements, and balance sheets for farm and ranch enterprises. Students analyze records created to help in making financial decisions. Prerequisite: Completion of MATH 0900, or equivalent placement.

**AGEC 2020** **4 CREDITS**  
**FARM-RANCH BUSINESS MANAGEMENT**  
 Students apply the tools of management and decision-making to problems found in agricultural operations. Exploration of the four functions of management provides an understanding of the complex issues facing the farm or ranch manager. Using community case studies, students practice market research, financial records analysis, crop and livestock enterprise analysis, risk management, and farm business organizational planning. Prerequisite: Completion of or concurrent enrollment in AGECE 1020.

**AGEC 2400** **4 CREDITS**  
**FARM CREDIT AND FINANCE**  
 Students conduct financial analysis of agricultural businesses, including solvency, liquidity, risk and return, capital budgeting methods, and analysis of land investments. Students will examine the sources and costs of credit available for agriculture. Students will culminate their experience by creating a farm or ranch management plan for a complete year's operation using records built throughout the semester. Prerequisite: Completion of AGECE 2020.

## **Agriculture—Agroecology**

**AECL 1000** **4 CREDITS**  
**AGROECOLOGY**  
 Students explore meteorology, soil science and hydrology, chemistry and nutrition, and ecology as related to food, energy, water, and agriculture systems. Students will work with their peers to engage in the scientific method and access and evaluate popular and scientific media while practicing science-informed decision-making.

**AECL 1005** **2 CREDITS**  
**FIELD CROPS AND INTEGRATED PEST MANAGEMENT**  
 Students explore the ecological interactions within food producing systems with an emphasis on integrated management principles. Students investigate common crops and evaluate cropping systems based on the environmental factors therein.

**AECL 2010** **4 CREDITS**  
**THE ECOLOGICAL WEB: SOILS**  
 Students are introduced to soil science including the formation of soils, soil ecology, the biological properties of the soil affecting plant growth, the chemical and physical properties of soil affecting nutrient storage and availability, and the different compositions of fertilizers and their interactions with soils and plants. Prerequisite: Completion of ENGL 0810 and MATH 0900, or equivalent placement.

**AECL 2395** **3 CREDITS**  
**AGRICULTURAL SCIENCE RESEARCH METHODS CAPSTONE**  
 Students engage in an in-depth study of a relevant topic in agriculture or rangeland ecology. Students engage in critical thinking and cooperative, collaborative work on current topics and/or topics of historical importance to agriculture or rangeland ecology. Sustainable food production, small-farming, local marketing, land use planning, government programs, and research are also addressed. The capstone project requires students to apply learned knowledge, gather new information from professionals, and perform research resulting in a written report and a capstone presentation. Prerequisite: Students graduating from the agriculture program and approval of their adviser.

## **Agriculture—Animal Science**

**ANSC 1010** **4 CREDITS**  
**LIVESTOCK PRODUCTION**  
 A course introducing students to the scope of the livestock industry, and management of beef cattle, sheep, dairy cattle, swine and poultry. Students are exposed to a foundation knowledge base in livestock breeding, genetics, reproduction and nutrition. Students also learn about products produced in animal agriculture such as wool, meat (pork, lamb and beef), dairy, and poultry products. Additionally, students explain current political and socioeconomic issues in the animal agriculture industry.



**ANSC 1100 2 CREDITS****ARTIFICIAL INSEMINATION**

This is an introductory course on Artificial Insemination of cattle. Students will describe the basic bovine anatomy and physiology, the bovine female endocrine system and reproductive cycles. Students will demonstrate proper technique in semen handling and artificial insemination. Students will become familiar with heat synchronization and the management of cattle before, during, and after artificial insemination and the associated cost and benefits.

**ANSC 1200 2 CREDITS****LIVESTOCK FITTING AND SHOWING**

Students learn the scope and process of the livestock showing industry. Students have the ability to learn proper techniques to fit and show cattle and sheep. Students are involved with actual fitting practices, entries for show, show ring, and participate in breaking and training of livestock for show.

**ANSC 1210 2 CREDITS****LIVESTOCK JUDGING I**

A course introducing students to the selection of domestic livestock based on type, conformation, and performance data. Students learn oral communication skills to justify their selection of animals and build upon logical thinking and argument development skills.

**ANSC 1220 2 CREDITS****LIVESTOCK JUDGING II**

Continuation of ANSC 1210. Prerequisite: Completion of ANSC 1210.

**ANSC 1260 2 CREDITS****LIVESTOCK MERCHANDISING**

Students gain experience in organizing and managing a livestock auction through hands-on experiences. Students work with consignors to advertise, set up sale facilities, and facilitate proper transport regulations pertaining to interstate and intrastate travel for livestock. In addition to hands-on experience, the course provides an overview of marketing strategies used in everyday livestock operations. Students explore the costs and risks of different marketing strategies including designing a marketing budget.

**ANSC 2020 4 CREDITS****FEEDS AND FEEDING**

Students learn the fundamentals of nutrition and how they apply to proper livestock management. Students also explore balancing feed rations and utilizing resources to formulate feeding plans to meet production expectations while managing feed costs. Prerequisite: Completion of ENGL 0810 and MATH 0900, or equivalent placement.

**ANSC 2025 2 CREDITS****LIVESTOCK NUTRITION**

Students examine the fundamentals of livestock nutrition and how they apply to proper management. Students explore different feed rations and begin to develop a feeding plan. Prerequisite: Completion of ENGL 0810 and MATH 0900 or equivalent placement, and ANSC 1010.

**ANSC 2230 2 CREDITS****LIVESTOCK JUDGING III**

A continuation of ANSC 1220. Prerequisite: Completion of ANSC 1220.

**ANSC 2320 2 CREDITS****LIVESTOCK HEALTH AND MANAGEMENT**

Students develop a basic knowledge of commonly occurring livestock diseases: identification, prevention, and treatment. Through a hands-on approach, students develop knowledge of proper housing, disinfecting, and vaccinating livestock using United States Department of Agriculture and American Veterinary Medical Association guidelines and regulations. Additionally, students study animal anatomy and physiology in order to understand the diseases and their potential impact on different body systems. Prerequisite: Completion of ANSC 1010.

## **Agriculture— Range Management**

**RGMG 2000 3 CREDITS****PRINCIPLES OF RANGE MANAGEMENT**

Students study the basic principles and practices of range management as they apply to the western and northwestern regions. Students examine the relationship of range management to livestock production, wildlife management, hydrology, forage production and other land uses. Prerequisite: Completion of ENGL 0810 and MATH 0900, or equivalent placement.

**RGMG 2400 4 CREDITS****RANGE ECOSYSTEMS AND PLANTS**

Students discover the dominant plant species, disturbance regimes, and management challenges of the major ecosystems of western North America. Students identify dominant woody, forb, grass, and grass-like species of these ecosystems, primarily by sight recognition of characteristic morphological features as well as taxonomic keys. Students examine the interactions between abiotic factors, disturbance regimes, and native and non-native species that create biogeographic variation among ecosystems as well as challenges and opportunities for land managers. Students are recommended to complete RGMG 2000 prior to registration.

## **Air Force**

**AS100 (AIR1010/AS1020)****HERITAGE AND VALUES**

This course provides an introduction to the Air Force and allows students to examine general aspects of the Department of the Air Force, AF Leadership, Air Force benefits, and opportunities for AF officers. The course also lays the foundation for becoming an Airman by outlining our heritage and values. As a foundational course, AS100 also provides a historical perspective such as lessons on war and US military, AF operations, principles of war, and airpower. As a whole, this course provides students with a knowledge-level understanding for the employment of air and space power, from an institutional, doctrinal, and historical perspective. The students will be introduced to the Air Force way of life and gain knowledge on what it means to be an Airman.

**AS200 (AIR2010/AS2020)****TEAM AND LEADERSHIP****FUNDAMENTALS**

This course is designed to provide a fundamental understanding of both leadership and team building. There are many layers to leadership, including aspects that don't always come to mind, which include listening, understanding themselves, being a good follower and efficient problem solving. The students will apply these leadership perspectives when completing team building activities and discussing things like conflict management. Students will demonstrate basic verbal and written communication skills. Cadets will apply these lessons at Field Training, which follows the AS200 year.

**AS300 (AIR3010/AS3020)****LEADING PEOPLE AND  
EFFECTIVE COMMUNICATION**

This course is designed to build on the leadership fundamentals taught in AS200 and help the cadets utilize these new skills as they begin more of a leadership role in the detachment. Cadets will learn about leading people and the course will provide them with the tools to use in their detachment leadership roles. Cadets will continue to hone their writing and briefing skills. The course continues into advanced leadership skills and ethics training that will prepare them for becoming an officer and a supervisor.

**AS400 (AIR4010/AS4020)****NATIONAL SECURITY/  
LEADERSHIP RESPONSIBILITIES &  
COMMISSIONING PREPARATION**

This course presents the basic elements of national security policy and process. Cadets will learn about air and space power operations as well as understand selected roles of the military in society and current domestic and international issues affecting the military profession. Cadets will learn about the responsibility, authority, and functions of an Air Force commander and selected provisions of the military justice system. The final semester of the AS400 course is designed to prepare cadets for life as a second lieutenant.

## **American Studies**

### **AMST 2010 3 CREDITS** **INTRODUCTION TO AMERICAN STUDIES**

This course introduces students to the interdisciplinary study of American culture. Students explore themes, values, and ideas that continue to resound throughout our cultural experience, focusing on individuals, ideas, and events that have defined what it means to be an American in context of past and current historical events. In the field of American studies, students develop an understanding of American cultures, identities, artifacts, landscapes, and institutions from a variety of viewpoints, building layers of meaning and interpretation for the objects studied. Prerequisite: Completion of ENGL 0810 or equivalent placement.

### **AMST 2110 3 CREDITS** **CULTURAL DIVERSITY IN AMERICA**

This course is designed to examine multicultural relations in the United States by exploring how common elements of humanity bind together individuals and groups of people. Students gain an understanding of issues related to social interaction, the concept of race, social class, age, gender, sexual orientation, and the sociology of minorities. Students also acquire an awareness of the constraints and motivations of many diverse populations including Native Americans, Hispanic-Americans, African-Americans, and Asian-Americans. Prerequisite: Completion of ENGL 0810 or equivalent placement.

## **Anthropology**

### **ANTH 1100 4 CREDITS** **INTRODUCTION TO BIOLOGICAL ANTHROPOLOGY**

An introductory course in physical/biological anthropology in which students are expected to become knowledgeable about and gain an understanding of mankind's primate background, human osteology, human genetics and variation, fossil primates, and fossil man. An archaeological overview of cultural evolution in the Old World from fossil man to the peopling of the New World are presented. Students engage in experiments and other exercises during weekly laboratory sessions and demonstrate a working knowledge of the scientific method.

### **ANTH 1200 3 CREDITS** **INTRODUCTION TO CULTURAL ANTHROPOLOGY**

An introductory course in cultural anthropology. Students demonstrate knowledge of basic concepts in social and cultural anthropology including ecological-economic systems, social and political organization, language, magico-religious beliefs, and culture change.

### **ANTH 1300 3 CREDITS** **INTRODUCTION TO ARCHAEOLOGY**

Students become knowledgeable about the ways in which prehistoric cultural remains provide an understanding of the shared cultural life ways of humankind. In addition to surveying basic archaeological theory, field methods and the laboratory analysis of field data, students learn about the evolution of culture, the growth and development of early Old World and New World civilizations, how cultures function, why they change, what similarities they shared broadly among cultures, and why cultures differ from one another. Prerequisite: Completion of ENGL 0910 or equivalent placement.

### **ANTH 2210 3 CREDITS** **NORTH AMERICAN INDIANS**

Students survey American Indian cultures north of Mexico at the time of the first contact with Europeans. Students acquire and demonstrate knowledge of detailed ethnographic and ethnohistorical comparisons of selected North American Indian cultural areas.

## **Army**

### **ARMY 1010 3 CREDITS** **LEADERSHIP AND PERSONAL DEVELOPMENT**

Students explore basic leadership application through classroom instruction, leadership training and mentorship, adventure exercises and camaraderie. Students explore and participate in managerial operations and military techniques. Students apply military customs and techniques through physical and mental training.

### **ARMY 1020 3 CREDITS** **INTRODUCTION TO LEADERSHIP**

As a continuation course to ARMY 1010, students further explore basic leadership application through classroom instruction, leadership training and mentorship, adventure exercises and camaraderie. Students explore and participate in managerial operations and military techniques. Students apply military customs and techniques through physical and mental training.

### **ARMY 2010 3 CREDITS** **FOUNDATIONS OF LEADERSHIP**

Students learn to apply the intermediate principles of leadership and small unit management applicable to all careers through instruction in land navigation, Leadership Laboratory, field training exercises, troop leading procedures, operations orders, and cultural awareness.

### **ARMY 2020 3 CREDITS** **FOUNDATIONS OF TACTICAL LEADERSHIP**

Students apply the intermediate principles of leadership and small unit management applicable to all careers through instruction in land navigation, Leadership Laboratory, field training exercises, U.S. Army customs, courtesies and career opportunities, and various leadership dimensions.

## **Art**

### **ART 1000 3 CREDITS** **GENERAL ART**

This course is intended for non-art majors. A basic introduction to art through various art media. Students explore and experiment with different art materials and techniques by creating and developing a number of basic projects.

### **ART 1010 3 CREDITS** **INTRO TO ART**

This course is not equal to or a replacement for the required art history courses for art majors. This is a one-semester, lecture-based introduction to the theories, techniques, concepts, and materials of art. Students define and describe the constructs underlying fine art such as visual literacy, themes of art, use of light and color, principles of design, and describe how these constructs are manifested in such art forms as sculpture, painting, drawing, ceramics, video, photography, architecture, etc. Students describe ways in which works of art exemplify principles and techniques of various media. Students also explore relationships between these concepts and sequential art history spanning ancient to contemporary movements. Prerequisite: Completion of ENGL 0810 or equivalent placement.

### **ART 1050 3 CREDITS** **BEGINNING DRAWING**

Students investigate the visual vocabulary required in drawing and gain an understanding of the basic form and techniques used to render realistic as well as expressive drawings. Students use a variety of media such as pencil, conte, charcoal, ink and pastels.

### **ART 1110 3 CREDITS** **FOUNDATION: TWO DIMENSIONAL**

Students explore the principles of art structure through a series of exercises in the visual organization of line, plane, value, mass, texture, shape, movement, and color. Students work in a studio environment and discover individual solutions to two dimensional challenges. This course is offered every fall. Prerequisite: Completion of ENGL 0810 or equivalent placement.

### **ART 1120 3 CREDITS** **FOUNDATION: THREE DIMENSIONAL**

Students explore the principles of art structure through a series of exercises in the visual organization of line, plane, value, mass, texture, shape, space, movement, and color. Students work in a studio environment and discover individual solutions to three dimensional challenges. This course is offered every Spring.

### **ART 1130 3 CREDITS** **FOUNDATION: COLOR**

Students explore the principles of art structure through a series of exercises in the visual organization of color. Students work in a studio environment and discover individual solutions to color theory challenges.



**ART 1250 3 CREDITS****WATER-BASED MEDIA I**

Students practice a wide variety of technical processes with water-based media and develop their compositional skills. Through classroom critiques, students analyze multiple solutions to painting problems.

**ART 1260 3 CREDITS****WATER-BASED MEDIA II**

In this continuation of ART 1250, students explore color theory and experiment with color palettes to produce desired effects. Students study the work of contemporary and historical painters and create original works of art that reflect that knowledge. Prerequisite: Completion of ART 1250.

**ART 1510 3 CREDITS****HANDBUILT CERAMICS**

An introductory course in basic ceramic techniques for sculpture production designed especially for non-majors. Students apply technical knowledge to form, glaze, and fire sculpture and trace historical trends in sculpture and contemporary sculptors. To practice design concepts, students produce a freestanding form, a series of multiple form sculptures, and an independent project. (This course does not fulfill LCCC's humanities/fine arts requirement.)

**ART 2005 3 CREDITS****DRAWING II**

In this continuation of ART 1050, students practice designing more sophisticated solutions to studio problems, and approaching alternative materials. Through classroom critiques, students analyze multiple solutions to drawing problems. Prerequisite: Completion of ART 1050.

**ART 2010 3 CREDITS****ART HISTORY I**

Students acquire introductory knowledge of the major arts of the world from pre-history to medieval, including pre-historic European, ancient Near Eastern, Egyptian, Aegean, Greek, Etruscan, Roman, African, Chinese, Japanese, Indian art and art from the Americas, through the Middle Ages. Also included is art from the Byzantine, Medieval, Romanesque, Gothic, Judaic, Christian, and Islamic movements. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**ART 2020 3 CREDITS****ART HISTORY II**

Students acquire introductory knowledge of the major arts of the world from the Renaissance, Baroque, and Rococo periods to the modern and post-modern eras, including the arts of Africa, China, Japan, Pacific Island cultures, and the Americas. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**ART 2050 3 CREDITS****LIFE DRAWING I**

This course provides instruction for drawing the human form. Working from clothed and nude models, students demonstrate an understanding of line, value, composition, realistic interpretation, self-expression, and the human form as art. Prerequisite: Completion of ART 1050 or equivalent skills. Instructor approval required.

**ART 2060 3 CREDITS****LIFE DRAWING II**

In this continuation of ART 2050, students expand and refine their skills in drawing the human form. Working from clothed and nude models, students demonstrate an understanding of line, value, composition, realistic interpretation, self-expression, and the human form as art. Prerequisite: Completion of ART 2050. Instructor approval required.

**ART 2075 3 CREDITS****ILLUSTRATION**

In this course, students apply elements of image making, concept, style, composition, and the design process to the broad field of illustration. Students use traditional and nontraditional art materials and approaches (including digital) in the creation of illustrative images in a range of styles and formats. Students use and enhance an overall visual vocabulary, including cartooning, comic art, photography, drawing/painting, type, the elements/principles of design, and digital imaging.

**ART 2080 3 CREDITS****DRAWING III**

In this continuation of ART 1060, students create a thematic series of works and present them with a written descriptive analysis. Students prepare their work for exhibition and build a portfolio. Prerequisite: Completion of ART 1060.

**ART 2090 3 CREDITS****INTRODUCTION TO PRINTMAKING**

Students gain skills in the use of materials and techniques for creating original art through the indirect process of printmaking. Students also design the surface used to print the image(s). Art projects include relief printing and monoprinting.

**ART 2210 3 CREDITS****BEGINNING PAINTING**

Students utilize a variety of painting techniques and art terms to produce a portfolio of work based upon design elements and principles. The historically significant works of contemporary painters and old masters are reflected in student projects. Topics include color and light phenomena in nature and in painting. Students are encouraged to produce unique work and to understand their artistic intentions.

**ART 2220 3 CREDITS****PAINTING II**

In this continuation of ART 2210, students continue to practice a variety of painting techniques and to refine their understanding of concepts. Students expand upon their personal strengths and increase their ability to recognize stylistic trends. (Students expecting to work in oils must consult with instructor.) Prerequisite: Completion of ART 2210.

**ART 2230 3 CREDITS****PAINTING III**

In this continuation of ART 2220, students develop advanced perceptual skills, improve their technical abilities, and gain a deeper understanding of and concern for the content of their work. Students also generate their own personal objectives and critique their work according to the elements and principles of design. Prerequisite: Completion of ART 2220.

**ART 2235 3 CREDITS****ADVANCED PAINTING**

Students develop an understanding of the "process" of creating paintings within the parameters of a variety of painting techniques. Individual solutions to group assignments are discussed within classroom critiques. Prerequisites: Instructor approval required based on drawing and painting skills.

**ART 2260 3 CREDITS****WATER-BASED MEDIA III**

In this continuation of ART 1260, students develop a portfolio of work with a thematic/stylistic cohesiveness and present a written descriptive analysis. Students prepare their work for exhibition. Prerequisite: Completion of ART 1260.

**ART 2310 3 CREDITS****SCULPTURE I**

An introductory course in additive and subtractive construction of three-dimensional form. Students trace the historical trends in sculpture, recognize contemporary sculptors, and develop a vocabulary that can be used in discussing sculpture. Emphasis is on the presentation of studio problems and their solutions through personal expression.

**ART 2320 3 CREDITS****SCULPTURE II**

A course in the study of three-dimensional form building upon knowledge gained in ART 2310. Investigation continues in the varied techniques of sculpture including welded metal, stone carving, and clay working. Students manipulate the form and imagery in representational and nonrepresentational art work. Emphasis is on current sculptural applications and the work of contemporary sculptors. Prerequisite: Completion of ART 2310.

**ART 2350 3 CREDITS****METALSMITHING I**

An introductory course in basic jewelry-making techniques. Students acquire technical skills in cutting, piercing, finishing, soldering, bezel stone setting, and texturing metal with an emphasis on design.

**ART 2360 3 CREDITS****METALSMITHING II**

A continuation of ART 2350. Students gain knowledge and technical skill in fabrication, chain making, hinges and casting techniques used in jewelry design. Prerequisite: Completion of ART 2350.

**ART 2370 3 CREDITS****METALSMITHING III**

A continuation of ART 2360. Students acquire technical skill in repousse, chasing and forging. Students also develop skills in metal working and jewelry design. Prerequisite: Completion of ART 2360.

**ART 2410 3 CREDITS****CERAMICS I**

Students learn the fundamentals of pottery construction, glazing, and firing techniques. Students apply skills to hand-building, wheel-throwing and surface methods. An emphasis is on the formative stages of the clay-working process.

**ART 2420 3 CREDITS****CERAMICS II**

Students focus on wheel-throwing pottery and evaluation of completed clay forms. Students explore technical information concerning clays, glazes and firing processes as well as historical trends in pottery. Prerequisite: Completion of ART 2410.

**ART 2430 3 CREDITS****CERAMICS III**

A continuation of ART 2420 with emphasis on the development of pottery form and a vocabulary that can be utilized in discussing ceramics. Students become knowledgeable about contemporary clay-working artists. Prerequisite: Completion of ART 2420.

## Astronomy

**ASTR 1050 4 CREDITS****SURVEY OF ASTRONOMY**

Students gain a greater understanding of astronomy through direct observation, laboratory application, and lecture. Students compare the planets and satellites in our solar system; distinguish the processes involved in the life, birth, and death of stars; and recognize unique objects such as quasars and black holes. Designed primarily for non-science majors. This course is not offered every semester. Prerequisite: MATH 1000 or higher or instructor permission. Recommended placement or enrollment in ENGL 1010.

## Automotive Body Repair

**AUBR 1500 3 CREDITS****AUTO BODY HAND/HYDRAULIC TOOLS**

This course is an introduction into the auto body repair field, focusing on hand, power, and hydraulic tools common to the trade. Students identify different tools available for repairs and demonstrate their proper and safe usage through various shop projects including vehicle trim and hardware identification and removal, as well as exterior panel replacement. Students gain skill in determining the proper selection and use of personal protection equipment required for hazardous materials found in body/paint shops.

**AUBR 1510 3 CREDITS****INTRODUCTION TO AUTO BODY REPAIR**

An introductory course in auto body repair. Students develop knowledge of basic procedures used in auto body repair. Students gain skill in and knowledge of shop safety, tools and equipment, metal straightening basics, welding basics, trim and accessories, and painting and refinishing procedures.

**AUBR 1520 3 CREDITS****COLLISION DAMAGE APPRAISING**

Students acquire and demonstrate knowledge of different estimating systems, manuals, and procedures used in the auto body repair field. Students prepare both handwritten estimates and computer-generated estimates using P-page logic and abbreviations. Students gain knowledge in all aspects of the estimating process including customer service, visual analysis, supplements, organization, and insurance influences.

**AUBR 1540 3 CREDITS****AUTO BODY WELDING**

Students gain the knowledge and skills necessary to identify the different types of metal used in today's vehicle construction and determine the limitations of different alloys. Students explore the different welding equipment and techniques available to repair shops and gain skill in performing the weld styles common to body repair and panel replacement.

**AUBR 1550 3 CREDITS****AUTO BODY REPAIR I**

Students examine the fundamentals of collision repair, straightening non-structural steel, and moveable glass replacement. Students gain skill in identifying the characteristics of different metals and plastic fillers and demonstrate industry repair procedures for dent removal.

**AUBR 1560 3 CREDITS****AUTO BODY REPAIR II**

This course is a continuation of AUBR 1550. Students gain the knowledge and skills necessary to identify and demonstrate repair procedures for the different types of plastics and aluminum used in today's vehicle construction. Students also explore the use of techniques for adhesive bonding.

**AUBR 1570 3 CREDITS****AUTO BODY REPAIR III**

This course is a continuation of AUBR 1560. Students continue to gain knowledge and skill development in repair procedures for damaged automotive sheet metals and plastics. In addition, students explore new vehicle materials and designs, safety features, park-assist systems, collision warning systems, and alternative fuel systems. Prerequisite: Completion of AUBR 1560.

**AUBR 1580 3 CREDITS****AUTO BODY REPAIR IV**

This course is the last in the Auto Body Repair series of courses. Students explore safe working procedures for auto body repairs on high voltage vehicles. Students also gain knowledge and skill in identifying different foam applications and their intended purpose in modern vehicles. Prerequisite: Completion of AUBR 1570.

**AUBR 1710 3 CREDITS****FRAME AND CHASSIS I**

This course is an introduction into frame designs, unibody structural parts, and steering/suspension components. Students examine different types of measuring and straightening equipment for structural parts and demonstrate their proper and safe usage. Students also identify the common types of suspension design and the parts contained in each.

**AUBR 1720 3 CREDITS****FRAME AND CHASSIS II**

This course is a continuation of AUBR 1710. Students demonstrate structural damage analysis and repair techniques for steel and aluminum structural parts. Students gain the skills necessary to identify, repair properly, and work safely around restraint system components. Students also explore heating, ventilation, and air-conditioning components commonly damaged in front-end collisions. Prerequisite: Completion of AUBR 1710.

**AUBR 1810 3 CREDITS****COLLISION DAMAGE REPAIR I**

Students examine procedures for repairing extensive body damage including welded or bonded outer body panel and structural parts replacement. Previous auto body repair and welding experience recommended.

**AUBR 1820 3 CREDITS****COLLISION DAMAGE REPAIR II**

This course is a continuation of AUBR 1810. Students gain experience performing structural parts repair, replacement, and sectioning following industry-approved procedures. Students explore welding techniques for advanced high-strength steels, as well as replacement procedures for stationary glass. Prerequisite: Completion of AUBR 1810 and AUBR 1540.

**AUBR 1910 3 CREDITS****AUTO PAINT I**

This course is an introduction to vehicle refinishing. Students examine different types of refinishing equipment and materials designed to duplicate factory finishes. They develop skills in surface preparation, masking vehicles, and application techniques for different refinish products.

**AUBR 1920 4 CREDITS****AUTO PAINT II**

This course is a continuation of AUBR 1910. Students acquire and demonstrate basic knowledge and skill in spot repairs, color matching, paint mixing, and overall refinish procedures. Students also examine the identification, causes, and corrections for common paint problems. Prerequisite: Completion of AUBR 1910.

**AUBR 1930 4 CREDITS****AUTO PAINT III**

This course is a continuation of AUBR 1920. Students exhibit a greater proficiency in the skills demonstrated in AUBR 1910 and 1920. Students explore multi-stage, and water-borne paint systems, as well as detailing and post-repair vehicle inspections. Prerequisite: Completion of AUBR 1920.

**AUBR 1945 3 CREDITS****INTRODUCTION TO AUTOMOTIVE CUSTOM PAINT**

This course is an introduction to the paints, techniques, and equipment used in automotive custom painting. Students examine color theory, paint systems, masking/stencil techniques, and freehand airbrush designs through instructor-guided projects. Students gain knowledge and skill in the control, proper use, disassembly, and cleaning of an airbrush. Students also demonstrate proficiency in the use of pinstripping brushes. Students are required to provide their own dual-action airbrush.

## **Automotive Technology**

### **AUTO 1500 3 CREDITS**

#### **BASIC AUTO MECHANICS**

Students gain and demonstrate knowledge and skills to understand the automotive service industry and to perform basic preventive maintenance, service procedures, and engine repair. Students work towards completing ASE/NATEF task list A1-A8.

### **AUTO 1510 4 CREDITS**

#### **ENGINE SYSTEM FUNDAMENTALS**

This course provides a basic introduction to engine operation, design, and service procedures. Students demonstrate precision measuring, engine disassembly and reassembly, diagnosis of engine problems, cylinder head reconditioning, and parts analysis. Students work towards completing ASE/NATEF task list for Engine Repair A-1. It is recommended students take AUTO 1500 prior to taking this course.

### **AUTO 1600 4 CREDITS**

#### **FUEL SYSTEMS I**

Students demonstrate the skills necessary for diagnoses and repair of various types of today's fuel delivery and electronic injection systems in this ASE certified course. Students work towards completing ASE/NATEF task list for Engine Performance A-8. Prerequisite: Completion of AUTO 2560.

### **AUTO 1690 3 CREDITS**

#### **MANUAL POWER TRAIN FUNDAMENTALS**

This course will cover the theory of 3-speed and 4-speed manual transmissions. Students gain practical experience in the overhaul of manual transmissions, clutches, related parts, and specialized equipment. Proper use of hand tools and safety in the lab will be emphasized. Students work towards completing ASE/NATEF task lists for Manual Drive Train and Axles A-3. Prerequisite: Completion of AUTO 2550.

### **AUTO 1730 4 CREDITS**

#### **AUTOMATIC TRANSMISSIONS**

This course will cover the theory of automatic transmissions. Students gain practical experience in the overhaul of automatic transmissions in popular use today. Proper use of hand tools and specialized equipment and safety in the lab will be emphasized. Students work towards completing ASE/NATEF task list for Automatic Transmissions A-2.

### **AUTO 1740 3 CREDITS**

#### **BRAKE SYSTEMS**

Students learn the theory, service, and repair of automotive braking systems and their components. Emphasis is on hydraulic and anti-lock brake theory; the repair of service booster units, master cylinders, and wheel cylinders; caliper rebuilds; and drum and rotor service. Students work towards completing ASE/NATEF task list for Brakes A-5. Prerequisite: Completion of AUTO 1765 or DESL 1540.

### **AUTO 1760 3 CREDITS**

#### **HEATING AND AIR CONDITIONING**

Students learn basic heating and air conditioning theory. Students diagnose, repair, and recharge air conditioning systems to OEM specifications. Students complete ASE/NATEF task list for Heating and Air Conditioning A-7. Prerequisite: Completion of AUTO 1690.

### **AUTO 1765 5 CREDITS**

#### **AUTOMOTIVE ELECTRICAL**

Students learn the basic theory of electricity, how to read and interpret wiring diagrams, and how to diagnose and repair individual electrical circuits on vehicles. These circuits include lights, horn, electric windows, power seats, electric defrosters, and other electrical circuits installed on vehicles. Students work towards completing ASE/NATEF task list A-6. Prerequisite: Completion of AUTO 1510.

### **AUTO 2550 4 CREDITS**

#### **AUTO ALIGNMENT AND SUSPENSION**

Students learn suspension and alignment theory. Suspension systems are diagnosed, measured, and repaired to OEM specifications. Wheel alignments will be performed on vehicles and adjusted to OEM specifications. These alignments include 4-wheel center point adjustments. Students work towards completing ASE/NATEF task list A-4. Prerequisite: Completion of AUTO 1740.

### **AUTO 2560 3 CREDITS**

#### **AUTOMOTIVE IGNITION SYSTEMS**

Students learn ignition theory and diagnosis and repair of various computerized and non-computerized ignition systems. Emphasis is placed on developing a comprehensive understanding of all electrical components and systems with special emphasis on problem diagnosis. Students work towards completing ASE/NATEF task list A-8. Prerequisite: Completion of AUTO 1765.

## **Biology**

### **BIOL 1002 4 CREDITS**

#### **DISCOVERING SCIENCE**

Students integrate Biology, Chemistry, Physics, and Earth Science through lectures, lab activities, field experiences and discussions. Fundamental concepts from each discipline are concurrently addressed enabling students to engage with science and apply it to larger societal issues.

### **BIOL 1003 4 CREDITS**

#### **CURRENT ISSUES IN BIOLOGY**

Students who are non-science majors, take this one semester course to examine central themes of biology-cell biology, genetics, evolution, ecology and scientific methodology, by focusing on current issues in biology and their interrelation to humans and the environment. Students participate in discussion and hands-on laboratory exploration of the content. Prerequisite: MATH 0900.

### **BIOL 1010 4 CREDITS**

#### **GENERAL BIOLOGY**

Students examine the basic chemistry of living systems, cell structures and functions, energy relations including photosynthesis and cellular respiration, Mendelian and molecular genetics, molecular biology, population dynamics, and evolutionary theory. Students perform experiments during regular laboratory sessions and demonstrate a working knowledge of the scientific method. Prerequisite: Completion of ENGL 0810 and MATH 0975, or equivalent placement.

### **BIOL 1390 4 CREDITS**

#### **INTRO TO SCIENTIFIC RESEARCH I**

An introduction to concepts used in a biological research environment. Students read scientific literature, perform computer-based literature searches, engage in experimental design and data collection, conduct statistical analyses, write a scientific paper, and design a poster. Students may have the opportunity to present their work at a scientific conference. Prerequisite: Completion of BIOL 1010 (with a grade of B or better) and instructor consent.

### **BIOL 2022 4 CREDITS**

#### **ANIMAL BIOLOGY**

Students examine the anatomy, physiology, ecology and evolution of animal biodiversity. Students demonstrate the ability to compare, contrast, and classify animals based upon shared derived characteristics. Through lectures, discussions, reading and writing assignments, and other activities, students discover the biodiversity of Kingdom Animalia and consider the importance of this biodiversity to themselves, humanity and the biosphere. Prerequisite: BIOL 1010.

### **BIOL 2023 4 CREDITS**

#### **PLANT AND FUNGAL BIOLOGY**

Students gain knowledge of how plants and fungi have evolved, what ecological roles they play in the world, and how species are important to humans. Students also contrast and classify plants and fungi and related organisms through their structure and function. This course is offered during fall semesters. Prerequisite: Completion of BIOL 1010.

### **BIOL 2390 4 CREDITS**

#### **SCIENTIFIC RESEARCH II**

This course is a continuation of BIOL 1390. Motivated students continue to perform scientific research at a higher level than BIOL 1390. Research II students work more independently in all aspects of research, including designing experiments, collecting data, analyzing results, and writing scientific literature. Research II students provide leadership for a small group of Research I students, being a "project leader" for an experiment. Prerequisite: Completion of BIOL 1390 and instructor consent.



**BIOL 2465** **1-3 CREDITS**  
**RESEARCH PROBLEMS IN BIOLOGY**  
 Students explore various methodologies employed in biological research, including experimental design, literature searches, data collection, analysis, and research report writing. Students may be required to present their work at public forum. Prerequisite: Consent of instructor.

**BIOL 2470** **4 CREDITS**  
**FIELD METHODS IN THE BIOLOGICAL SCIENCES**  
 Students develop an understanding of ecological principles on a broad scale through field exercises, group discussions, research projects, and written assignments. Employing the scientific method in collaboration with students and instructors from another region or country, students examine local ecology as they engage in authentic research projects, on-the-ground conservation, and cultural interactions. Developing biological fundamentals, students delve into the evolution, behavior, population, community and ecosystem ecology, biogeography, physiology, and organismal biology in this region. Besides tuition and mandatory fees, students pay additional costs that may include but are not limited to airfare, room and board, classes, local tours, and other activities.

## **Business**

**BUSN 2000** **3 CREDITS**  
**INTRO TO INTERNATIONAL BUSINESS**  
 Students develop knowledge of the diverse cultural impact on multinational trade, marketing, finance, management, and government policies. Emphasis will be on the cultural dynamics of global business. Prerequisite: Completion of ENGL 0810 or equivalent placement.

## **Business Administration**

**BADM 1000** **3 CREDITS**  
**INTRODUCTION TO BUSINESS**  
 Students study the basic business functions of management, marketing, financial institutions, economic systems, business ethics, and personal financial planning. The areas discussed in this course will expose students to business as it relates to their lives and their career. Students relate business concepts to daily lives and careers through a general introduction of basic business concepts and principles. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**BADM 1020** **3 CREDITS**  
**BUSINESS COMMUNICATION**  
 Students study the principles, strategies, and techniques of effective written, oral, and digital business communication. Emphasis is placed on reviewing grammar and mechanics as students create successful written messages including e-mails, memos, letters, reports, and resumes. Students learn productive techniques to communicate professionally in an increasingly global, digital workplace. Prerequisite: Completion of ENGL 1010.

**BADM 2010** **3 CREDITS**  
**LEGAL ENVIRONMENT FOR BUSINESS**  
 Students explore a broad overview of business-related legal topics including the nature and sources of law, court systems, common law, statutory law, constitutional law, business torts, intellectual property, product liability, business ethics, and contracts. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**BADM 2030** **3 CREDITS**  
**BUSINESS ETHICS**  
 Students examine the nature of ethical behavior in business and its broader implications for society. Students discover the history of ethics in business, factors that impact the ethical decision-making process, and the global aspect of business ethics. Students practice skills and strategies to develop and evaluate a business code of ethics as well as employee training programs on ethical business behavior. Prerequisite: Completion of ENGL 1010 or instructor approval.

**BADM 3010** **3 CREDITS**  
**BUSINESS AND PROFESSIONAL WRITING**  
 Students enhance writing skills appropriate for professional managers. These may include audience analysis, information design, and the use of visuals. Students study the principles, strategies, and techniques of effective written, oral, and digital communication. Emphasis is placed on creating successful written messages including e-mails, memos, letters, reports, resumes, and proposals. Students apply techniques to communicate professionally in an increasingly global, digital workplace. Prerequisite: Completion of ENGL 1010.

**BADM 3020** **3 CREDITS**  
**DATA ANALYSIS FOR MANAGERS**  
 Students examine the process of data prioritization and analysis. Students will evaluate how data is utilized within a business or organization, including its appropriate disclosure. Students will learn to interpret the statistical nature of data analysis and the role it plays in managerial decision making. Students will describe how to direct analytic activities to drive the data analysis process towards coherent, useful, and valid results. Prerequisite: Completion of MGT 3210.

**BADM 3210** **3 CREDITS**  
**BUSINESS ETHICS**  
 Students explore the nature of ethical behavior in business and its broader implications for society. Students examine the history of ethics in business, factors that impact the ethical decision-making process and the global aspect of business ethics. Students practice skills and strategies to develop and evaluate a business code of ethics as well as employee training programs on ethical business behavior.

**BADM 4600** **3 CREDITS**  
**ADVANCED INTERNSHIP**  
 The internship places students in local and regional business organizations with the intent of providing the student with an advanced understanding of business policy, procedures, and acumen. Prerequisite: Instructor approval.

## **Chemistry**

**CHEM 1000** **4 CREDITS**  
**INTRO TO CHEMISTRY**  
 In this introductory lab science course, students name chemical compounds; write chemical equations; explain and describe physical properties of gases, liquids, and solids; examine atomic structure, chemical bonding, and mass relationships and energy changes in chemical reactions; discuss properties of acids and bases, chemical equilibria, and nuclear chemistry; identify organic functional groups and relate them to biochemistry. Prerequisite: Completion of ENGL 0810 and MATH 0975 or equivalent placement.

**CHEM 1020** **4 CREDITS**  
**GENERAL CHEMISTRY I**  
 Students develop problem-solving skills using the factor-label method, demonstrate proficiency in the use of the metric system, perform laboratory experiments, and use computers/calculators to analyze experimental data. Students examine states of matter, properties of elements and compounds, inorganic nomenclature, atomic theory and structure, chemical bonding, quantitative chemical relationships and energy changes in chemical reactions, and gas laws and kinetic molecular theory. Prerequisite: Completion of or concurrent enrollment in MATH 1400 or equivalent placement, and completion of CHEM 1000 or one year high school chemistry is strongly recommended.

**CHEM 1030** **4 CREDITS**  
**GENERAL CHEMISTRY II**  
 Students explain the properties of liquids, solids, and solutions; discuss the structures and properties of organic compounds; examine chemical kinetics, chemical equilibria and its applications, the chemistry of acids and bases, spontaneity of chemical reactions, electrochemistry, and nuclear chemistry. Students also perform laboratory experiments and use computers/calculators to analyze experimental data. Prerequisite: Completion of CHEM 1020.

**CHEM 2300** **4 CREDITS**  
**INTRODUCTORY ORGANIC CHEMISTRY**  
 This is a one-semester course in organic and beginning biological chemistry with no lab component. Students discuss bonding within molecules; name and draw structures of organic molecules; predict products for reactions of various functional groups, including hydrocarbons, halocarbons, alcohols, carbonyls, and amines; identify and draw stereoisomers; use spectroscopy data to identify molecules; and understand the biological/industrial significance of molecules such as heterocycles, polymers, lipids, carbohydrates, amino acids, and nucleotides. Prerequisite: Completion of CHEM 1000 or CHEM 1020.

**CHEM 2420 4 CREDITS**  
**ORGANIC CHEMISTRY I**

This is the first-semester course of a two-semester organic chemistry sequence. Students draw molecular orbitals and discuss bonding within molecules; name and write structures and reaction products for alkanes and radicals; discuss and distinguish stereoisomers; write the products of substitution and elimination reactions; perform laboratory techniques for the preparation, separation, purification, and characterization of organic compounds; and operate the NMR, FT-IR, GC-MS, and UV-VIS instruments. Prerequisite: Completion of CHEM 1030.

**CHEM 2440 4 CREDITS**  
**ORGANIC CHEMISTRY II**

This is the second-semester course of a two-semester organic chemistry sequence. Students name and write structures and reaction products for alkenes & alkynes; write the products of electrophilic aromatic substitution reactions; write structures and reaction products for carbonyl compounds, alcohols, ethers, carboxylic acids and their derivatives (amines, some simple sugars, amino acids, and nucleic acids); and prepare and characterize a number of molecules containing a variety of functional groups (ketones, alcohols, amides, carboxylic acids, and esters). Prerequisite: Completion of CHEM 2420.

## **Communication**

**COMM 1000 3 CREDITS**  
**INTRO TO MASS MEDIA**

Students examine the historical, economic, social, regulatory, and ethical implications that shape modern media content and function and its impact on diverse populations; critique media for accuracy and ethics using modern fact-checking tools and established media theory models; and explore career opportunities in media fields. Prerequisites: Completion of ENGL 0810 or equivalent placement.

**COMM 1005 3 CREDITS**  
**INTERCULTURAL COMMUNICATION**

Students examine human communication processes within the context of various cultures. Specifically, students analyze how culture influences our communication with individuals and groups. Students explore the importance of cultural beliefs, attitudes, and values in order to become more competent communicators in co-cultural settings. Prerequisite: ENGL 0810 or equivalent placement.

**COMM 1015 3 CREDITS**  
**FOUNDATIONS OF COMMUNICATION**

Students explore communication contexts and develop personal and professional skills in the following areas: interpersonal communication, public speaking, and small group communication. Course content includes practice in the application of the principles of listening, verbal and nonverbal communication, group dynamics, and public speaking. This course is designed primarily for applied science degrees and certificate programs. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**COMM 1030 3 CREDITS**  
**INTERPERSONAL COMMUNICATION**

Students develop skills in interpersonal communication by examining topics such as perception, identity, listening, nonverbal communication, relationship development, conflict management and diversity. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**COMM 1040 3 CREDITS**  
**INTRO TO HUMAN COMMUNICATION**

Students analyze human communication experiences by applying theories of intra- and interpersonal communication, group communication, intercultural communication, mass communication, and organizational communication. Prerequisite: Completion of ENGL 1010.

**COMM 2010 3 CREDITS**  
**PUBLIC SPEAKING**

Students develop foundational verbal, digital, and written communication skills in this introductory public speaking course. Students practice skills to effectively construct, write, organize, deliver, and critique speeches in a variety of public communication contexts and speaking formats. Students focus on the speech development and the preparation process which includes: analyzing the audience, developing the thesis and main ideas/arguments, researching supporting evidence, applying appropriate writing strategies, organizing and outlining, evaluating and revising speech drafts, using appropriate language, vocal delivery and nonverbal behavior in speech performance, listening, critically thinking and reflecting on the speech and writing process, creating digital messages and exploring digital communication technologies. Prerequisite: Completion of or concurrent enrollment in ENGL 1010.

**COMM 2100 3 CREDITS**  
**MEDIA WRITING**

Intensive practice in gathering and writing news. Topics include journalistic jargon, news judgment, interviewing techniques, law and ethics, computer-assisted reporting, and careers. Students write the following kinds of stories: news, features, roundups, sidebars, follow-ups, obituaries, legislative, statistical, controversial, speeches, meetings, brights, public affairs, news conference, and public relations releases. Prerequisites: Completion of ENGL 0810 or equivalent placement and MMMM 1111, and some keyboarding skills required.

**COMM 2120 3 CREDITS**  
**SMALL GROUP COMMUNICATION**

Students develop group communication skills focusing on topics such as group decision making and problem solving techniques, group development and cohesion, conflict management, and leadership principles. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**COMM 2400 3 CREDITS**  
**INTRO TO PHOTOGRAPHY**

Students learn to manually compose photographs with single lens reflex cameras; apply compositional guidelines to photography; critique images emphasizing artistic and journalistic methods; and discuss image aesthetics in relation to historic process and forms of photographic involvement.

## **Computer Applications**

**CMAP 1200 3 CREDITS**  
**COMPUTER INFORMATION SYSTEMS**

A course covering digital electronic devices, hardware, software, the internet, and productivity software currently used in business. Students select and apply appropriate technology to address specific situations. Students evaluate privacy and ethical issues in the use of technology, and students evaluate the impact of technology on society. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**CMAP 1610 1 CREDIT**  
**WINDOWS I**

Students develop expertise in using the Microsoft Windows operating system. Students explore the basic concepts of managing files and folders, working with programs, customizing the desktop, implementing simple security features, and establishing and using an internet connection. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**CMAP 1615 3 CREDITS**  
**OPERATING SYSTEMS**

Students install, use, troubleshoot and configure popular operating systems (OS) and prepare to support OS functions. Students take the CompTIA A+ operating system exam. Students explore the startup process, device drivers, hard disk setup and the Microsoft Windows family - setup and upgrade, Linux setup, and DOS basics.

**CMAP 1750 1 CREDIT**  
**INTRODUCTION TO SPREADSHEET APPLICATIONS**

Students are provided with a basic understanding of spreadsheet applications. Students learn how to use spreadsheet commands to build and maintain spreadsheets using a popular electronic spreadsheet program. Prerequisite: Completion of MATH 0965 or equivalent placement.

**CMAP 1815 3 CREDITS**  
**DATABASE APPLICATIONS**

A study of the techniques used in file organization, storage, and retrieval using a popular database management system. Students develop advanced skills used in creating and using relational database applications. Emphasis is on business applications.

**CMAP 1886 2 CREDITS****MICROSOFT OUTLOOK**

This course introduces students to the popular Microsoft Office Outlook software. Using web and client versions, students develop the ability to customize Outlook, use e-mail client, manage Outlook's contacts, use Outlook calendar, manage tasks, use Outlook's journal component, and share folders and files with other Outlook users.

**CMAP 1920 4 CREDITS****COMPUTER HARDWARE MAINTENANCE**

Students install, troubleshoot, configure, update, and maintain computer hardware. Students take the CompTIA A+ hardware exam. Students explore systems setup and the classification of RAM, motherboards, processors, multimedia and mass storage devices, power supplies, I/O devices, printers and laptops. Students also perform hardware maintenance and troubleshooting.

**CMAP 1960 3 CREDITS****SERVER INSTALLATION AND ADMINISTRATION**

Students develop the knowledge and skills needed to install and administer Microsoft and Linux servers. Students learn about the architecture, virtualization, installation, server roles, monitoring, performance, disaster recovery, security, and troubleshooting of industry standard servers. Students also learn about system networking including network services and IPv4 and IPv6 addressing. This course also provides a base from which students can study to pass the CompTIA Server+ certification.

**CMAP 2005 3 CREDITS****VIRTUALIZATION**

Students develop the skills necessary to install, configure, and manage machines, servers, storage, images, cloud and backup technologies. Prerequisite: CSCO 2000 or instructor approval.

**CMAP 2471 1 CREDIT****PC SUPPORT SKILLS**

Students acquire knowledge and skills in maintaining and troubleshooting PCs. Topics include security, safety, environmental issues, communication, and professionalism, as well as installing, configuring, upgrading, and troubleshooting hardware and operating systems.

**CMAP 2472 1 CREDIT****DATA PROTECTION AND RECOVERY I**

Students acquire knowledge and skills enabling them to explain the process of data corruption and data loss and the steps required to protect data and perform simple data recovery. Prerequisites: Completion of CMAP 1615 and CMAP 1920 or instructor approval.

**CMAP 2473 1 CREDIT****DATA PROTECTION AND RECOVERY II**

Students acquire additional knowledge and skills enabling them to explain in detail the process of data corruption and data loss and the advanced steps required to protect data and perform advanced data recovery. Prerequisite: Completion of CMAP 2472.

**CMAP 2835 3 CREDITS****INTRODUCTION TO SQL**

Students acquire knowledge and skills in Structured Query Language using a relational database management system as a platform. Students create and maintain databases and database objects. Topics include queries, subqueries, views, and functions. Prerequisite: Completion of COSC 1010 or equivalent experience.

## Computer Applications—Cisco

**CSCO 2000 3 CREDITS****CISCO: INTERNETWORKING I**

Students build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Students develop skills necessary to plan and design the architecture, structure, functions, component, and models of the Internet and computer networks. Students implement the principles of IP addressing and fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. This is the first of two courses needed in order to take the Interconnecting Cisco Network Devices 1 (ICND 1) certification exam to earn the Cisco Certified Entry-Level Network Technician (CCENT) title.

**CSCO 2010 3 CREDITS****CISCO: ADVANCED INTERNETWORKING I**

This course prepares students to plan and design the architecture, components, and operations of routers and switches in a small network. Students configure routers and switches for basic functionality. Students configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs and inter-VLAN routing in both IPv4 and IPv6 networks. This is the second of two courses needed in order to take the Interconnecting Cisco Network Devices 1 (ICND 1) certification exam to earn the Cisco Certified Entry-Level Network Technician (CCENT) title. Prerequisite: Completion of CSCO 2000 or instructor approval.

**CSCO 2020 3 CREDITS****CISCO: ADVANCED INTERNETWORKING II**

Students plan and design the architecture, components, and operations of routers and switches in a large and complex network. Students configure routers and switches for advanced functionality. By the end of this course students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP and VTP in both IPv4 and IPv6 networks. Students implement DHCP and DNS operations in a network. This is the first of two courses needed in order to take the Interconnecting Cisco Network Devices 2 (ICND 2) Exam. Upon completion of this exam (and having passed the ICND 1 exam), the student earns the title of Cisco Certified Networking Associate (CCNA). Prerequisite: Completion of CSCO 2010 or instructor approval.

**CSCO 2025 3 CREDITS****CISCO: ADVANCED INTERNETWORKING III**

Students plan and design WAN technologies and network services required by converged applications in a complex network. Students analyze network devices and resolve common issues with data link protocols as well as implementing IPsec and virtual private network (VPN) operations in a complex network. This is the second of two courses needed in order to take the Interconnecting Cisco Network Devices 2 (ICND 2) Exam. Upon completion of this exam (and having passed the ICND 1 exam), the student earns the title of Cisco Certified Networking Associate (CCNA). Prerequisite: Completion of CSCO 2020.

## Computer Applications—Computer Security

**CSEC 1500 3 CREDITS****NETWORK SECURITY FUNDAMENTALS**

Students gain a fundamental understanding of computer and network security and explore a wide variety of concepts related to computer security. This course prepares the student for the CompTIA Security+ Certification. Prerequisite: Completion of or concurrent enrollment in CSCO 2000.

**CSEC 1510 3 CREDITS****NETWORK DEFENSE PRINCIPLES**

Students employ knowledge and gain experience installing firewalls and intrusion detection systems. Students develop a solid foundation in advanced network security fundamentals, intrusion detection systems, network address translation, packet filtering, proxy servers, firewalls, and virtual private networks. Students explore network defense fundamentals, critical system analysis, risk analysis, security policy implementation, network traffic signatures, virtual private network concepts and implementation, incident response, and firewall management as well as systems and services security. Prerequisite: Completion of CSEC 1500, CSCO 2000, and CMAP 1960.

**CSEC 1520 3 CREDITS****NETWORK ATTACK PRINCIPLES**

Students scan, test, hack, and secure systems in an interactive lab environment. Students analyze perimeter defenses and attacker tactics, as well as intrusion detection, policy creation, social engineering, DDoS Attacks, buffer overflows, and virus creation. This course will help prepare the student for the EC-Council Certified Ethical Hacker (CEH) Certification. Prerequisite: Completion of or concurrent enrollment in CSCO 2000.



**CSEC 1530 3 CREDITS****COMPUTER FORENSICS**

Students employ a detailed methodological approach to computer forensics and evidence analysis. Students demonstrate the skills necessary to acquire and handle digital evidence, identify and track cybercriminals and complete computer investigations. This course will help prepare the student for the EC-Council Certified Hacking Forensic Investigator (CHFI) Certification. Prerequisite: Completion of or concurrent enrollment in CSCO 2000.

**CSEC 1540 3 CREDITS**  
**INCIDENT RESPONSE**

Students detect how and when data breaches occurred, identify compromised and affected systems, and determine what data attackers took or changed. In addition, students perform containment and remediation of incidents, and research threat intelligence. Prerequisites: CSEC 1500 or current CompTIA Security+ certification or instructor consent.

**CSEC 1550 3 CREDITS**  
**MALWARE ANALYSIS AND REVERSE ENGINEERING**

Students demonstrate dynamic and static malware analysis on all major file types, carve malicious code from executables, and demonstrate how to recognize common malware tactics. Prerequisite: CSEC 1500 or valid CompTIA Security+ certification or instructor consent.

**CSEC 1560 3 CREDITS**  
**CYBER SECURITY ANALYSIS**

Students perform defensive operations in an information security operations center environment. Students actively defend information systems through threat intelligence and monitoring. Assessment is based on employment of appropriate defensive measures in a hostile environment. Prerequisite: CSEC 1500 or valid CompTIA Security+ certification or instructor consent.

**CSEC 2013 3 CREDITS**  
**CYBERSECURITY CAPSTONE**

Students demonstrate the knowledge and skills they have acquired throughout the Cybersecurity program within a Cyber Range, a controlled virtual environment designed to test student ability to protect systems against cyber attacks under realistic conditions. After completion of the practical portion of the lab, students develop a new policy or procedure to add to current cybersecurity practices. Instructor consent required.

**CSEC 2395 3 CREDITS**  
**CYBERSECURITY CAPSTONE**

Students demonstrate the knowledge and skills they have acquired throughout the Cybersecurity program within a Cyber Range, a controlled virtual environment designed to test student ability to protect systems against cyber attacks under realistic conditions. After completion of the practical portion of the lab, students develop a new policy or procedure to add to current cybersecurity practices. Instructor consent required.

**Computer Applications—Linux****LINX 2500 4 CREDITS**  
**LINUX ADMINISTRATION I**

Students develop the knowledge and skills necessary to install and administer Linux-Based systems. Students examine the basic concepts of Linux/UNIX operating systems and architecture. Topics covered include installation, boot managers, Linux desktop, help resources, software management, file and directory structure, command line administration, process management, and basic network and security configurations. Upon successful completion of the course, students will be able to install, configure, and administer a basic Linux system. This course also provides a base from which students can study to pass the LPI-1, 101 (LXO-103) exam (Part 1 of 2) for the Linux+ and LPIC-1 certifications.

**LINX 2510 4 CREDITS**  
**LINUX ADMINISTRATION II**

Students develop the knowledge and skills necessary to install and administer Linux systems. Students illustrate Linux bash-shell scripts and data management. Students demonstrate user interfaces management and system administration. Students also learn to manage system services, networks, and security configurations. This course helps prepare students to take the LPIC-1 exam 102 (LXO-104) and earn the LPI LPIC-1 as well as the CompTIA Linux+ certification. Prerequisite: Completion of LINX 2500.

**Computer Applications—Microsoft Technology****MSFT 2578 4 CREDITS**  
**NETWORKING ESSENTIALS**

A course designed to provide students with the knowledge and skills necessary to understand the local area networking information in Microsoft courses on workstations and networking. The course serves as a general introduction for students who need a foundation in current networking technology for local area networks (LANs), wide area networks (WANs), and the Internet. Prerequisite: Completion of CMAP 1650 or instructor approval.

**MSFT 2600 4 CREDITS**  
**IMPLEMENTING MICROSOFT WINDOWS DESKTOP**

Students gain the knowledge and skills necessary to install, manage, and maintain professional Microsoft Windows desktop environments. Students install, manage, and maintain current Microsoft Windows operating systems; manage local accounts and configure permission to resources; and manage security, network resources, printers, and group policies. This course is intended for help desk, desktop, and systems administrators who work in a Microsoft networked environment and prepares students to test for the Microsoft Windows Desktop Configuration Certification.

**MSFT 2700 4 CREDITS****MICROSOFT SYSTEMS ASSOCIATE I SERVERS**

Students gain the knowledge and skills necessary to install, configure and maintain Microsoft server environments. Students configure and manage Active Directory servers and accounts; design and implement storage solutions, including virtual and network-based storage; configure Hyper-V virtualization and High Availability including clustering and system recovery; manage Windows containers using Docker CLI and PowerShell for Docker as well as managing container images using Microsoft Azure. This course prepares students to take the Microsoft 70-740 Exam.

**MSFT 2710 4 CREDITS**  
**MICROSOFT SYSTEMS ASSOCIATE II**

Students develop the knowledge and skills necessary for implementing, managing, and maintaining the network infrastructure in a Windows Server environment. Students configure and troubleshoot name resolution (DNS), Dynamic Host Configuration Protocol (DHCP), IPv4 and IPv6 Addressing, Group Policy Objects (GPO), implementing remote access solutions such as DirectAccess and VPNs, implementing network policies and network access protection, as well as update management and monitoring of Windows systems. This course helps prepare students to take the Microsoft 70-741 exam. Prerequisite: Completion of MSFT 2700 or instructor approval.

**MSFT 2715 4 CREDITS**  
**MICROSOFT SYSTEMS ASSOCIATE III ADMINISTRATION**

Students develop the knowledge and skills necessary for designing, implementing, and managing a Microsoft Active Directory infrastructure using graphical tools and PowerShell scripting. Students deploy, manage, and maintain Active Directory sites, Group Policy Objects (GPO), certificate authorities (CA), and Federation Services (FS). Students implement Active Directory Rights Management Services (AD RMS), and Microsoft Azure AD. Students will understand how to secure AD DS as well as monitor and troubleshoot AD DS services. This course prepares students to take the Microsoft 70-742 Exam. Prerequisite: Completion of MSFT 2700 or instructor consent.

**MSFT 2800 4 CREDITS**  
**IMPLEMENTING MICROSOFT SERVER VIRTUALIZATION**

Students develop the knowledge and skills necessary to design and administer Microsoft server virtualization. Students install and configure Microsoft Hyper-V and VMware virtual environments. Students design and manage virtual machines and virtual networking. Students also manage virtual resources including storage, networking, processing, clusters, and memory. Students learn to manage virtual machine replication, remote desktop, and cloud environments. Students learn to monitor and optimize virtual machines as well as backup and restore them. Prerequisite: Completion of MSFT 2700 or instructor approval.



**MSFT 2810** **4 CREDITS**  
**MICROSOFT SQL SERVER**  
**ADMINISTRATION**

Students develop the knowledge and skills necessary to design and administer Microsoft SQL servers and SQL databases. Students install and configure Microsoft SQL servers. Students design and manage SQL tables, views, databases, stored procedures, and reports. Students also configure user accounts, authentication and permissions for SQL databases. Students also learn to monitor, optimize and backup SQL servers. Prerequisite: Completion of MSFT 2700 or instructor approval.

**MSFT 2900** **4 CREDITS**  
**MICROSOFT PROJECT MANAGEMENT**

Students learn to plan, design and manage technical projects. Students develop the knowledge and skills necessary to plan, design and manage technology-based projects effectively in order to meet the business needs. Students plan and design Microsoft systems and networks through the Project Management processes detailed in the Project Management Book of Knowledge (PMBOK). Students develop a project plan which addresses all phases of a successful project. Students use project management tools to aid in the design and implementation of their projects. Prerequisite: Completion of MSFT 2700 or instructor approval.

## **Computer Science**

**COSC 1010** **4 CREDITS**  
**INTRODUCTION TO**  
**COMPUTER SCIENCE**

Students are introduced to the fundamental concepts of computer programming and the programming development cycle. Given varied problems students will analyze, design, implement, and test solutions utilizing a contemporary computer programming language. Solutions will become more complex as the course progresses. Students will ultimately utilize simple data types, input/output statements, strings, control structures, and modules. Students will employ sound software engineering principles and debugging techniques. Prerequisite: Completion of or concurrent enrollment in MATH 1400 or higher.

**COSC 1030** **4 CREDITS**  
**COMPUTER SCIENCE I**

Students continue using the programming development cycle (analyze, design, code, and test) while expanding their programming skills to include Graphical User Interfaces (GUI), object-oriented programming, arrays, file I/O, character I/O, dynamic memory allocation, and strings. Prerequisite: Completion of COSC 1010.

**COSC 1490A** **3 CREDITS**  
**TOPICS: PROGRAMMING APPS**  
**FOR ANDROID DEVICES**

In this intermediate-level programming course, students learn to program apps for Android devices (apps are application programs for smartphone and tablet devices). Students use the Eclipse IDE and both the Java and Android SDKs (the programming environment that the vast majority of Android programmers use) to create fully functional apps for Android devices. All software required is free for download and available for Windows, Mac, and Linux platforms. An Android device is not required, but if students have one, they may utilize it. Prerequisite: Completion of COSC 1010 or permission of instructor.

**COSC 2030** **4 CREDITS**  
**COMPUTER SCIENCE II**

Students experiment with the use and implementation of abstract data structures in an object-oriented programming environment. Topics include lists, stacks, queues, tables, binary trees, graphs, space and time complexity, recursion, and recursive data types. Programming exercises and experimentation with software in a closed laboratory supplement the discussion. Prerequisite: Completion of COSC 1030.

**COSC 2300** **3 CREDITS**  
**DISCRETE STRUCTURES**

Students are introduced to the mathematical concepts that serve as foundations of computer sciences: logic, set theory, relations and functions, graphs (directed and undirected), inductively defined structures (lists and trees), and applications of mathematical induction. Provides an introduction to abstract and rigorous thinking in advanced mathematics and computer sciences. Cross-listed with MATH 2300. Prerequisite: Completion of COSC 1030 or MATH 2200 or MATH 2350.

**COSC 2409** **3 CREDITS**  
**PROGRAMMING**

Students are introduced to the fundamental concepts of computer programming and the programming development cycle. Given varied problems students will analyze, design, implement, and test solutions utilizing a contemporary computer programming language. Solutions will become more complex as the course progresses. Students will ultimately utilize basic features of the chosen language such as simple data types, input/output statements, strings, control structures, and modules. Students will employ sound software engineering principles and debugging techniques. Prerequisite: None

## **Construction Management**

**CMGT 1520** **3 CREDITS**  
**INTRODUCTION TO BLUEPRINT**  
**READING AND BUILDING CODES**

Students acquire knowledge about the complexities of modern construction and related technologies. Students learn to read, understand, and interpret construction drawings for both commercial and residential construction. Students examine how design parameters and construction methods relate to codes and specifications.

## **Cooperative Work Experience**

An introduction to the work-related experience. This course combines classroom study with on-site employment to provide the student a complete learning experience. The course is designed to provide the student with relevant duties and responsibilities at the training station and to prepare the student for advancement toward the student's occupational goal.

Students may earn a maximum of 10 credit hours, which would be applicable to an associate's degree or a certificate. Entering students must consult with the department prior to enrollment.

Veterans interested in these offerings should contact the veterans' counselor as these courses may not qualify for VA benefits.

Courses numbered 1480 denote academic freshman-level work.

Courses numbered 2480 denote academic sophomore-level work.

Courses numbered 1980 denote vocational freshman-level work.

Courses numbered 2980 denote vocational sophomore-level work.

## **Counseling**

**CNSL 2300** **3 CREDITS**  
**COUNSELING SKILLS FOR**  
**HELPING PROFESSIONALS**

Students discuss and apply basic counseling and communication skills. In addition, students develop and demonstrate use of basic skills including listening, responding, encouraging, and initiating change in interpersonal communication through mediation and conflict resolution. Students engage in self-examination in preparation for going into the helping profession. Prerequisite: Completion of PSYC 1000.

## **Criminal Justice**

### **CRMJ 1310 3 CREDITS** **CRIMINAL INVESTIGATION I**

Students examine the fundamentals of criminal investigation. This class is designed for students considering careers in law enforcement or criminal justice as well as for those already in the field. Prerequisite: Completion of or concurrent enrollment in CRMJ 2120 or instructor approval.

### **CRMJ 1320 3 CREDITS** **CRIMINAL INVESTIGATION II**

Students examine the crime laboratory as an integral part of criminal investigation. Topics include an overview of the historical development of forensic sciences; descriptions and applications of various scientific techniques used in the study of crimes; the collection, preservation, and recognition of evidence; and laboratory techniques. Prerequisite: Completion of or concurrent enrollment in CRMJ 1310 or instructor approval.

### **CRMJ 1510 3 CREDITS** **POLICE SCIENCE I**

A study of the role of the police and policing in American society and an examination of the pattern of relations between police and the public. Students become knowledgeable about the nature of police organizations and police work within the context of a broad social, political, and legal framework. Prerequisite: Completion of CRMJ 2120 or consent of instructor.

### **CRMJ 2120 3 CREDITS** **INTRODUCTION TO CRIMINAL JUSTICE**

An overview course regarding the criminal justice system and how it relates to the administration of justice in our complex society. Students study a survey of philosophies, functions and methods of social control with emphasis on the role of law and those involved in its administration, i.e. police, courts, and corrections organizations which includes a study of history, organization process and problems related to law and justice agencies in a heterogeneous, democratic society. Prerequisites: Completion of ENGL 0810 or equivalent placement.

### **CRMJ 2210 3 CREDITS** **CRIMINAL LAW I**

Students explore substantive criminal law as a formal means of social control. Students view criminal law from the perspective of criminal justice, law, anthropology, sociology, and psychology. This course is intended for both non-majors and majors in law enforcement, corrections and pre-law. Prerequisite: Completion of or concurrent enrollment in CRMJ 2120 or instructor approval.

### **CRMJ 2220 3 CREDITS** **CRIMINAL LAW II**

Students examine the basic individual rights protected under the United States Constitution and how these rights come into conflict with the maintenance of public order and the enforcement of the criminal laws of the United States and individual states. Topics include an overview of the criminal court system and the arena in which legal conflict is resolved, law of arrest, search and seizure, confessions, pretrial identifications, the exclusionary rule, privacy, probable cause, reasonable doubt, and those rights guaranteed by the Fourth, Fifth, and Sixth Amendments. Prerequisite: Completion of or concurrent enrollment in CRMJ 2120 or instructor approval.

### **CRMJ 2350 3 CREDITS** **INTRODUCTION TO CORRECTIONS**

Students explore the development and philosophy of the American correctional system. Topics include treatment and punishment of adults and juveniles in both community and institutionally-based alternatives. This course is designed for both nonmajors and majors in criminal justice. Prerequisite: Completion of or concurrent enrollment in CRMJ 2120 or instructor approval.

### **CRMJ 2380 3 CREDITS** **PROBATION AND PAROLE**

Students explore the history, philosophy, and legal authority of community correctional alternatives. Community corrections topics include probation, parole, fines, diversion, restitution, community treatment centers, work/study release centers, half-way houses, and other intermediate sanctions. Prerequisite: Completion of or concurrent enrollment in CRMJ 2120 or consent of instructor.

### **CRMJ 2400 3 CREDITS** **CRIMINOLOGY**

An introductory overview of criminal behavior and its impact on the criminal justice system. Students discover theories of criminal behavior, examination and analysis of statistics on crime, explanations of crime causation, and the relationship between crime and the criminal justice process. Prerequisite: Completion of CRMJ 2120 or SOC 1000 or consent of instructor. Cross-listed with SOC 2400 Criminology.

### **CRMJ 2420 3 CREDITS** **JUVENILE JUSTICE**

Students examine the system of justice for those under age 18. Topics include an analysis of the various models of the system, the decision to call the police, police discretion involving delinquents, juvenile court philosophy and process, prevention, and diversion from the juvenile justice system. Prerequisite: Completion of or concurrent enrollment in CRMJ 2120 or instructor approval.

## **Decision Science**

### **DSCI 1000 3 CREDITS** **INTRODUCTION TO DECISION SCIENCE**

Students examine the process of decision making in a business setting while exploring the characteristics of problem analysis. Students are introduced to project management with an emphasis on performance measurement. Prerequisite: Completion of ENGL 0810.

### **DSCI 1100 3 CREDITS** **SUPPLY CHAIN MANAGEMENT**

Students examine the fundamentals and concepts of managing a supply chain and its role in the business strategy of the firm. Students analyze how successful supply chain management can help the firm gain a competitive advantage in local and global markets. Prerequisite: Completion of DSCI 1000.

### **DSCI 1200 3 CREDITS** **LOGISTICS AND TRANSPORTATION**

Students examine the fundamentals of logistics and transportation. Course coverage includes the design of channels of distribution, management of inventory, evaluation of transportation alternatives, information flows, facility location, outsourcing, and the rapidly expanding field of logistics information technology. Prerequisite: Completion of DSCI 1000.

### **DSCI 1300 3 CREDITS** **PROJECT MANAGEMENT**

Students examine project management in theory and practice, and the roles and responsibilities of the project manager. Students focus on a practical approach to managing projects, focusing on organizing, planning, and controlling the efforts of the project. Prerequisite: Completion of DSCI 1000.

### **DSCI 2210 3 CREDITS** **PRODUCTION AND OPERATIONS MANAGEMENT**

An introductory course in production and operations management. Students gain knowledge and skills about operations strategy, project management, forecasting, quality management, supply chain management, inventory management, production and operations planning. Students apply these decision-making strategies to typical management situations. Prerequisite: Completion of STAT 2010, STAT 2050 or STAT 2070, MATH 2355 or MATH 2200, and IMGT 2400.

### **DSCI 3210 3 CREDITS** **INTRO TO OPERATIONS AND SUPPLY CHAIN MANAGEMENT**

Students explore production and operations management. Students develop operational strategies including quality management, facilities location, facilities layout, forecasting, inventory management, production planning, and scheduling. Prerequisite: MGT 3210

**DSCI 4260** **3 CREDITS**  
**PROJECT MANAGEMENT**  
 Students examine project management theory and practice and the roles and responsibilities of a project manager. Students focus on a practical approach to managing projects including organizing, planning, and controlling the outcomes of the project. Prerequisite: Completion of MGT 3210.

## **Dental Hygiene**

**DHYG 1110** **3 CREDITS**  
**DENTAL BIOLOGY**  
 Students study dental terminology and explore the structure and function of the teeth and oral cavity. Students examine the embryonic development and microscopic anatomy of the oral structures. Students practice identification of teeth, oral structures, and occlusion, and perform activities related to embryonic development and histology in the lab. Prerequisite: Acceptance into the Dental Hygiene program.

**DHYG 1150** **2 CREDITS**  
**PREVENTIVE DENTISTRY**  
 Students explore risk assessments, preventive concepts and oral physiotherapy aids to help clients achieve control of oral diseases. Students examine the basic etiology, classification and process of caries and periodontal disease. Students apply the CAMBRA methodology of prevention and control. Students demonstrate dental health education and client motivation techniques. Prerequisite: Acceptance into the Dental Hygiene program.

**DHYG 1200** **2 CREDITS**  
**PHARMACOLOGY**  
 Students examine the principles of pharmacology as they affect the clinical practice of dental hygiene and the management of medical emergencies in the dental office. Prerequisite: Completion of DHYG 1410.

**DHYG 1245** **3 CREDITS**  
**DENTAL NUTRITION AND BIOCHEMISTRY**  
 Students identify the concepts of biochemistry, cell metabolism and principles of nutrition. Students examine energy balance and the chemistry, digestion, absorption and metabolism of proteins, carbohydrates, lipids, water, vitamins and minerals. Students explore the role of nutrition in development and maintenance throughout the life cycle, as well as the role of nutrition in health and disease in the oral cavity. Students analyze diets and eating patterns. Students apply nutritional counseling strategies to prevent oral disease and improve oral health. Prerequisite: Completion of DHYG 1150.

**DHYG 1410** **6 CREDITS**  
**DENTAL HYGIENE PRINCIPLES**  
 Students identify the microbiology related to transmissible diseases in dentistry and the chain of asepsis. Students practice sterilization, aseptic techniques, infection control procedures and the use of maintenance of dental equipment. Students identify OSHA, HIPAA, hazardous communication, safety, ergonomic, risk management, and medical emergencies procedures and documentation. Students explore the principles of ethical and professional behavior, the American Dental Hygienists' Association Code of Ethics and Standards of Care as they relate to the practice of dental hygiene. Students assess their client's needs, complete dental hygiene diagnosis, develop care plans and document in practice management software. Students identify instruments and practice instrumentation. Prerequisite: Acceptance into the Dental Hygiene program.

**DHYG 1420** **2 CREDITS**  
**DENTAL HYGIENE SEMINAR I**  
 Students analyze patient assessment data, prepare dental hygiene diagnoses and design dental hygiene care plans for physically compromised, geriatric, pediatric and culturally diverse clients. Students practice selection, use and maintenance of area specific and implant instruments and powered scalers. Students demonstrate topical, non-injectable, and desensitizing techniques for client comfort. Students practice professional and legal documentation. Techniques learned in class will be utilized in DHYG 1425. Prerequisite: Completion of DHYG 1410.

**DHYG 1425** **3 CREDITS**  
**DENTAL HYGIENE CLINIC I**  
 Students demonstrate competency in basic dental hygiene interventions utilized in patient care in both clinical settings and service-learning activities. Students apply the fundamental principles of assessing, treating, and evaluating the patient's individual needs as they develop skills using the dental hygiene process of care model. Students also assess their clinical skills, delivery of patient care, and reflect on their experiences in all settings. Prerequisite: Completion of DHYG 1410.

**DHYG 2200** **2 CREDITS**  
**GENERAL AND ORAL PATHOLOGY**  
 Students demonstrate an understanding of the fundamentals of general pathology and disease processes including immunology, inflammation and repair. Students practice differential assessment of common diseases affecting the oral and perioral structures based on clinical signs, symptoms and radiographic manifestations. Students will be able to differentiate between normal and abnormal tissues and refer abnormal findings for diagnosis. Prerequisite: Completion of DHYG 2400.

**DHYG 2250** **2.5 CREDITS**  
**PAIN MANAGEMENT**  
 Students acquire the knowledge to administer topical, noninjectable, and local anesthetics and nitrous oxide analgesia to increase patient comfort and pain control when providing dental hygiene services. Students examine principles of pharmacology, patient management, medical considerations, and indications and contraindications for the use of local anesthetics and nitrous oxide analgesia. Students correlate theory to practice in the lab and clinical experience practicing pain management techniques using the dental hygiene process of care and the safe use of equipment and armamentarium. Prerequisite: Completion of DHYG 1200 and current CPR certification.

**DHYG 2260** **3 CREDITS**  
**DENTAL PUBLIC HEALTH**  
 Students identify significant social, political, psychological and economic factors influencing the health care system. Through service-learning activities, students assess, plan, implement and evaluate strategies to address diverse community-identified needs. Students practice research methodology and basic statistical analysis in classroom activities and public presentations. Prerequisite: Completion of DHYG 2430.

**DHYG 2330** **4 CREDITS**  
**PERIODONTOLOGY**  
 Students review anatomy and histology of periodontal structures in health and disease. Students identify the etiologies, host response, histopathology and classifications, of periodontal diseases including local, systemic and parafunctional factors. Students explore the dental hygienist's role in prevention and intervention using dental laser and other nonsurgical periodontal therapies. Students correlate theory to practice in the lab and clinic safely practicing laser and other nonsurgical periodontal protocols and application techniques using the dental hygiene process of care. Students examine legal, ethical and evidence based applications of nonsurgical periodontal therapies, principles of laser physics, and indications and contraindications for the use of dental lasers and other nonsurgical periodontal therapies. Students develop evidence-based treatment plans or recommendations for referral of selected cases. Prerequisite: Completion of DHYG 1420.

**DHYG 2400** **2 CREDITS**  
**HEAD, NECK, AND ORAL ANATOMY**  
 Students explore the structure and function of the head and neck. Students examine the skull osteology, sinuses, muscles, neuroanatomy, blood supply, lymphatics, glandular tissue, and oral mucous membranes. Prerequisite: Completion of DHYG 1110.



**DHYG 2410 3 CREDITS**  
**ETHICS, LAW AND PRACTICE MANAGEMENT**

Students examine ethical theories, professional codes of ethics and apply ethical reasoning techniques to dental hygiene practice. Students explore legal topics including employment, civil, criminal, professional and regulatory law related to dentistry. Students learn dental practice management skills and job seeking strategies. Prerequisite: DHYG 2330.

**DHYG 2430 2 CREDITS**  
**DENTAL HYGIENE SEMINAR II**

Students practice behavior management strategies, dental hygiene diagnosis and treatment planning for cognitively impaired, medically compromised, chemical dependent, nutritionally compromised and culturally diverse clients. Students document oral conditions using intraoral cameras and intraoral photos. Techniques learned in class will be practiced in DHYG 2435. Prerequisite: Completion of DHYG 1420.

**DHYG 2435 5 CREDITS**  
**DENTAL HYGIENE CLINIC II**

Students demonstrate competency in more advanced clinical practice skills using state-of-the-art treatment modalities and equipment. Utilizing the dental hygiene process of care model, students apply the principles of professionalism, communication, clinical judgment, collaboration, and self-evaluation to provide individualized patient care in a variety of clinical settings and service-learning activities. In addition, students write journal entries reflecting on their experiences and relating these experiences to their professional development. Prerequisite: Completion of DHYG 1425.

**DHYG 2440 1 CREDIT**  
**DENTAL HYGIENE SEMINAR III**

Students explore the licensing process, dental specialty practices and practice advanced supplemental clinical skills. Students present an analysis of a periodontal case study patient treated in the dental hygiene clinic. Students evaluate their personal competency in a capstone portfolio and case-study and through self-reflection of a clinical experience. Prerequisite: Completion of DHYG 2330.

**DHYG 2445 5 CREDITS**  
**DENTAL HYGIENE CLINIC III**

Students demonstrate competency in comprehensive patient care through the integration of all required program competencies and proficiencies. Students practice evidence-based decision making in providing dental hygiene interventions and developing or modifying treatment plans. Utilizing the dental hygiene process of care model, students apply the principles of professionalism, communication, clinical judgment, collaboration, and self-evaluation to provide individualized patient care in a variety of clinical settings and service-learning activities. In addition, students write journal entries that reflect critical thinking and development of professional, personal, and civic responsibility. Prerequisite: Completion of DHYG 2435.

**DHYG 2450 3 CREDITS**  
**DENTAL RADIOLOGY**

Students expose, process, mount and evaluate radiographic images. Students demonstrate principles of x-ray generation, image production and radiology safety. Students examine radiographic anatomy and pathology. Prerequisite: Acceptance into the Dental Hygiene program.

**DHYG 2455 3 CREDITS**  
**DENTAL MATERIALS**

Students examine the composition, chemical and physical properties of dental materials to enhance the student's ability to make clinical judgments on the use and care of these materials in formulating the dental hygiene treatment plan. During lab, students manipulate various materials and explore the influence and effects of manipulation and oral environment on the clinical performance of dental materials. Prerequisite: Completion of DHYG 1150.

**DHYG 2975 1 CREDIT**  
**DIRECTED STUDIES IN CLINICAL DENTAL HYGIENE**

Students demonstrate the ability to provide comprehensive patient care while maintaining and/or improving clinical skills in preparation for returning to practice. Prerequisite: Completion of four terms of the Dental Hygiene Program and permission of the instructor.

## **Developmental Studies**

**DVST 0890 3 CREDITS**  
**BASIC SKILLS DEVELOPMENT**

A course designed to enhance students' skills in reading, vocabulary, speaking, mathematics, and/or writing. Instruction is individualized to meet the students' needs in the basic skills areas. May be repeated for up to two times for credit. Placement in this course is by advisor only.

## **Diagnostic Medical Sonography**

**IMAG 1500 3 CREDITS**  
**CROSS-SECTIONAL ANATOMY**

Students will explore human anatomy as seen in various anatomical and regional areas in the body, to include transverse, sagittal, and coronal planes. Students will identify the anatomy of the human head, thorax, spine, abdomen, pelvis and extremities. Students correlate cross-sectional images from various modalities and recognize normal anatomy, anatomic variants, and selected pathology. Prerequisites: Acceptance into the Diagnostic Medical Sonography Program.

**IMAG 1505 3 CREDITS**  
**INTRO TO DIAGNOSTIC MEDICAL SONOGRAPHY SONOGRAPHY**

Students explore the field of Diagnostic Medical Sonography by examining the history of sonography and correlation of other imaging modalities. Students develop an understanding of the Society of Diagnostic Medical Sonography Code of Ethics pertaining to patient care and daily involvement with physicians, nurses, and other sonographers. Students learn to identify different behaviors and mental processes as it relates to the healthcare field. Prerequisite: Admission to the Diagnostic Medical Sonography program.

**IMAG 1510 2 CREDITS**  
**ULTRASOUND PHYSICS I**

Students are introduced to physics and instrumentation relevant to diagnostic medical sonography. Students explore the components of the ultrasound machine system, sound beam properties, sound propagation in tissue and ultrasound transducers. While applying key concepts, students will develop a framework which will be built upon in IMAG 1515 Ultrasound Physics II. Prerequisites: Completion of IMAG 1500 and IMAG 1505.

**IMAG 1515 3 CREDITS**  
**ULTRASOUND PHYSICS II**

Students build on skills learned in IMAG 1510. Students demonstrate competency in general Doppler, color Doppler, and spectral Doppler principles, quality assurance and quality control principles, and sonographic safety as they relate to bioeffects. Students explore image production and display, storage of the ultrasound image, and sonographic artifacts. Students investigate new frontiers in ultrasound principles, and demonstrate competency in transducer selection, usage, setting scanning parameters, and interactive properties of ultrasound. Prerequisite: Completion of IMAG 1510.

**IMAG 1520 2 CREDITS**  
**OB/GYN SONOGRAPHY I**

Students are introduced to the anatomy, pathology, and physiology of the non-gravid female pelvic organs and first-trimester pregnancy along with the proper scanning protocols of each pelvic organ and a first-trimester pregnancy. Specifically, the student learns and recognize normal echo-texture of anatomy and pathology as it relates to the following organs: uterus, ovaries, pelvic muscles, bladder, and development of a first-trimester pregnancy. The students explore the importance of sonographic image quality as it relates to the anatomy, pathology, and the development of the first-trimester fetus. This course is offered in the fall semester. Prerequisite: Completion of IMAG 1500 and IMAG 1505. Corequisite: Concurrent enrollment in IMAG 1505.

**IMAG 1521 1 CREDIT****OB/GYN SONOGRAPHY I LAB**

A course to be taken concurrently with IMAG 1520. Through laboratory experience, students actively demonstrate and experiment with the effects of technical factors, patient positioning, and recognition of normal echo-texture of anatomy and pathology of the female pelvic organs and first-trimester pregnancy. Students perform ultrasounds of the non-gravid female pelvic organs including the uterus, ovaries, pelvic muscles, and bladder. Students perform ultrasounds of the first-trimester pregnancy including the uterus, ovaries, and development of a fetus. This course is only offered in the fall. Prerequisites: Completion of IMAG 1500 and IMAG 1505. Corequisite: Concurrent enrollment in IMAG 1520.

**IMAG 1525 2 CREDITS****ABDOMINAL SONOGRAPHY I**

Students will be introduced to the anatomy, pathology, physiology and pathophysiology of the abdominal organs along with the proper scanning protocols of each organ. Students will identify and recognize normal echo-texture of anatomy and pathology as it relates to the following organs: pancreas, liver, biliary system, gallbladder, kidneys, and abdominal vasculature. Students will explore the importance of sonographic image quality as it relates to the anatomy and pathology. This course is offered in the fall semester. Prerequisite: Completion of IMAG 1500 and IMAG 1505. Corequisite: Concurrent enrollment in IMAG 1526.

**IMAG 1526 1 CREDIT****ABDOMINAL SONOGRAPHY I LAB**

A course to be taken concurrently with IMAG 1525. Through laboratory experience, students actively demonstrate and experiment with the effects of technical factors, patient positioning, and recognition of normal echo-texture of anatomy and pathology of the abdominal organs. Students perform ultrasounds of the human abdomen including: liver, gallbladder, biliary system, pancreas, abdominal aorta and kidneys. This course is offered in the fall. Prerequisite: Completion of IMAG 1500 and IMAG 1505. Corequisite: Concurrent enrollment in IMAG 1525.

**IMAG 1530 1 CREDIT****VASCULAR SONOGRAPHY I REVIEW**

Students are introduced to the anatomy, pathology, physiology, and pathophysiology, along with the proper scanning protocols, of the venous system of the upper and lower extremities. Students identify and recognize normal pathological venous blood flow in the peripheral vascular system. Students explore the importance of sonographic image quality as it relates to the anatomy and pathology and learn to compare and contrast the results with other diagnostic procedures. This course is offered in the fall semester.

**IMAG 1531 0.5 CREDITS****VASCULAR SONOGRAPHY I LAB**

Students actively demonstrate and experiment with the effects of technical factors, patient positioning, and recognition of normal and pathological venous waveforms through laboratory experience. Students perform ultrasounds of the peripheral venous vascular system.

**IMAG 1540 2 CREDITS****OB/GYN SONOGRAPHY II**

A continuation of IMAG 1520. Students will be introduced to the anatomy, pathology, and physiology and pathophysiology of the developing second and third-trimester pregnancy and post-pregnancy female pelvis along with proper scanning protocols. Students will learn to identify and recognize normal echo-texture of anatomy and pathology as it relates to the developing fetus. Students explore the importance of sonographic image quality as it relates to the anatomy, pathology, and development of a second and third-trimester fetus along with interventional procedures. This course is only offered in the spring semester. Prerequisites: Completion of IMAG 1520 and IMAG 1521.

**IMAG 1541 1 CREDIT****OB/GYN SONOGRAPHY II LAB**

A course to be taken concurrently with IMAG 1540. Through laboratory experience, students actively demonstrate and experiment with the effects of technical factors, patient positioning, and recognition of normal echo-texture of anatomy and pathology of the second and third-trimester pregnancy and post-pregnancy female pelvis. Students perform ultrasounds of the second and third-trimester pregnancy and post-pregnancy female pelvis. This course is only offered in the spring. Prerequisites: Completion of IMAG 1520 and IMAG 1521.

**IMAG 1545 2 CREDITS****ABDOMINAL SONOGRAPHY II/SMALL PARTS**

Students will be introduced to the anatomy, pathology, physiology and pathophysiology of the superficial abdominal organs along with the proper scanning protocols of each organ. Students will identify and recognize normal echo-texture of anatomy and pathology as it relates to the following organs: thyroid, breast, male reproductive system, neonatal brain, and other superficial anatomical structures. Students will explore the importance of sonographic image quality as it relates to the anatomy and pathology and model proper sterile technique for invasive ultrasound procedures. This course is offered in the spring semester. Prerequisite: Completion of IMAG 1525 and IMAG 1526. Corequisite: Concurrent enrollment in IMAG 1546.

**IMAG 1546 1 CREDIT****ABDOMINAL SONOGRAPHY II / SMALL PARTS LAB**

Through laboratory experience, students actively demonstrate and experiment with the effects of technical factors, patient positioning, and recognition of normal echo-texture of anatomy and pathology of superficial structures and focus on performing a complete abdominal ultrasound. Students perform ultrasounds of the abdominal organs including the liver, pancreas, biliary system, gallbladder, kidneys, spleen and abdominal vasculature. Students perform ultrasounds on the superficial structures including: thyroid, breast, and explore interventional procedures. Prerequisite: Completion of IMAG 1525 and IMAG 1526. Corequisite: Concurrent enrollment in IMAG 1545.

**IMAG 1550 2 CREDITS****VASCULAR SONOGRAPHY II**

Students examine the anatomy, physiology, and pathophysiology of the cerebrovascular and peripheral vascular system along with the proper scanning protocols. Students identify standard form pathological arterial blood flow in the peripheral and cerebrovascular vascular system and recognize normal and pathological ankle-brachial indices. The student explores the importance of hemodynamics and sonographic image quality as it relates to the anatomy and pathology. Students compare and contrast the results with other diagnostic procedures. The student identifies therapeutic interventions and non-invasive testing-exams along with protocols. This course is offered in the spring semester. Prerequisite: Completion of IMAG 1530 and IMAG 1531. Corequisite: Concurrent enrollment in IMAG 1551.

**IMAG 1551 1 CREDIT****VASCULAR SONOGRAPHY II LAB**

Students actively demonstrate and experiment with the effects of technical factors, patient positioning, and recognition of normal and pathological arterial waveforms through laboratory experience. Students perform ultrasounds of the carotid arteries, ankle-brachial indices, and peripheral vascular systems. Prerequisite: Completion of IMAG 1530 and IMAG 1531. Corequisite: Concurrent enrollment in IMAG 1550.

**IMAG 2212 3 CREDITS****CROSS-SECTIONAL ANATOMY**

This course introduces students to human anatomy as seen in various anatomical and regional areas in the body, to include transverse, sagittal, and coronal planes. Students explore the anatomy of the human head, thorax, spine, abdomen, pelvis and extremities. Students correlate cross-sectional images from various modalities and recognize normal anatomy, anatomic variants, and selected pathology. Prerequisite: Acceptance into the Diagnostic Medical Sonography Program.

**IMAG 2500 6 CREDITS****SONOGRAPHY CLINICAL EXPERIENCE I**

This course provides clinical experience in a sonography department at a foundational level. Under supervision in the clinical setting, students demonstrate competency in clinical and patient skills as well as correlation of pathological processes and normal variants to ultrasound imaging. Utilizing correct sonography equipment settings and operations, students observe and perform ultrasound examinations of the abdomen, non-gravid and gravid female pelvis, small parts and vascular structures. Prerequisites: Completion of IMAG 1541, IMAG 1546, and IMAG 1551.

**IMAG 2515 11 CREDITS**  
**SONOGRAPHY CLINICAL EXPERIENCE II**

Students participate in the clinical experience building on skills acquired during the first semester of clinical. Under supervision, students demonstrate competency in clinical and patient skills as well as correlation of pathological processes and normal variants to ultrasound imaging. Utilizing correct sonography equipment settings and operations, students observe, perform and attempt ultrasound competencies of the abdomen, non-gravid and gravid female pelvis, small parts and vascular structures. Prerequisite: Completion of IMAG 2500.

**IMAG 2520 13 CREDITS**  
**SONOGRAPHY CLINICAL EXPERIENCE III**

Students participate in the clinical experience building on skills acquired during previous clinical experience. With minimal supervision, students demonstrate competency in clinical and patient skills as well as correlation of pathological processes and normal variants to ultrasound imaging. Utilizing correct sonography equipment settings and operations, students perform and complete ultrasound competencies of the abdomen, non-gravid and gravid female pelvis, Small parts, and vascular structures. Prerequisite: Completion of IMAG 2515.

**IMAG 2530 1 CREDIT**  
**REGISTRY REVIEW I**

Students prepare for successful completion of the American Registry for Diagnostic Medical Sonography national certifying examination by completing a comprehensive review of all prior courses in the sonography curriculum. Students develop and refine the analytical and test-taking skills necessary for passing the national certifying examination in Sonography. Students participate in group activities, mock tests, and discussion to synthesize knowledge, attitudes, and skills professional sonographic practice. Students are required to complete a minimum of two computerized Mock Registry Sessions as part of the course. Time to be arranged with the instructor. Prerequisite: Completion of IMAG 2500.

**IMAG 2535 1 CREDIT**  
**REGISTRY REVIEW II**

Students prepare for successful completion of the American Registry for Diagnostic Medical Sonography national certifying examination by completing a comprehensive review of all prior courses in the sonography curriculum. Students develop and refine the analytical and test-taking skills necessary for passing the national certifying examination in Sonography. Students participate in group activities, mock examinations, and discussion to synthesize knowledge, attitudes, and skills professional sonographic practice. Students are required to attempt their abdomen and obstetrical and gynecology registries during the last half of the course. Prerequisite: Completion of IMAG 2530.

**IMAG 2540 1 CREDIT**  
**VASCULAR SONOGRAPHY REGISTRY REVIEW**

Students prepare for successful completion of the American Registry for Diagnostic Medical Sonography national vascular certifying examination by completing a comprehensive review of all prior courses in the vascular sonography curriculum. Students develop and refine the analytical and test-taking skills necessary for passing the national certifying examination in vascular technology. Students will participate in group discussions, online activities, cases studies and mock board exams with faculty interaction to synthesize knowledge and skills in professional vascular sonographic practice. Prerequisite: Completion of IMAG 2530.

## **Diesel Technology**

**DESL 1500 3 CREDITS**  
**INTRODUCTION TO DIESEL TECHNOLOGY**

An introductory course in diesel technology. Students develop knowledge of basic procedures used in diesel technology. Students gain skill in and knowledge of shop safety, tools and equipment, engine oil, diesel fuel, and engine performance technology.

**DESL 1501 1 CREDIT**  
**AUTOMOTIVE AND DIESEL INDUSTRIAL SAFETY STANDARDS**

Students are introduced to OSHA required pollution and safety standards within the lab environment.

**DESL 1540 5 CREDITS**  
**DIESEL ELECTRICAL**

Students diagnose electrical circuits pertaining to light, medium, and heavy duty vehicles. Students acquire knowledge in basic electrical theories, circuit testing, motor circuits, batteries, charging systems, and starting systems. Prerequisite: Completion of DESL 1501.

**DESL 1610 5 CREDITS**  
**ENGINE REBUILDING I**

Students learn diesel engine theory and design. Students perform disassembly, diagnosis, reassembly and operation procedures. Students demonstrate skills in measuring, evaluating, and rebuilding engine parts to OEM specifications. Prerequisite: Completion of DESL 1501.

**DESL 1650 5 CREDITS**  
**DIESEL FUEL SYSTEMS AND TUNING I**

Students use scan tools to properly diagnose diesel computer control and fuel systems, including air intake and exhaust systems, intake manifold heater systems, superchargers and turbochargers. Students also bench-test fuel injection systems using state of the art equipment. Prerequisite: Completion of DESL 1501.

**DESL 1700 5 CREDITS**  
**DIESEL DRIVETRAIN**

Students learn the theory and design of manual and automatic transmissions used in over-the-road and industrial applications. Students apply knowledge of hydraulic systems in hydrostatic, Allison transmissions, PTO drives, hydraulic fluid pumps and hydraulic controls, as well as the theory and operation of drive axles. Prerequisite: Completion of DESL 1501.

**DESL 1755 5 CREDITS**  
**HEATING, AIR CONDITIONING, AND REFRIGERATION**

Students are introduced to the basic principles that govern heating, air conditioning, and refrigeration used in diesel vehicles. Students acquire knowledge about and develop skills in the diagnosis and repair of heating, air conditioning, and refrigeration systems in accordance with manufacturers' specifications. Prerequisite: Completion of DESL 1501.

**DESL 1990 3 CREDITS**  
**LIGHT VEHICLE MAINTENANCE**

Students learn the basics of maintaining light vehicles (trucks and cars) with diesel engines. Students learn skills necessary to enhance performance in light diesel vehicles via engine, drive, train, and stability control in order to achieve better fuel economy and towing capabilities. Students learn the basics of high performance and the effects of these type of builds when working on their own vehicles. Corequisite: Concurrent enrollment in DESL 1501.

**DESL 2505 3 CREDITS**  
**ADVANCED ENGINE PERFORMANCE**

Students learn to apply knowledge and use technical diagnostic equipment to advanced timing, fuel controls, advanced emission systems, naturally aspirated engine performance enhancements, and boost performance modifications for diesel engines. Prerequisite: Completion of AUTO 1765 or DESL 1540.

**DESL 2515 4 CREDITS**  
**CAPSTONE COURSE FOR DIESEL TECHNOLOGY**

Students consolidate the entire spectrum of their educational experience into the development of a project based learning Diesel Service Project. Students select a diesel project and Industry partner to develop a project plan and see the project to completion. Students present their project to the Industry partner(s) for their review upon the completion of the capstone course. Prerequisite: Instructor consent required.

**DESL 2950 5 CREDITS**  
**AIR BRAKES, SUSPENSION AND STEERING**

A course designed to provide students with the skills necessary to physically apply the principles of air brake and suspension systems. Students gain the ability to identify, assemble, adjust and repair hydraulic systems, air-over hydraulic systems, air brake systems, front suspension systems and rear suspension systems. This course also encompasses Department of Transportation approved procedures for vehicle highway safety regulations, preventative maintenance inspection, (PMI). Prerequisite: Completion of DESL 1501.



## **Economics**

### **ECON 1000 3 CREDITS** **GLOBAL ECONOMIC ISSUES**

This is an introductory course on how people use both free markets and government regulations to create value, and enhance society. Students explore how economic ideas and tools address global economic issues, while exploring the cultural influence and/or impact of those issues. Prerequisite: ENGL 0810 or equivalent placement.

### **ECON 1010 3 CREDITS** **MACROECONOMICS**

An introduction to contemporary economic principles and the foundations of a market based economic system. Students analyze how economic principles are applied to the economic problem of scarcity. Students develop an understanding of how to measure economic performance, and explore the impact of policy on economic performance. Topics include GDP growth, unemployment and inflation, government debt, deficits, tax policy, economic booms & busts, and the relevant economic policies. Prerequisite: ENGL 0810 and MATH 0965 or MATH 0980 or equivalent placement.

### **ECON 1020 3 CREDITS** **MICROECONOMICS**

Students examine how markets solve the issue of economic scarcity and how the decisions and behaviors of consumers, producers, government, and the market structure affect market outcomes. Students analyze market failure, where markets fail to produce efficient results, and describe the theoretical conditions needed for perfect competition. Prerequisite: Completion of MATH 1400.

### **ECON 1200 3 CREDITS** **ECONOMICS, LAW, AND GOVERNMENT**

Students acquire and demonstrate knowledge about how markets and free enterprise depend on supportive legal and political institutions. Students investigate and describe the influence of these governmental and legal institutions on markets and individual economic decisions. Topics to be covered include economic systems and economic reasoning; government fiscal actions and public policies; the economics of crime, pollution and poverty; relationships among market development, our legal framework and the U.S. political systems, and the constitutions of the U.S. and state of Wyoming. Prerequisite: Completion of MATH 0965 and ENGL 0810 or equivalent placement or instructor approval.

## **Education**

### **EDUC 2100 2 CREDITS** **PRACTICUM IN TEACHING**

In this capstone course, students evaluate educational topics such as classroom management, learning differences, and pedagogy. In addition, students spend a minimum of 30 hours in a school setting to observe, assist in the classroom, and teach a formal lesson under the supervision of a classroom teacher. Note: Students must successfully pass a criminal background check to be eligible for this course. Prerequisite: Completion of or concurrent enrollment in EDST 2550 and a GPA 2.5 or higher.

### **EDUC 2280 3 CREDITS** **YOUNG ADULT LITERATURE**

Students study works of literature for young adults, focusing on reading issues, adolescence, censorship, literary value, and life-long reading/learning. Students identify reading materials for young adult readers with a close examination of diversity including ethnicity, gender, and sexuality. This course is intended to provide teachers and others who work with young adults the opportunity to read and discuss literature that is written for or read by young adults in grades 6-12. Prerequisite: Completion of ENGL 1010 or instructor approval.

## **Education— Early Childhood**

### **EDEC 1020 3 CREDITS** **INTRO TO EARLY CHILDHOOD EDUCATION**

Students explore the field of early childhood and elementary education in this introductory course. Students visit early childhood education programs and public schools in the region to discover how teachers create an environment that values the uniqueness of each child. Students examine curriculum, child-development, and ethics as they apply to the early childhood and elementary education profession. Note: Students must successfully pass a criminal background check in this program. Prerequisite: Completion of or concurrent enrollment in ENGL 1010.

### **EDEC 1100 3 CREDITS** **OBSERVATION AND GUIDANCE OF YOUNG CHILDREN**

Students observe children in a variety of early childhood settings and explore effective methods of guidance to meet the children's needs and to promote a positive and constructive climate. Students develop skills to plan effective environments and classroom management, prepare materials and equipment, develop schedules, and utilize assessment tools. Students work in direct contact with children throughout the course.

### **EDEC 1200 3 CREDITS** **ADMINISTRATION IN EARLY CHILDHOOD PROGRAMS**

Students explore the role and responsibilities of the program administrator in public, private, and non-profit early childhood settings and become familiar with the business and human relation components of establishing and administering centers for young children. Students examine program planning and assessment, regulations and licensing, personnel management, family and community relations, and fiscal management.

### **EDEC 1300 3 CREDITS** **CURRICULUM PLANNING AND REVIEW FOR YOUNG CHILDREN**

Students develop skills in planning, implementing, and evaluating developmentally appropriate experiences to encourage intellectual, physical, social, emotional, and creative growth in young children with the focus on the whole child. Students spend time observing early childhood settings in this course.

### **EDEC 1482 3 CREDITS** **SKILLS FOR THE CHILD DEVELOPMENT ASSOCIATE (CDA)**

This course is designed for students seeking the Child Development Associate (CDA). Students discuss best practices in child care to create a healthy and dynamic learning environment. Students become familiar with the CDA competency goals and create a professional portfolio.

### **EDEC 2000 3 CREDITS** **ENGAGING FAMILIES IN EARLY CHILDHOOD SETTINGS**

Students explore the impacts of culture, family structure, and socio-economic factors on family involvement and engagement in children's education. Students examine current trends and contemporary issues influencing families through the lens of historical perspectives. Students develop successful strategies to create learning environments that are supportive of young children and families. Prerequisite: Completion of EDEC 1020.

### **EDEC 2200 4 CREDITS** **EARLY CHILDHOOD PRACTICUM**

Students actively participate in the care and education of young children in an early childhood setting. Students plan lessons, design developmentally appropriate activities, and demonstrate effective classroom management skills during a 60 hour practicum experience, under the supervision of a classroom teacher in addition to LCCC coursework. Students focus on trends in the field of early childhood education. Prerequisite: Completion of EDEC 1020, or instructor approval.

## Education— Educational Foundations

**EDFD 1010** 3 CREDITS

### **INTRO TO TEACHING**

Students explore career options within the teaching profession through observations, discussions, and research at the secondary school level. Students cultivate an awareness of diversity in public schools and become familiar with public school administration and financing. Students examine the historical and philosophical foundations of the American education system. Note: Students must successfully pass a criminal background check in this program. Prerequisite: Completion of or concurrent enrollment in ENGL 1010.

**EDFD 2020** 3 CREDITS  
**FOUNDATIONS OF EDUCATION**

Students explore the historical, philosophical, and sociological foundations of the American education system. Students become familiar with public school governance and financing. Students also cultivate an awareness of individual differences, diversity, and multiculturalism. Prerequisite: Completion of or concurrent enrollment in EDFD 1010.

**EDFD 2100** 3 CREDITS  
**EDUCATIONAL PSYCHOLOGY**

Students compare educational theories related to cognitive, socio-emotional, and moral development. Students create lesson plans and assessment instruments applicable to effective classroom instruction. Prerequisite: Completion of EDFD 2020.

## Education— Educational Studies

**EDST 2420** 3 CREDITS  
**HUMAN LIFE SPAN DEVELOPMENT**

Students explore human development holistically from conception through late adulthood and death and dying. Students examine the physical, cognitive, social, cultural, and emotional aspects of being human. Prerequisite: ENGL 1010 or instructor permission.

**EDST 2450** 3 CREDITS  
**FOUNDATIONS OF DEVELOPMENT AND LEARNING**

Students explore child development from birth through adolescence. Students analyze various theories related to the physical, cognitive, social, and emotional domains of learning and development. Prerequisite: Completion of or concurrent enrollment in ENGL 1010.

**EDST 2550** 3 CREDITS  
**EDUCATIONAL ASSESSMENT**

Students develop skills to select, score, and interpret educational assessments. Students become familiar with standards and benchmarks, reliability and validity, standardized tests, and performance assessments. Students also explore special issues surrounding the assessment of individuals with special needs. Students will practice designing tests and rubrics for the classroom setting. Prerequisite: Completion of EDST 2450.

## Education— Elementary Education

**EDEL 1410** 1 CREDIT

### **ELEMENTARY SCHOOL MATHEMATICS SEMINAR I**

This course parallels the content of MATH 1100. Students experience topics from MATH 1100 through hands-on activities that will provide them with ideas for instructional practices they can model in their future classrooms. Students examine applications of the mathematical content to other areas of mathematics to develop their appreciation for the scope of mathematics as an academic field of study. Corequisite: Concurrent enrollment in MATH 1100.

**EDEL 1430** 1 CREDIT

### **LIFE SCIENCE IN THE ELEMENTARY SCHOOL**

As pre-service elementary teachers, students identify standards and explore topics in life science through hands-on activities. Students become familiar with teaching methodology including the use of manipulatives, models, technology, and tools used to teach life science at the elementary level. It is recommended that this course be taken concurrently with a biology course.

**EDEL 1450** 1 CREDIT

### **EARTH SCIENCE IN THE ELEMENTARY SCHOOL**

As pre-service elementary teachers, students investigate various topics including meteorology, astronomy, geography, and geology. Students explore basic earth science standards, materials, concepts, and curricula applicable to teaching in the elementary classroom. In addition, the pre-service elementary education teacher develops positive attitudes toward teaching science in this seminar. It is recommended that this course be taken concurrently with an earth science lab course.

**EDEL 2140** 3 CREDITS  
**TEACHING LITERACY IN THE  
ELEMENTARY SCHOOL**

Students examine curriculum and effective instructional strategies for emergent readers. Students have the opportunity for selecting and using materials to foster literacy development in young children. Prerequisite: Completion of ENGL 1010.

**EDEL 2280** 3 CREDITS  
**LITERATURE FOR CHILDREN**

Students read and analyze children's literature across the curriculum. Students evaluate works within the genres of children's literature and model the integration of children's books in the pre-school settings and elementary classrooms. Prerequisite: Completion of ENGL 1010.

**EDEL 2410** 1 CREDIT

### **ELEMENTARY SCHOOL MATHEMATICS SEMINAR II**

As pre-service elementary teachers, students identify standards and explore topics in geometry through hands-on activities. Students become familiar with teaching methodology including the use of manipulatives, models, technology, and tools used to teach geometry at the elementary level. Corequisite: Concurrent enrollment in MATH 2120.

## Education— Exceptional Children

**EDEX 2484** 3 CREDITS

### **INTRO TO SPECIAL EDUCATION**

Students identify the characteristics and needs of exceptional learners, including those who are intellectually gifted. Students explore legislation, categories of disability, incidents and etiology, diagnostic and therapeutic services, educational programs, and resources that address the needs of individuals with disabilities. Prerequisites: Completion of EDEC 1020 and EDFD 1010.

## Education— Instructional Technology

**ITEC 2360** 3 CREDITS

### **TEACHING WITH TECHNOLOGY**

Students discover how technology can be used to enhance teaching and learning. Students explore a variety of technological and educational resources. Additionally, information literacy, digital responsibility, and effective digital communication are evaluated for applicability in the classroom setting.

## Education— Special Education

**EDCI 2440** 2 CREDITS

### **CLASSROOM MANAGEMENT**

Pre-service teachers explore methods of classroom management for their future classrooms. Students focus on strategies and techniques to promote a positive and constructive classroom environment. Prerequisite: Completion of EDFD 1010.

## Electrical Technology

**ELTR 1516** 3 CREDITS

### **ELECTRICAL SKILLS AND PRACTICE**

Students are introduced to electrical symbols and the types of information that can be found on schematics, one-lines, and wiring diagrams. Students investigate the handling and installation of various types of lamps and lighting fixtures. Students describe specific types of incandescent, fluorescent, and HID lamps, ballasts and various types of lighting controls. Conduit-bending and installation methods enable students to perform techniques for using hand-operated and step conduit benders. Students utilize common electrical test equipment, including voltage testers, ammeters, ohmmeters, multimeters, safety precautions and meter category ratings are investigated. Prerequisites: Completion of IST 1712 and IST 1713.

**ELTR 1600 3 CREDITS****NATIONAL ELECTRICAL CODE 1**

Students investigate electrical safety rules and regulations including precautions for electrical hazards found on the job. Students learn layout of and practice finding information within the National Electric Code using an easy-to-follow procedure. Students describe fuses and circuit breakers along with their practical applications and sizing. Students explain how to size and select circuit breakers and fuses for various applications and perform short circuit calculations. Prerequisites: Completion of IST 1712 and IST 1713.

**ELTR 1611 3 CREDITS****ELECTRICAL CALCULATIONS**

Students explain how to calculate branch circuit and feeder loads for residential and commercial applications. Considering component installation and the National Electric Code requirements, basic service calculations for commercial and residential applications are practiced. Prerequisite: Completion of IST 1520.

**ELTR 1621 3 CREDITS****ELECTRICAL CONDUCTORS AND CABLES**

Students investigate the factors involved in conductor selection, including insulation types, current-carrying capacity, temperature ratings, and voltage drop. Students describe methods of terminating and splicing conductors, including preparing and taping conductors. Students focus on the purpose of grounding and bonding electrical systems covered in the National Electric Code. Prerequisite: Completion of IST 1560.

**ELTR 1631 3 CREDITS****ELECTRICAL WIRING METHODS**

Students are introduced to systems, mounting hardware and applications of raceways, wireways, ducts, pull and junction boxes. Students demonstrate the selection and sizing of pull boxes and junction boxes and the applications of proper wiring techniques according to the National Electric Code requirements. Prerequisite: Completion of HMDV 1510.

**ELTR 1641 3 CREDITS****SPECIAL LOCATION WIRING METHODS**

Students investigate the installation of electric circuits in health care facilities, including the requirements for life safety and critical circuits. Students investigate a basic overview of HVAC systems and their controls, electrical troubleshooting and the related National Electric Code requirements. Completion of IST 1660 and IST 1661.

## Emergency Medical Services—Paramedics

**EMGT 2500 2 CREDITS****PARAMEDIC PREPARATORY**

A study of comprehensive concepts that prepare an EMT for national and state paramedic certification. Students analyze EMS systems, paramedic roles and responsibilities, paramedic well-being, illness/injury prevention, medical/legal issues, and healthcare ethics. Prerequisite: Completion of entrance exam and instructor approval.

**EMGT 2515 3 CREDITS****PARAMEDIC ANATOMY AND PHYSIOLOGY**

Students explore fundamental anatomy and physiology concepts related to paramedic practice. Students integrate a complex depth and comprehensive breadth of knowledge of the anatomy and physiology of all human systems. Prerequisite: Completion of entrance exam and instructor approval.

**EMGT 2525 2 CREDITS****PARAMEDIC PHARMACOLOGY**

Students explore fundamental pharmacology concepts related to paramedic practice. Students integrate a complex depth and comprehensive breadth of knowledge of pharmacology and the human body. Prerequisite: Completion of entrance exam and instructor approval.

**EMGT 2535 2 CREDITS****PARAMEDIC AIRWAY**

Students integrate a complex knowledge of anatomy, physiology, and pathophysiology into an airway assessment and airway procedures. Students develop a treatment plan with the goal of assuring a patent airway, adequate ventilation, and respiration for patients of all ages. Prerequisite: Completion of entrance exam and instructor approval.

**EMGT 2545 4 CREDITS****PARAMEDIC ADVANCED CARDIAC LIFE SUPPORT**

Students investigate complex knowledge of anatomy, physiology, and pathophysiology into a cardiovascular assessment and perform basic and advanced ECG interpretation and electrical therapy procedures. Students develop a treatment plan for patients with cardiovascular disease and ECG abnormalities. Prerequisite: Completion of entrance exam and instructor consent.

**EMGT 2555 3 CREDITS****PARAMEDIC ADVANCED MEDICAL LIFE SUPPORT**

Students integrate assessment findings with principles of epidemiology and pathophysiology to formulate a field impression and implement a comprehensive treatment/disposition plan for a patient with a medical complaint. Prerequisite: Completion of entrance exam and instructor consent.

**EMGT 2565 2 CREDITS****PARAMEDIC PRE-HOSPITAL TRAUMA LIFE SUPPORT**

Students integrate assessment findings with principles of epidemiology and pathophysiology to formulate a field impression to implement a comprehensive treatment/disposition plan for an acutely injured patient. Prerequisite: Completion of EMGT 2555.

**EMGT 2575 3 CREDITS****PARAMEDIC SPECIAL POPULATIONS AND OPERATIONS**

Students integrate assessment findings with principles of pathophysiology and knowledge of psychosocial needs to formulate a field impression and implement a comprehensive treatment/disposition plan for patients with special needs. Students also gain knowledge of operational roles and responsibilities to ensure safety for the patient, the public and themselves. Prerequisite: Completion of EMGT 2555.

**EMGT 2600 1 CREDIT****PARAMEDIC CLINICAL I**

Students are provided a clinical experience in the hospital setting under the supervision of a preceptor. In the clinical setting students, gain experience with patient assessments and various allowed skills. Students will demonstrate competency in patient care and assessment, assist the preceptor or other medical staff, work with a preceptor to apply knowledge in the vehicular setting, apply knowledge of patient pathophysiology, and formulate treatment plans. These correlate to the paramedic's scope of practice, and use of effective communication to patients and staff in explaining their knowledge of patient care. Students complete 48 hours of clinical experience for this course. Prerequisite: Completion of EMGT 2545.

**EMGT 2605 4 CREDITS****PARAMEDIC CLINICAL II**

Students are provided a clinical experience in the hospital setting under the supervision of a preceptor. In the clinical setting students, gain experience with patient assessments and various allowed skills. Students will demonstrate competency in patient care and assessment, assist the preceptor or other medical staff, work with a preceptor to apply knowledge in the vehicular setting, apply knowledge of patient pathophysiology, and formulate treatment plans. These correlate to the paramedic's scope of practice, and use of effective communication to patients and staff in explaining their knowledge of patient care. Students complete 48 hours of clinical experience for this course. Prerequisite: Completion of EMGT 2600.

**EMGT 2620 3 CREDITS****PARAMEDIC VEHICULAR I**

Students perform 135 hours of vehicular time at various Emergency Medical Services (EMS) agencies throughout the region while completing course competencies and gaining valuable experience performing patient assessments and other applicable skills as appropriate for the specific patient situation. At the completion of this course, students are prepared to function autonomously at or above the Green Level as described in the Paramedic handbook. The EMS program is a closed Program. Prerequisite: Successful completion of EMGT 2600 and EMGT 2605.



**EMGT 2630 10 CREDITS****PARAMEDIC VEHICULAR II**

Students complete the final 380 hours of required vehicular time at various EMS and fire agencies throughout the region while completing course competencies and gaining valuable experience through performing patient assessments and various applicable skills. At the completion of this course, students will function within the Red Level; autonomously at the level of an entry level paramedic, as described in the Paramedic handbook. The EMS program is a closed Program. Prerequisite: Completion of EMGT 2620

**EMGT 2700 3 CREDITS****PARAMEDIC CAPSTONE**

Students prepare for the State and National Registry Examinations. Students practice final skills, review for the examinations, and organize their vehicular/clinical documentation for course completion. Prerequisite: Completion of EMGT 2600.

## **Emergency Medical Technology**

**EMT 1500 9 CREDITS****EMERGENCY MEDICAL TECHNICIAN BASIC (EMT-B)**

Students prepare to identify medical and trauma emergencies and are able to provide appropriate interventions in this entry-level course. Students learn proper medical care for emergencies such as stroke, heart attack, drug overdoses, childbirth as well as traumatic events such as car accidents, burns, and other emergency situations. At the conclusion of the course students take the Wyoming Licensure exam to become licensed EMTs. Students are eligible to take the National Registry of EMT's exam. This entry-level training enables students to seek employment in the field of pre-hospital emergency medicine as paid or volunteer providers and provides an important professional link into other allied health professions.

## **Engineering Science**

**ES 1060 3 CREDITS****INTRO TO ENGINEERING COMPUTING**

In this course, students explore spreadsheets and structured programming. Students apply the methodology used in the engineering profession for analyzing problems. In laboratory, students solve example problems using appropriate computer software. Prerequisite: Completion of or concurrent enrollment in MATH 1400.

**ES 2110 3 CREDITS****STATICS**

An introduction to the statics of particles and rigid bodies and to the analysis of structures. Students apply equilibrium conditions to physical systems (including particles, rigid bodies, trusses, frames, and machines) using free body diagrams and vector analysis. Corequisite: Completion of or concurrent enrollment in MATH 2205.

**ES 2120 3 CREDITS****DYNAMICS**

A study of the dynamics of particles and rigid bodies. Students apply laws of motion to analyze the dynamics of particles and rigid bodies, including momentum and energy considerations. Prerequisite: Completion of ES 2110 and MATH 2205.

**ES 2210 4 CREDITS****ELECTRIC CIRCUIT ANALYSIS**

A study of electric circuits and their theoretical base. Students apply theoretical tools such as network theorems and phasors to analyze electric circuits, including dependent sources, first and second order circuits, and three-phase power systems. The accompanying laboratory reinforces electric circuit principles. Prerequisite: Completion of MATH 2205.

**ES 2310 4 CREDITS****THERMODYNAMICS I**

A study of the thermodynamics of macroscopic systems. Students learn about energy and its various forms, state variables and equations of state, pure substances and property tables, reversible and irreversible processes. Students also apply laws of thermodynamics to analyze power, heat pump, and refrigeration cycles. Prerequisite: Completion of ES 2120 and MATH 2210, or PHYS 1310.

**ES 2330 3 CREDITS****FLUID DYNAMICS**

A study of the incompressible flow of ideal and real fluids. Students learn about fundamental concepts such as potential functions, stream functions, and dimensional analysis. Students also apply equations of fluid dynamics to solve fluid flow problems such as flow in pipes and open channels. Prerequisite: Completion of ES 2120, MATH 2210, and ES 2120 or PHYS 1310.

**ES 2410 3 CREDITS****MECHANICS OF MATERIALS**

A study of stresses inside deformable bodies. Students apply statics as well as new techniques such as Mohr's circle to perform stress analysis of deformable bodies. Prerequisite: Completion of ES 2110 and MATH 2205.

## **English**

**ENGL 0810 6 CREDITS****FUNDAMENTALS OF READING AND WRITING**

Students practice critical reading and academic writing as a process and develop interrelated literacy skills to improve their success in college-level courses. Prerequisite: Appropriate placement.

**ENGL 0910 3 CREDITS****LITERACY ENHANCEMENT FOR COMPOSITION I**

Students practice research, reading, and writing as a process in order to develop literacy skills for success in college-level courses. Students must be co-enrolled in the Composition I course. Corequisite: ENGL 1010. Prerequisite: Appropriate COMPASS/ACT placement score or successful completion of ENGL 0810.

**ENGL 1010 3 CREDITS****ENGLISH COMPOSITION I**

In this composition course, students conduct college-level research; apply critical reading and analysis strategies; and draft, revise, and edit a variety of academic and professional essays. Students will develop awareness of audience, purpose, and genre; generate logically organized claims with evidence; and use appropriate formatting, including MLA. Prerequisite: ENGL 0810 or equivalent placement.

**ENGL 1020 3 CREDITS****ENGLISH COMPOSITION II**

Students independently gather material from primary and secondary research; critically read and analyze material; synthesize information; write expository essays in a variety of academic genres; and document sources according to appropriate styles. Prerequisites: Completion of ENGL 1010.

**ENGL 1040 3 CREDITS****INTRO TO CREATIVE WRITING**

This course is intended for non-English majors and serves to guide students' understanding of the creative process and its relevance to their own interests and goals. Students learn introductory craft, analysis, and revision skills as they relate to creative writing. Students read a variety of literary genres from different societal, cultural, and historical contexts; analyze and reflect on their own craft choices; and produce multiple drafts of creative writing in multiple genres.

**ENGL 2020 3 CREDITS****INTRODUCTION TO LITERATURE**

Students critically read a variety of literary works that possess distinct class, race, culture, gender, genre, and time-period origination. Students employ literary terminology and literary concepts to analyze these works' external, structural, and social influences. Students develop understanding through discussion and select writing assignments. Prerequisite: Completion of or concurrent enrollment in ENGL 1010

**ENGL 2040 3 CREDITS****CREATIVE WRITING II**

This course is intended for students on the Communication and Creative Arts (CCA) Pathway and serves to guide their understanding of the creative process, literature and analysis, and potential education and career paths. Students learn introductory craft, analysis, revision, and communication skills as they relate to creative writing. Students read a variety of literary genres from different societal, cultural, and historical contexts; participate in workshop critique and discussion; analyze and reflect on their own and others' craft choices; and produce multiple drafts of creative writing in multiple genres. Prerequisite: Completion of or concurrent enrollment in ENGL 1010 or instructor consent.

**ENGL 2041 3 CREDITS****CREATIVE WRITING:  
NONFICTION AND POETRY**

In this scholarly course, students develop tools based in the tradition of creative writing, tools with which students will create their own poetry and creative nonfiction. Students read and study an array of poetry and creative nonfiction in order to absorb best practices for developing craft in these two genres. Students are expected to participate in writing workshops that include written and verbal/discussion-based feedback. May be repeated for up to two times for credit. Prerequisite: Completion of ENGL 2040 or instructor approval.

**ENGL 2042 3 CREDITS****CREATIVE WRITING:  
FICTION AND DRAMA**

In this scholarly course student develop tools based in the tradition of creative writing, tools with which they will create their own fiction and drama. Students read and study an array of fiction and drama in order to absorb best practices for developing craft in these two genres. Students are expected to participate in writing workshops that include both written and verbal/discussion-based feedback. May be repeated for up to two times for credit. Prerequisite: Completion of ENGL 2040 or instructor approval.

**ENGL 2095 3 CREDITS****WRITING YOUR LIFE**

In this scholarly course, students write memoirs about the stories that have shaped their lives. Students read an array of published creative nonfiction in the form of personal essay and memoir, referring to them in discussion of how personal stories teach us profound lessons about ourselves, others, and our world. Students use the writing process in development of their memoirs and are expected to participate in writing workshops that include both written and verbal/discussion-based feedback. May be repeated for up to two times for credit. Prerequisite: Completion of ENGL 2040.

**ENGL 2100 1-3 CREDITS****LITERARY MAGAZINE**

Students prepare to assume the responsibility of publishing a literary/ arts magazine once a year. Students fulfill responsibilities in a variety of areas: recruitment, publicity, marketing, fundraising, sales, submission selection process, desktop publishing, magazine layout, and other editorial duties. May be repeated for up to 6 credits. Prerequisite: Approval of instructor.

**ENGL 2140 3 CREDITS****WORLD LITERATURE**

Students study a survey of significant works of seminal literature spanning a spectrum of genres, time periods, histories, and cultures. Literature works will span from the works of ancient cultures and continue through present day. Students analyze texts through discussions and formal writing assignments. Prerequisite: Completion of ENGL 1010.

**ENGL 2210 3 CREDITS****ENGLISH LITERATURE**

Students survey the major authors and literary movements in English literature beginning with the Middle Ages and continuing through the Restoration. Prerequisite: Completion of or concurrent enrollment in ENGL 2020.

**ENGL 2220 3 CREDITS****ENGLISH LITERATURE: THE ROMANTIC PERIOD TO THE PRESENT**

Students survey the major authors and literary movements in English literature beginning with the Romantic Period and continuing through the present day. Prerequisite: Completion of or concurrent enrollment in ENGL 2020.

**ENGL 2230 3 CREDITS****INTRODUCTION TO SHAKESPEARE**

Students examine Shakespeare's writings, including selections from his histories, comedies, tragedies and romances, as well as his poetry. Alongside close readings of his texts, students explore contexts of Shakespeare's plays and poetry, both those contemporary to Shakespeare and those contemporary to the modern world, in order to address the lasting nature of his work. Prerequisite: Completion of or concurrent enrollment in ENGL 2020.

**ENGL 2270 3 CREDITS****MODERN WOMEN WRITERS**

A literature course emphasizing writing by women from 1899 to present day. Students recognize and critique texts written by women of diverse identities and ethnicities in a variety of literary genres and forms. Students examine themes of gender, ethnicity, class, marginalization, and agency in course texts. Students demonstrate basic vocabulary of literary criticism, particularly feminist criticism. Students write literary analysis essays and conduct scholarly research on issues connected to women in modern society. Prerequisite: Completion of ENGL 2020.

**ENGL 2310 3 CREDITS****AMERICAN LITERATURE I**

Students survey the major figures and literary movements in the United States beginning with the pre-colonial period and continuing through the Civil War. Students gain an understanding of the historical, political, philosophical, and religious influences upon early American literature. Prerequisite: Completion of or concurrent enrollment in ENGL 2020.

**ENGL 2320 3 CREDITS****AMERICAN LITERATURE II**

Students survey the major figures and literary movements in the United States from the Civil War to present, including naturalism, realism, modernism, and post-modernism eras. Students gain an understanding of the historical, political, philosophical, and religious influences upon later American literature. Prerequisite: Completion of or concurrent enrollment in ENGL 2020.

**ENGL 2330 3 CREDITS****CONTEMPORARY AND  
MULTICULTURAL LITERATURE**

This course investigates post-World War II literature in English, including fiction, poetry, and essays by ethnic writers. Students examine the "American Dream" as relevant to contemporary American life through discussion of such issues as pluralism, discrimination, class, and cultural conflict, and gender issues. Corequisite: ENGL 2020

**ENGL 2340 3 CREDITS****NATIVE AMERICAN CULTURE  
AND LITERATURE**

Students engage in a broad cultural study of Native Americans, past and present. The course examines and engages in critical evaluation of the social and historical contexts surrounding Native America through selected biographies, novels, short stories, poetry and/or drama. Students address the way Native American identity grows out of the borderland between oral and written traditions and western and Native American culture. Prerequisite: Completion of ENGL 1010.

**ENGL 2411 3 CREDITS****LITERARY GENRES: GRAPHIC NOVELS**

Students study the literary and aesthetic features of graphic novels. Students read an array of graphic novels that explore various thematic, cultural, genre, and philosophical issues. Students analyze texts through discussions and formal writing assignments. Prerequisite: Completion of ENGL 1010.

**ENGL 2420 3 CREDITS****LITERARY GENRES:**

Students study specific genres of literature (e.g. Gay and Lesbian Literature, Young Adult Literature). Emphasis will vary from semester to semester, depending on curricular needs. May be repeated for up to three times for credit. Prerequisite: Completion of ENGL 1010.

## **Entrepreneurship**

**ENR 1500 3 CREDITS****INTRODUCTION TO  
ENTREPRENEURSHIP**

An introductory course that explores the small business climate, the identification of entrepreneurial traits, and the feasibility of a business opportunity. Students analyze and determine how to obtain the skills needed to own, operate, and manage a small business successfully. Students determine the market and industry research necessary to define the scope of a business opportunity. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**ENR 1520 3 CREDITS****CREATING A BUSINESS PLAN**

Students evaluate a business opportunity, collect and organize research data into a marketing plan, and prepare a financial plan for their small business idea. In addition, students gain skills to be able to continue developing their business plan as they learn new information and gain ability to make a "go" or "no-go" determination. Prerequisite: Completion of ENR 1500.

**ENTR 2550 3 CREDITS**  
**SOCIAL AND INTERNET TECHNOLOGIES**  
 Students explore the current social and Internet mediums as they relate to business in today's world. Students examine venues including quickly changing online technologies and mobile mediums. Students analyze the issues with which marketers wrestle today as they navigate the new tools and challenges including blogs, social networking, user-generated content, and video as well as others. Prerequisite: Completion of ENTR 1500.

**ENTR 2700 3 CREDITS**  
**ENTREPRENEURIAL MINDSET**  
 Students develop entrepreneurial mindsets as they explore concepts essential to success in startups or within established firms. Students emphasize creativity and innovation as they experience the process of identifying and evaluating ideas and developing them into business opportunities. Prerequisite: Completion of ENGL 1010

## **Equine Studies**

**EQST 1505 4 CREDITS**  
**BASIC HORSEMANSHIP**  
 Designed for students who desire training in horsemanship skills and horse care. Students acquire knowledge and valuable skills in horsemanship needed to improve balance, the proper use of aids such as hands, weight, legs, and voice, and appropriate cues at all three gaits. Prerequisite: Instructor consent required.

**EQST 1515 4 CREDITS**  
**EQUINE SCIENCE I**  
 Students are introduced to the fundamental concepts in Equine Science. Students acquire an understanding of history, breed characteristics, selection, skeletal anatomy, dentistry and basic hoof care of horses. Foundation knowledge of equine husbandry and care is applied to an industry setting with the use of hands-on laboratories.

**EQST 1550 2 CREDITS**  
**EQUINE EVALUATION I**  
 Students demonstrate skills in the evaluation of a horse's conformation and performance. Students use terminology in the equine industry to describe conformation of individual horses. Students defend their reasoning of equine evaluation through the use of oral and/or written reasons.

**EQST 1650 2 CREDITS**  
**EQUINE EVALUATION II**  
 A continuation of EQST 1550. Students examine breed and association standards for the judging of equine classes. Students also develop vocabulary and utilize proper terminology for the discussion of these equine classes. Equine classes examined in this course include Western Pleasure, Hunter Under Saddle, Reining, Western Riding, Hunter Hack, and Pleasure Driving. Prerequisite: Completion of EQST 1550 and consent of instructor.

**EQST 1685 4 CREDITS**  
**EQUINE BEHAVIOR AND HORSEMANSHIP**  
 Students evaluate a horse's body language, identify how a horse learns, common stereotypic behaviors and key factors for the foundation of training. Students acquire knowledge and valuable skills in horsemanship needed to improve balance, the proper use of aids such as hands, weight, legs and voice, and appropriate cues at all three gaits. Basic training techniques will also be applied throughout the course.

**EQST 1710 2 CREDITS**  
**BASIC FUNDAMENTALS IN CUTTING HORSES**  
 Students acquire and demonstrate the basics of positioning the horse in cutting competition and improve livestock handling skills, horse placement techniques, and horse training techniques. Students will be charged a livestock fee. Prerequisites: Students must have basic riding skills and supply their own horses.

**EQST 1720 2 CREDITS**  
**BASIC ROPING**  
 This basic course is designed to help students acquire proper calf roping, heading, and heeling techniques. Students learn to use the appropriate type of rope and the proper basic rope swing for each event. Students demonstrate mental and physical preparation and proper equipment use. At the end of the course, students demonstrate technique improvement.

**EQST 1725 2 CREDITS**  
**RODEO ROUGH STOCK I**  
 This course is designed as an initial preparatory course in the rodeo rough stock events. Students acquire basic knowledge in the individual events so they may ride competitively at NIRA-sponsored events. They demonstrate safety procedures, mechanical consistency, event rules, and mental and physical preparation. A livestock fee will be charged to each student. Enrollment by consent of instructor.

**EQST 1730 2 CREDITS**  
**RODEO ROUGH STOCK II**  
 This course is the second in the series of rodeo rough stock classes. Students elevate basic knowledge in the individual events so they can ride competitively at NIRA-sponsored events. They demonstrate mechanical consistency, substantial improvement in their mental and physical preparation, safety procedures, and event rules. A livestock fee will be charged to each student. Enrollment by consent of instructor.

**EQST 1740 2 CREDITS**  
**RODEO TIMED EVENTS I**  
 This course is designed as an initial preparatory course in the rodeo timed events. Students acquire basic knowledge in the individual events so they can compete effectively at NIRA-sponsored events. They demonstrate mechanical consistency, substantial improvement in their mental and physical preparation, safety procedures, and events rules. A livestock fee will be charged to each student. Enrollment by consent of instructor.

**EQST 1750 2 CREDITS**  
**RODEO TIMED EVENTS II**  
 This course is designed as an initial preparatory course in the rodeo timed events. Students acquire basic knowledge in the individual events so they can compete effectively at NIRA-sponsored events. They demonstrate mechanical consistency, substantial improvement in their mental and physical preparation, safety procedures, and event rules. A livestock fee will be charged to each student. Enrollment by consent of instructor.

**EQST 1760 2 CREDITS**  
**ALTERNATIVE RODEO TIMED EVENTS I**  
 This course is the first in a series of courses dealing with barrel racing and/or goat tying. Students acquire skills in these events, enhance their competitive abilities, and demonstrate safety procedures, horsemanship techniques, practice methods, and mental and physical preparation. A livestock fee will be charged. Enrollment by consent of instructor.

**EQST 1765 2 CREDITS**  
**ALTERNATIVE RODEO TIMED EVENTS II**  
 This is the second in a series of rodeo courses designed to increase knowledge of and skills in barrel racing and/or goat tying. Students enhance their basic skills and knowledge of NIRA rules and safety procedures in these events while improving their competitive abilities through supervised practical application. A livestock fee will be charged. Prerequisite: Completion of EQST 1760 or consent of instructor.

**EQST 2500 3 CREDITS**  
**EQUINE HEALTH MANAGEMENT**  
 Students explore equine health management principles and practices, including a practical examination of equine nutrition, diseases, and vaccines. Students learn to identify lameness and differentiate between various types of lameness. Students also discuss general safety and first aid techniques. Prerequisite: Completion of EQST 2516.

**EQST 2516 3 CREDITS**  
**EQUINE SCIENCE II**  
 A continuation of EQST 1515 with emphasis on the internal anatomy and physiology of the horse. Students acquire knowledge of the muscular system, nervous system, respiratory system, cardiovascular system, digestive system, urinary system, integumentary system, genetics, and parasitology. Prerequisite: Completion of EQST 1515 or permission of instructor.

**EQST 2520 3 CREDITS**  
**EQUINE REPRODUCTION**  
 This course is a study of the anatomy and physiology of the stallion and mare. Students will associate various hormones with their functions. Breeding systems and methods, including cooled and frozen artificial insemination techniques, will also be explored. In addition, students will study proper mare management and foaling problems. Prerequisite: Completion of EQST 2500.



**EQST 2560 4 CREDITS**  
**ADV TRAINING TECHNIQUES/  
EQUINE EVAL**

In this course, students start a young horse under saddle. Under the direction of the instructor students demonstrate round pen reasoning, correct longeing, sacking out, saddling, introducing a bit, and driving. The horse that is started under saddle will be trained for 30-45 days. A two to four year old horse is provided to each student to gently train and care for according to established training objectives within the equine training program. Evaluation of a horse's conformation and performance including terms used in horse judging, will also be covered throughout the duration of this class. Prerequisite: Completion of EQST 1685.

**EQST 2570 2 CREDITS**  
**BASIC RANCH HORSE VERSATILITY**

Students acquire knowledge about and develop skills in the training and riding of ranch horse versatility. Topics include reining, working cow, trail, and pleasure focusing on lead changes, turn-arounds, roll backs and running patterns. Course will follow rules of AQHA. Students must provide their own horse for course. Prerequisite: Instructor Consent.

**EQST 2700 1 CREDIT**  
**EQUINE SEMINAR**

Students apply knowledge of contemporary topics related to the equine industry, including current market trends, controversial issues, recent research, marketing strategies, and training methods and equipment. They also gain skills in resume writing, job searching, and the application process.

**EQST 2730 2 CREDITS**  
**ALTERNATIVE RODEO  
TIMED EVENTS III**

This is the third in a series of rodeo courses designed to further increase knowledge of and skills in barrel racing and/or goat tying to enhance competition levels at NIRA-sponsored events. Students demonstrate mechanical consistency, coordinate mental and physical consistency and preparation, and practice precise event rules and improved livestock handling. A livestock fee will be charged. Prerequisite: Completion of EQST 1765 or consent of instructor.

**EQST 2735 2 CREDITS**  
**ALTERNATIVE RODEO  
TIMED EVENTS IV**

This is the fourth in a series of rodeo courses designed to demonstrate advanced knowledge and skills in barrel racing and/or goat tying to enhance competition levels at NIRA-sponsored events. Students demonstrate advanced livestock handling, refinement of rodeo event skills, advanced training techniques and application of NIRA rules. A livestock fee will be charged. Prerequisite: Completion of EQST 2730 or consent of instructor.

**EQST 2740 2 CREDITS**  
**RODEO ROUGH STOCK III**

This course is the third in the series of rodeo rough stock classes. Students further enhance skills and knowledge in the individual events so competition levels are increased at NIRA-sponsored events. They are demonstrating mechanical consistency, coordinating mental and physical preparation, demonstrating appropriate safety procedures, and administering concise event rules. A livestock fee will be charged to each student. Enrollment by consent of instructor.

**EQST 2750 2 CREDITS**  
**RODEO ROUGH STOCK IV**

This course is the fourth in the series of rodeo rough stock classes. Students further enhance skills and knowledge in the individual events so competition levels are increased at NIRA-sponsored events. They are performing mechanical consistency, executing mental and physical preparation, demonstrating appropriate safety procedures, and administering concise event rules. A livestock fee will be charged to each student. Enrollment by consent of instructor.

**EQST 2760 2 CREDITS**  
**RODEO TIMED EVENTS III**

This course is the third in the series of rodeo timed event classes. Students further enhance skills and knowledge in the individual events so competition levels are increased at NIRA-sponsored events. They are demonstrating mechanical consistency, coordinating mental and physical preparation, administering precise event rules, and improving livestock handling ability and advanced horse placement utilization. A livestock fee will be charged to each student. Enrollment by consent of instructor.

**EQST 2770 2 CREDITS**  
**RODEO TIMED EVENTS IV**

This course is the fourth in the series of rodeo timed event classes. Students are demonstrating skill and knowledge in the individual events so competition levels are increased at NIRA-sponsored events. They are performing mechanical consistency, executing mental and physical preparation, administering appropriate safety procedures, improving livestock handling ability and advanced horse placement utilization, and demonstrating precise event rule knowledge. A livestock fee will be charged to each student. Enrollment by consent of instructor.

**EQST 2780 2 CREDITS**  
**INTERMEDIATE TEAM ROPING**

Students learn the correct methods of team roping. Students demonstrate proper horse handling techniques in the box, approach to cattle, and setting cattle for the heeler. Handling livestock, use of equipment for team roping, and physical and mental preparation will be stressed. Students become familiar with the Professional Rodeo Cowboys Association (PRCA) rule book, and safety will be practiced at all times. A livestock fee will be charged to each student. Enrollment by consent of instructor. Prerequisite: Students must have the basic horsemanship skills required to rope and ride at the same time.

**EQST 2800 2 CREDITS**  
**FUNDAMENTALS OF TEACHING RIDING**

Students develop the necessary skills to become an effective instructor of riding. Through classroom and arena assignments the student has the opportunity to gain confidence, learn methods of organization, and practice teaching techniques. Students have the opportunity to become certified riding instructors by the Certified Horsemanship Association. Prerequisite: Instructor approval required.

**EQST 2805 2 CREDITS**  
**WESTERN EQUITATION**

A course in the basic exercises needed to improve balance, the proper use of aids such as hands, weight, legs and voice, and appropriate use of cues at all three gaits. Students must provide their own horses for this course.

**EQST 2970 3 CREDITS**  
**EQUINE INTERNSHIP**

Students apply theoretical and practical knowledge gained in the equine studies classroom and labs through work experience in an equine-related industry in a supervised environment. The equine internship packet must be completed with one of the equine faculty who will also provide site and/or virtual site visits. With faculty assistance, students complete all required paperwork during the internship which will aid in evaluating and describing the internship experience. Prerequisite: Completion of EQST 1685 and concurrent enrollment in EQST 2560, and instructor approval required.

**EQST 2975 4 CREDITS**  
**INDIVIDUALIZED TRAINING**

Students work with the instructor in a fully observed atmosphere to refine their advanced training techniques with the goal of obtaining equine performance specialization. Prerequisite: Completion of EQST 1685, 2560 and 2970. Horses are provided by the equine program, students may request to bring their own horses with approval of instructor.

**EQST 2985 3 CREDITS**  
**EQUINE BUSINESS**

Students apply knowledge and build skill in topics related to equine business law including taxes, liability, legal issues, current legislation and politics, breeding contracts, syndications, recordkeeping, depreciating facility costs, scheduling, developing employee benefit packages, employee relations, scheduling, and payroll records.

## Family and Consumer Sciences

### FCSC 2121 1 CREDIT CHILD DEVELOPMENT

Through theory and observation, students explore the four main domains of child development from birth to age twelve. These domains include physical, cognitive, social, and emotional development. Students complete in-depth observations, multiple case studies, and a developmental assessment in the course. Prerequisites: Completion of or concurrent enrollment in PSYC 2300.

### FCSC 2122 1 CREDIT CHILD DEVELOPMENT

Through theory and observation, students explore the four main domains of child development from birth to age twelve. These domains include physical, cognitive, social, and emotional development. Students complete in-depth observations, multiple case studies, and a developmental assessment in the course. Prerequisites: Completion of or concurrent enrollment in PSYC 2300.

## Finance

### FIN 1001 1 CREDIT PERSONAL FINANCIAL PLANNING

Students examine the foundations of personal financial planning. Students explore the following topics: the financial planning process, financial statements, taxes, and the management of basic assets such as cash and savings instruments, and purchasing strategies for consumer goods and automobiles. Students examine key concepts and procedures used in sound personal financial planning and effective money management. Prerequisite: Completion of ENGL 0810 or equivalent placement.

### FIN 1002 1 CREDIT RISK AND CREDIT MANAGEMENT

Students examine the advantages, disadvantages, sources and costs of consumer credit. Students learn how to develop a plan to protect their credit and manage their debts. Students learn the basics of selecting and financing different housing options. Students learn the importance of risk management and how to manage that risk with insurance, including life, disability, health care, and property insurance. Prerequisite: Completion of ENGL 0810 or equivalent placement.

### FIN 1003 1 CREDIT INVESTMENT AND RETIREMENT PLANNING

Students learn the fundamentals of personal investing including the factors that influence investment choices. Students examine various types of investments, their risks, and sources of return. Students explore retirement goals and estimate future retirement income needs. Students learn about the role of estate planning in personal financial planning. Prerequisite: Completion of ENGL 0810 or equivalent placement.

### FIN 1100 3 CREDITS FINANCIAL PLANNING AND CONSULTING

Students acquire an understanding of the process financial planning and the components of a comprehensive personal financial plan. Prerequisite: Completion of BADM 1020.

### FIN 1110 3 CREDITS FINANCIAL STATEMENT AND CREDIT ANALYSIS

Students acquire knowledge and understanding of business industries and types, why businesses borrow money, and a basic understanding of business financial statements, tax returns and cash flow statements as tools to determine creditworthiness. Prerequisite: Completion of ACCT 2010.

### FIN 1120 3 CREDITS INVESTMENTS

Students examine the fundamentals and concepts of various investments from the viewpoint of a financial planner. Prerequisite: Completion of ACCT 2010.

### FIN 2000 3 CREDITS PRINCIPLES OF BANKING

Students acquire knowledge of the principles and theory of the U.S. banking system, with a focus on deposit accounts and payment systems, the lending function and lending regulations, compliance with regulatory laws and requirements, and personal financial planning services. Prerequisite: Completion of FIN 1110.

### FIN 2100 3 CREDITS CORPORATE FINANCE

Students explore the theoretical and practical framework for corporate financial management. Topics to be included are financial analysis, time value of money, risk and return, portfolio analysis, capital budgeting, financial assets, and cost of capital. Prerequisite: Completion of ACCT 2020, MATH 2200 or MATH 2355 and completion of or concurrent enrollment in STAT 2010, STAT 2050 or STAT 2070.

### FIN 2200 3 CREDITS REAL ESTATE PRINCIPLES AND PRACTICE

Students examine the fundamentals of real estate practice including; agent roles and responsibilities, mortgage concepts and process, and real estate valuation methods. Prerequisite: Completion of FIN 1100.

### FIN 2470 3 CREDITS FINANCE INTERNSHIP I

Students integrate academic experiences with professional experience under the supervision of a manager in a financial institution or a certified financial planner in a cooperating organization. Students engage in the daily operations of the organization as an entry level finance intern. Prerequisite: Completion of BADM 1020 and instructor consent.

### FIN 2471 3 CREDITS FINANCE INTERNSHIP II

Students integrate academic experiences with professional experience under the supervision of a manager in a financial institution or a certified financial planner in a cooperating organization. Students engage in the daily operations of the organization as an entry level finance intern. Prerequisite: Completion of BADM 1020 and instructor consent.

### FIN 4010 3 CREDITS BUSINESS FINANCE

Students evaluate the basic analytical tools required to make value creating financial decisions. Students explore theoretical foundations of finance, such as the time value of money and the risk-return trade-off. Students utilize financial concepts in the practical applications of financial decision-making. Topics covered in the course include analysis of financial and operating performance, assessment of financial health, financial planning, working capital and growth management, valuation of financial and real assets, investment, funding and distribution decisions in the context of non-financial firms. Prerequisites: Completion of ACCT 3080 and MGT 3210

## Fire Science

### FIRE 1501 3 CREDITS PRINCIPLES OF EMERGENCY SERVICES

Students explore principles of emergency services, including fire protection, career opportunities in fire protection, and related fields. Students examine the philosophy and history of the fire service, fire loss analysis, and the organization and function of public and private fire protection services. Students analyze fire departments as part of the local government, laws and regulations affecting the fire department, and many other topics specific to the foundation of firefighting and emergency services. Prerequisite: Completion of AHA Health Care Provider CPR and/or program manager approval.

### FIRE 1510 3 CREDITS FIREFIGHTING STRATEGY AND TACTICS I

Students examine the principles of fire control through utilization of personnel, equipment, and extinguishing agents on the scene of a fire. Prerequisite: Completion of FIRE 1501 and/or program manager approval.

### FIRE 1625 3 CREDITS FIRE PROTECTION HYDRAULICS AND WATER SUPPLY

Students explore the use of water in fire protection, apply hydraulic principles, analyze flow demand criteria, and solve water supply problems. Prerequisite: Completion of MATH 0970 or equivalent placement or program manager approval.

**FIRE 1700 3 CREDITS****INTRODUCTION TO FIRE PREVENTION**

Students acquire fundamental information regarding the history and philosophy of fire prevention, organization, and operation of a fire prevention bureau; use of fire codes; identification and correction of fire hazards; and the relationships of fire prevention with built-in fire protection systems, fire investigation, and fire and life-safety education.

**FIRE 1725 3 CREDITS****FIRE PROTECTION SYSTEMS**

Students acquire information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection, and portable fire extinguishers.

**FIRE 1760 3 CREDITS****BUILDING CONSTRUCTION**

Students examine the components of building construction that relate to fire and life safety. Focusing on firefighter safety, students analyze and apply elements of construction and design that have been shown to be key factors when inspecting buildings, preplanning fire operations, and operating at an emergency.

**FIRE 1810 4 CREDITS****INTRODUCTION TO WILDLAND FIREFIGHTING**

In this course, students prepare for firefighting operations in the wildland sector. Students learn proper tool handling, water use, hose operations, and meteorology. This course is a combination of National Wildland Coordinating Group courses S-190, S-130, and L-180 Human Factors on a Fireline.

**FIRE 1825 3 CREDITS****FIRE BEHAVIOR AND COMBUSTION**

Students explore the theories and fundamentals of how and why fires start, spread, and how they are controlled.

**FIRE 2500 3 CREDITS****FIRE INVESTIGATOR I**

Students develop the fundamental skills and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter, and types of fire causes.

**FIRE 2550 3 CREDITS****FIRE INVESTIGATOR II**

Students develop advanced skills and technical knowledge on the rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation, and courtroom testimony. Prerequisite: Completion of FIRE 2500.

**FIRE 2610 3 CREDITS****CHEMISTRY OF HAZARDOUS MATERIALS**

Students examine basic fire chemistry relating to the categories of hazardous materials including recognition, reactivity, and health problems that may be encountered by firefighters.

**FIRE 2800 4 CREDITS****FIRE ACADEMY**

In this course, students develop and apply the skills listed in the State of Wyoming Firefighter I and II manipulative skills objectives catalog. Students participate in lecture and drill ground activities. Upon successful completion of the course, students are eligible to take state testing for Firefighter Level I and II certification. Prerequisite: Completion of FIRE 1501 or program manager approval.

**FIRE 2970 4-12 CREDITS****FIREFIGHTER FIELD EXPERIENCE**

In this course students prepare for life in the fire service. Students participate in the daily duties of an actual fire department. Students act as members of the designated department and perform duties as probationary firefighters. Students observe and participate in actual emergent and non-emergent situations. Credits awarded are based on job experience and/or documented professional certifications. Prerequisite: Completion of FIRE 1760, FIRE 1825, FIRE 2800 (or current FF Level I or II certification), and/or program director approval.

**French****FREN 1010 4 CREDITS****FIRST YEAR FRENCH I**

Students develop the fundamentals of grammar, composition, conversation and reading in the French language and explore cultural aspects of the French-speaking world.

**FREN 1020 4 CREDITS****FIRST YEAR FRENCH II**

A continuation of FREN 1010. Prerequisite: Completion of FREN 1010.

**FREN 2030 4 CREDITS****SECOND YEAR FRENCH I**

In this intermediate-level French course students refine their conversation skills and integrate level grammatical structures into conversations and compositions. Students are exposed to basic French literature and develop more advanced writing skills in French. Prerequisite: Completion of FREN 1020 or equivalent.

**FREN 2040 4 CREDITS****SECOND YEAR FRENCH II**

Students continue development of intermediate speaking, listening, reading and writing skills in the French language. Students integrate intermediate level grammatical structures into conversations and compositions, and explore cultural aspects of the French-speaking world, focusing on interpretation of French literature and film. Prerequisite: Completion of FREN 2030 or equivalent 3rd semester course.

**Geography****GEOG 1000 3 CREDITS****WORLD REGIONAL GEOGRAPHY**

Students explore the topics of globalization and localization and how they affect world geography. Students apply knowledge on distributions, traits and processes of people and landscapes within specific geographic regions as well as within interconnected global community. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**GEOG 1010 4 CREDITS****INTRO TO PHYSICAL GEOGRAPHY**

A systematic study of the natural aspects of the geographic environment, including weather and climate, the hydrologic cycle, landforms, soils, flora and fauna. Students learn the principles, concepts and tools within the geography discipline while engaging in the atmospheric processes, exploring the interactions between the biosphere, lithosphere and hydrosphere and investigating the physical forces shaping Earth's crust. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**GEOG 1020 3 CREDITS****HUMAN GEOGRAPHY**

Students examine the field of human geography and the tools and techniques which are used to evaluate and describe topics in global resource utilization, population, language, religion, settlement, industry, and agricultural land use. Prerequisite: Completion of ENGL 0810.

**GEOG 1040 3 CREDITS****MOBILE MAPPING WITH GPS**

Students learn the fundamentals of Global Positioning System (GPS)/Global Navigation Satellite Systems (GNSS) operation, basic geodesy and coordinate system, basic project planning, apply basic mapping skills, create and use data dictionaries, set up and operate GPS receivers, college field data, and import data into a GIS. Students operate a professional level GPS receiver and software package for the class work. This class is applicable for all majors who need to collect data for input into a CAD or GIS mapping system; i.e. agriculture, engineering, engineering/surveying technology, anthropology, construction trades, and law enforcement.

**GEOG 1050 3 CREDITS****INTRODUCTION TO NATURAL RESOURCES**

A course where students examine human interaction with the environment, ranging from regional to global scales. Students become knowledgeable about and gain an understanding of approaches to environmental management. The course emphasizes the scientific aspects of environmental concerns. Prerequisite: Completion of ENGL 0810 or equivalent placement.



**GEOG 1100 4 CREDITS****INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS**

An introductory Geographic Information Systems (GIS) course. Students explore the use of computers in displaying and analyzing spatial information. Students acquire skills in manipulating geographic data for a variety of uses including: natural resource management, planning, health care, Homeland Security, agriculture, and others. Students should be familiar with Windows-based computer operating systems as well as file management procedures. Prerequisite: Completion of ENGL 0810.

**GEOG 1220 3 CREDITS****INTRODUCTION TO GEOSPATIAL TECHNOLOGY**

This course provides an introduction to Geospatial Technology with a primary focus on geographic information systems (GIS) and an overview of related technologies such as remote sensing (RS), global positioning systems (GPS), and other emerging technologies. Students learn concepts and employ the hands-on use of technologies to create, manage, analyze, and map geospatial data in the context of various application areas such as business, public safety, health, environment, engineering, agriculture, natural resources, and natural and social sciences. Prerequisite: Completion of ENGL 0810 or equivalent placement and familiarity with a Windows-based computer operating system.

## Geology

**GEOL 1035 3 CREDITS**  
**GEOLOGY OF YELLOWSTONE NATIONAL PARK**

Students explore the geologic processes and features of the greater Yellowstone and Grand Teton geo-ecosystem including: earthquakes, landslides, glacial and stream processes, geothermal features, and other geological structures, processes, and hazards. This course involves daily hikes of at least 4-5 miles on uneven terrain. All activities will be conducted outdoors where temperatures may be cold and precipitation likely. A course fee will be assessed for reservation of lodging, food, transportation, and entrance fee into parks. This course is only available to registered students who are at least 18 years of age; limit to 13 students. It is recommended that students registering for this course have had some previous exposure to an Earth science class or experience.

**GEOL 1100 4 CREDITS****PHYSICAL GEOLOGY**

Students identify common minerals and rocks and explain how igneous, sedimentary, and metamorphic rocks form. Students acquire scientific knowledge about the movement of crustal plates, interior Earth processes, and external Earth processes including water cycles and resources. Students use geologists' techniques and methods in the pursuit of scientific inquiry. Prerequisite: Completion of ENGL 0810 and MATH 0900 or equivalent placement.

**GEOL 1200 4 CREDITS****HISTORY OF EARTH**

Students learn to infer geologic history through careful study of fossils, rocks, and geologic structures. Students examine the theory of the origin of life, organic evolution, plate tectonics, and the evolution of Earth's continents, oceans, and climate. Students use geologists' techniques and methods in the pursuit of scientific inquiry. Prerequisite: Completion of ENGL 0810 and MATH 0900 or equivalent placement.

## Health Education

**HLED 1006 3 CREDITS****PERSONAL HEALTH**

Students recognize a variety of personal health issues including the impact of family history on health. Students identify health risks and describe behaviors that improve overall health and well-being. Students analyze how physical activity and exercise minimize the effects of stress on one's health and apply this to their personal lives.

**HLED 1221 2 CREDITS****STANDARD FIRST AID AND SAFETY**

In this comprehensive program, students are trained to act in emergency situations and recognize and care for life-threatening respiratory or cardiac emergencies. Students learn skills necessary in an emergency to help sustain life and to minimize pain and the consequences of injury or sudden illness until professional medical help arrives. Students are trained in adult and pediatric cardiopulmonary resuscitation (CPR) as well as in the use of an automated electronic defibrillation device.

**HLED 2006 1 CREDIT****HEALTH FOR ELEMENTARY EDUCATORS**

Students identify and examine National and State Health Standards and Benchmarks, assessment procedures, health curriculum models/approaches for K-6, and health education lesson plans. Students also explore methodologies to integrate health education into the K-6 curriculum. Students discuss current health-related issues facing the elementary-age student, families, and the elementary classroom teacher.

## Health Information Technology and Management

**HIT 1500 4 CREDITS****INTRODUCTION TO HEALTH CARE CAREERS AND WORKPLACE PREPAREDNESS**

Students explore the health care system and examine different types of careers available to them in the administrative realm of health care. Students focus on introductory positions such as a medical secretary, coding career clusters, and health information technology career clusters as well as a brief overview of how success in those clusters can lead to management positions. Students are introduced to basic skills needed to succeed in a medical office environment including: basic business writing, verbal and nonverbal communication, professional dress and behaviors. Prerequisite: Acceptance into HITM program and instructor approval required.

**HIT 1510 4 CREDITS****COMPUTER SOFTWARE FOR MEDICAL OFFICE PROFESSIONALS**

Students explore and apply computer software used in many medical offices. Through hands-on exercises, students explore a Windows environment; create medical documents in MS Word; work with formulas, functions, and charts in MS Excel; use basic features in MS Access; and utilize common features of MS Outlook. Prerequisite: Acceptance into the HITM program and instructor approval required.

**HIT 1550 3 CREDITS****MEDICAL OFFICE PROCEDURAL SKILLS**

Students are introduced to the basic skills needed to succeed in a medical office environment. Students examine the importance of effective and timely scheduling and the effects on customer service, discuss the necessity of complying with medical ethics, create and work with basic medical records, and review basic insurance used in a medical office. Prerequisite: Acceptance into the HITM program and instructor approval required.

**HIT 1600 2 CREDITS****INTRODUCTION TO HEALTH INFORMATION**

Students build knowledge of the health care delivery system with emphasis on health information management (HIM), organizational structures, regulatory and accreditation standards, and health care reform. Students explore the content of health records and documentation requirements, use and structure of health data and data sets, primary and secondary records, and discuss the data sets and what they mean to the organization. Students are introduced to the various tasks and skills performed in a health record department. Prerequisite: Completion of HIT 1550 or instructor approval.

**HIT 2500** **2 CREDITS**  
**HEALTH DATA MANAGEMENT**

Students study the compilation and interpretation of health care statistics for clinical indices and databases/registries. Students collect, organize, and present data using common data software applications to design and generate reports for patient care and related studies. Clinical data will be analyzed to identify trends that demonstrate quality, safety, and effectiveness in health care. Prerequisite: Completion of HIT 1510.

**HIT 2550** **2 CREDITS**  
**HEALTH CARE QUALITY AND PERFORMANCE IMPROVEMENT**

Students develop a working knowledge of the health care data and statistics necessary to address quality of care and performance improvement. Students analyze data to identify trends in the facilities that represent quality, safe, and effective patient care. Students use the analyzed data to report quality measures and initiatives that apply to the federal, state, and local regulations in the health care industry. Prerequisite: Completion of MEDC 1700.

**HIT 2600** **3 CREDITS**  
**HEALTH INFORMATION APPLICATION SKILLS**

Students build on the foundations of health data management and the uses for the data collection and management within the health care industry. Students apply the principles of health information management to the practical situations and case studies in class. Students use and evaluate the various software applications found within the industry. Using the technology and the primary knowledge of health information management, the students analyze patient records and perform audits of patient charts and correlate the information found in the audits to quality measurements. Prerequisite: Completion of HIT 1600.

**HIT 2700** **3 CREDITS**  
**HEALTH INFORMATION MANAGEMENT**

Students explore the basic theories and concepts of management in the healthcare environment. Students study the functions, skills, roles, and challenges in managing health information service areas in healthcare. Students gain a fundamental understanding of strategic and operational planning, workflow, project management, financial management, human resources management and vendor/contract management. Prerequisite: Completion of or concurrent enrollment in HIT 1600.

**HIT 2970** **2 CREDITS**  
**PROFESSIONAL PRACTICE EXPERIENCE (HIM)**

Students gain real-world experience in health care settings. The guidelines of this course are set in the Professional Practice Experience (PPE) handbook published by the American Health Information Management Association. Students are placed in different health care settings to help them achieve the experience and competencies set forth in the handbook while utilizing management and leadership skills. Placements vary and could include a hybrid PPE, meaning a real-world placement with an online experience with a virtual lab. Students complete the PPE in a health information management setting. Prerequisite: Completion of or concurrent enrollment in HIT 2600.

## **Health Technology**

**HLTK 1200** **2 CREDITS**  
**MEDICAL TERMINOLOGY**

Students study the vocabulary associated with health care professions. Students demonstrate knowledge of suffixes, prefixes, root words and their combining forms, and abbreviating through testing, pronunciation, and writing. Students use and incorporate technology in their development of medical based vocabulary.

**HLTK 1210** **3 CREDITS**  
**HUMAN BODY SYSTEMS**

Students identify the structure and function of the systems that make up the human body—integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive. In this non-lab class, students examine body defenses, common diagnostic values, specific abnormalities in function, and how the body works to maintain homeostasis.

**HLTK 1510** **3 CREDITS**  
**NURSE ASSISTANT**

Students gain proficiency in basic resident care skills, beginning infection control, communication and interpersonal skills through theory, practice and supervised clinical experience. Students prepare to take the qualifying exam for Certified Nurse Aide (CNA) as an integral part of this course. Nurse aides must be certified to work in health care facilities in Wyoming, and this course is designed to meet OBRA guidelines and follows state-approved curriculum.

**HLTK 2300** **3 CREDITS**  
**HEALTH CARE ETHICS**

Students explore the basic principles of health care ethics. By engaging in theoretical health care practice situations the students apply practical application of course material to contemporary ethical issues. Students responsibly develop awareness of issues emphasizing diversity of ethical analysis with stress placed on non-judgmental collaboration and philosophical reflection.

**HLTK 2510** **2 CREDITS**  
**PATHOPHYSIOLOGY**

An introduction to the physiology of human disease processes, intended for health professions students. Students explore the nature of various diseases and conditions, methods of diagnosis, medical and surgical treatment options, and disease risk factors, classified by affected body systems. Prerequisite: Completion of HLTK 1210 or ZOO 2010 or ZOO 2015, and recommended completion of or concurrent enrollment in ZOO 2020 or ZOO 2025.

## **Healthcare Administration**

**HCA 3010** **3 CREDITS**  
**FOUNDATIONS OF HEALTHCARE MANAGEMENT**

Students will explore the foundations of management theory as it applies to healthcare and examine the organizational structure of the current healthcare delivery system and its history. Students will analyze the major issues presented to healthcare administrators and their role in healthcare facilities.

**HCA 3020** **3 CREDITS**  
**HEALTH INFORMATICS**

Students will examine healthcare information systems and learn how to optimize computer functions to best collect and manipulate healthcare data. Students will appraise telemedicine, electronic medical records, cybersecurity and how technology has changed the way information is stored and shared in the healthcare industry. Prerequisite: IMGT 3020

**HCA 3030** **3 CREDITS**  
**HEALTHCARE LAW**

Students explore concepts and principles of healthcare policy, legal control, and regulatory environments effects on the healthcare industry and on healthcare professionals. Students will analyze specific healthcare laws that will help them, as future managers, to recognize and guide decision-making policies to minimize legal risk. Prerequisite: Completion of BADM 2010.

**HCA 3040** **3 CREDITS**  
**PUBLIC HEALTH**

Students will analyze the history and principles of public health, focusing on improving the health of populations through an evidence-based public health framework. Students will assess the importance of healthcare professional collaboration, healthcare infrastructure, and social determinants in public health. Students will also examine the differences between the U.S. health profile and that of other countries. Prerequisite: Completion of MGT 3210

**HCA 4010** **3 CREDITS**  
**HEALTHCARE QUALITY AND PERFORMANCE IMPROVEMENT**

Students will analyze the fundamentals of quality management and improvement of healthcare processes, delivery, and outcomes. Students will address the concepts, topics, and practices needed to address quality improvement challenges in the healthcare industry and how managers can assess quality of care and implement process improvement measures. Prerequisite: MGT 3210

**HCA 4020** **3 CREDITS**  
**FINANCE FOR HEALTHCARE**

Students will develop an understanding of administrative financial techniques in healthcare. Students will also analyze the purpose and methods of financial reporting, insurance principles, reimbursement, and laws associated with healthcare finance. Prerequisite: Completion of ACCT 3080

**HCA 4030 3 CREDITS**  
**HEALTHCARE POLICY AND REGULATION**

Students will examine the development of healthcare policy in the U.S. and the influences of societal, political, and economic environments on the healthcare industry. Students will also analyze the role of both the government's and regulatory agencies' influence on the healthcare field. Prerequisite: Completion of MGT 3210

**HCA 4395 3 CREDITS**  
**HEALTHCARE ADMINISTRATION CAPSTONE**

This capstone course is the culminating experience for the Bachelor of Applied Science in Healthcare Administration. This capstone course also provides students with the opportunity to integrate and synthesize the knowledge, skills and attitudes acquired throughout their course work in an original comprehensive portfolio. Students will examine the principles of strategic management in relation to healthcare administration and analyze how leadership and professionalism play a role in the successful administration of a healthcare facility. Prerequisite: Completion of MGT 3420

## **Heating, Ventilation, and Air Conditioning**

**HVAC 1600 3 CREDITS**  
**MECHANICAL PIPING SYSTEMS**

Students explore the different piping materials used for heating, ventilation, air conditioning, and refrigeration, including polyvinyl chloride (PVC), hard and soft copper, and galvanized and black iron piping. They develop skills to measure, cut, prepare, and connect piping and tubing. In addition, students use a piping schematic to layout a piping system. Finally, students identify and explain the use of common fittings and valves for different styles of piping and tubing.

**HVAC 1610 3 CREDITS**  
**HEATING AND AIR CONDITIONING PRINCIPLES**

Students examine the primary concepts of thermal dynamics and fluid dynamics, including attributes of heat and pressure, states of matter, heat transfer methods, energy conversion, and expressions of power. They gain a fundamental understanding of the refrigeration cycle, system components, and refrigerant properties. Students also explore how the properties of air—to include humidity and temperature—affect human comfort.

**HVAC 1620 3 CREDITS**  
**REFRIGERATION CIRCUIT COMPONENTS**

Students examine the major refrigeration system components, including evaporators, condensers, compressors, metering devices, and accessories. Students apply the internal workings of each different type of component to an operational refrigeration circuit. Prerequisite: Completion of or concurrent enrollment in HVAC 1610, or instructor approval.

**HVAC 1630 3 CREDITS**  
**ENERGY EFFICIENT RESIDENTIAL HEATING SYSTEMS**

Students explore energy efficient residential gas-fired heating systems. Students install, commission, troubleshoot, and repair residential gas-fired systems of varying efficiencies using electronic test equipment, parts, and tools. Prerequisite: Completion of or concurrent enrollment in IST 1710, IST 1711, IST 1712, IST 1713, HVAC 1600, and HVAC 1610 or instructor approval with concurrent employment in the field of Heating, Ventilation, and Air Conditioning/Refrigeration.

**HVAC 1640 3 CREDITS**  
**AUTOMATIC BUILDING CONTROLS**

Students discover how various types of controls work and how they are applied in heating, ventilation, air conditioning, and refrigeration systems. In particular, they examine bimetallic, liquid-filled, vapor-filled, thermocouple, and thermister controls. In addition, students experiment with the operation of temperature controls, pressure controls, hydronic relief valves, and transducers to include accurate adjustments. Finally, students troubleshoot and repair control systems using electrical test equipment such as voltmeters, ammeters, and ohmmeters. Prerequisite: Completion of or concurrent enrollment in HVAC 1630 and HVAC 1650, or instructor approval.

**HVAC 1650 3 CREDITS**  
**RESIDENTIAL AIR CONDITIONING SYSTEMS**

Students leak check, evacuate, recover refrigerant from and charge residential and light commercial air conditioning systems. Students open and seal refrigeration systems using brazing and soldering techniques and also examine Core, Type I, Type II, and Type III system characteristics as they prepare to take the Environmental Protection Agency (EPA) Refrigerant Handling Certification exams. Prerequisites: Completion of IST 1710, IST 1711, IST 1712, IST 1713, HVAC 1600, and HVAC 1610 or instructor approval with concurrent employment in the field of Heating, Ventilation, and Air Conditioning/Refrigeration.

**HVAC 1660 3 CREDITS**  
**HVAC DISTRIBUTION SYSTEMS**

Students examine the primary concepts of Indoor Air Quality (IAQ). They also investigate the hazards of improper IAQ and methods to mitigate those hazards to include ventilation, humidification, and dehumidification of living spaces. Students examine air distribution systems and use test equipment to measure pressure and flow as part of system balancing. Prerequisite: Completion of or concurrent enrollment in HVAC 1610 and HVAC 1650, or instructor approval.

**HVAC 1670 3 CREDITS**  
**LIGHT COMMERCIAL REFRIGERATION SYSTEMS**

Students identify various supermarket refrigeration units for analyzing the selection and installation placement procedures for the equipment. They predict how different refrigerant system installation methods could affect a building's heating, ventilation, and air conditioning systems. In addition, students examine the unique operation quality control aspects of commercial ice production before operating, maintaining, and repairing commercial ice machines. They evaluate and troubleshoot the operation of several styles of commercial refrigeration systems. Prerequisite: Completion of or concurrent enrollment in HVAC 1620, HVAC 1630, HVAC 1640, and HVAC 1660, or instructor approval.

**HVAC 1710 3 CREDITS**  
**BUILDING AUTOMATION SYSTEM FUNDAMENTALS**

Building Automation Systems (BAS) Fundamentals is an introduction to the BAS industry. Students study the history of BAS, identify manufacturers and contractors, and study industry scope and trends as they explore careers in BAS. Students are introduced to types of BAS systems as well as BAS architecture.

**HVAC 1720 3 CREDITS**  
**BUILDING AUTOMATION SYSTEMS DEVICES**

Building Automation Systems (BAS) Devices introduces students to the major types of components found in BAS systems. Students learn how to properly select and apply BAS systems components in the field. Topics include input/output wiring, temperature sensors, humidity sensors, pressure sensors, flow sensors, safety circuits, actuator devices for dampers and control valves, power supplies, transducers, relays, motor controls, power supplies, enclosures and power monitoring devices.

**HVAC 1730 3 CREDITS**  
**BUILDING AUTOMATION SYSTEMS NETWORKING**

Building Automation Systems (BAS) Networking introduces the fundamentals of data transmission. The course is closely aligned with Cisco Systems Certification and assists students in their preparation for that credential. Topics covered are network fundamentals, standard, OSI model, IP protocol, network signal transmission, media, protocols, physical topologies, hardware, typical BAS networks and typical BAS subnetworks. Prerequisite: Completion of IST 1712.

**HVAC 1740 3 CREDITS**  
**BUILDING AUTOMATION SYSTEMS LOGIC AND PROGRAMMING**

Building Automation Systems (BAS) Logic and Programming introduces concepts and work with logic, truth tables, logical equivalences, conditionals, Boolean expressions, logic gates, digital logic circuits, number systems, object-oriented programming, data types, decision making and programming style. Prerequisite: Completion of IST 1712 and HVAC 1640.



**HVAC 1750** **3 CREDITS**  
**BUILDING AUTOMATION SYSTEMS DESIGN AND INSTALLATION**  
 Building Automation Systems (BAS) Design and Installation provides students a hands-on introduction to the fasteners, equipment, tools and methods for installing building automation system components. The concepts and principles of previous BAS courses are applied to the design of and commissioning of automation systems. Prerequisite: Completion of HVAC 1710

## History

**HIST 1110** **3 CREDITS**  
**WESTERN CIVILIZATION I**  
 Students study and evaluate western civilization from ancient times to the Renaissance. Students study several aspects of this long and complex story, including political, social, military, religious and cultural traditions and their contributions to the modern world. Prerequisite: Completion of ENGL 0810.

**HIST 1120** **3 CREDITS**  
**WESTERN CIVILIZATION II**  
 Students study and evaluate western civilization from the Renaissance to modern times. Students study several aspects of this long and complex story, including political, social, military, religious and cultural traditions and their contributions to the modern world. Prerequisite: Completion of ENGL 0810 or placement into ENGL 1010.

**HIST 1211** **3 CREDITS**  
**U.S. TO 1865**  
 Students study a survey of United States history commencing with the America's prehistory, European background and first discoveries. Students follow the pattern of colonization and the development of American institutions throughout the colonial period and the early national experience to 1865. Students study the essentials of the United States Constitution in context of American history to 1865. Students also evaluate the Wyoming Constitution. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**HIST 1221** **3 CREDITS**  
**U.S. FROM 1865**  
 Students survey U.S. history from the Civil War to the present. This class meets the requirements of the Wyoming statutes providing for instruction in the provisions and principles of the constitutions of the U.S. and of Wyoming. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**HIST 1251** **3 CREDITS**  
**WYOMING HISTORY**  
 Students study Wyoming's economic, political, constitutional, and social history from preterritorial days to the present. Students analyze the constitutions of the United States and Wyoming. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**HIST 1290** **3 CREDITS**  
**HISTORY OF THE U.S. WEST**  
 This course is an introductory survey of the American West, wherein students examine developments in both the 19th and 20th centuries beginning in the nineteenth century from early exploration through the fur trade, including territorial expansion to the Pacific and in the American Southwest. Students also develop an informed familiarity with western American mining frontiers, the growth and expansion of the cattle industry and farming frontiers, and examine the diversity of the people living in this region. Prerequisite: Completion of ENGL 0810, or placement into ENGL 1010.

**HIST 1341** **3 CREDITS**  
**WORLD HISTORY TO 1500**  
 Students examine the history of the world's peoples and societies from human prehistory to 1500, with an emphasis on the diversity and interconnectedness of human life in the past. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**HIST 1351** **3 CREDITS**  
**WORLD HISTORY SINCE 1500**  
 Students examine the history of the world's peoples and societies from 1500 to the present, with an emphasis on the diversity and interconnectedness of human life in the past. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**HIST 2120** **3 CREDITS**  
**ANCIENT GREECE AND THE NEAR EAST**  
 A survey of ancient western history from its beginnings in Mesopotamia to the coming of Rome. Students examine several aspects of this long and complex story: political, social, military, religious, and cultural traditions and their contributions to the modern world. The Trojan War, Sparta, the Persian Wars, Alexander the Great, and Greek mythology will be given special attention. Prerequisite: Completion of ENGL 1010.

**HIST 2290** **3 CREDITS**  
**HISTORY OF NORTH AMERICAN INDIANS**  
 Students survey North American Indian history from the time of Columbus through present time. Students analyze and evaluate how political, social and economic change impacted the Indian people. Prerequisite: Completion of ENGL 0810 or placement into ENGL 1010.

**HIST 2390** **3 CREDITS**  
**MEXICAN CIVILIZATION**  
 A historical and cultural survey of Mexico to include the study of pre-Hispanic civilizations, the Spanish Conquest, the independence movement, the Mexican Revolution, and the modern era. Students gain an appreciation of the development of Mexican culture through its history and artistic thought and the influence that Mexico has had upon the United States. Cross-listed with HUMN 2395. Prerequisite: Completion of ENGL 0810 or equivalent placement.

## Home Economics

**HOEC 1140** **2 CREDITS**  
**NUTRITION**  
 A study of basic principles of normal nutrition, their application in food selection, and current issues in nutrition and weight maintenance. Students analyze diets and eating patterns to improve nutritional status and evaluate nutritional claims of products. Students apply nutrition principles to individuals throughout the lifespan and on selected special diets.

## Human Development

**HMDV 1510** **3 CREDITS**  
**SUCCESS IN THE WORKPLACE: SOFT SKILLS**  
 Students identify and develop the soft skills necessary for success in the workplace; explore workplace etiquette requirements; and develop strategies on how to market skills to potential employers in the global job market.

## Human Services

**HMSV 1005** **3 CREDITS**  
**GROUP PROCESS**  
 Students are introduced to the dynamics of group interaction with emphasis upon the student's firsthand experience as a group leader and member. The factors involved in problems of communication, effective emotional responses and personal growth will be highlighted. Emphasis will be placed on group process as a means of changing behavior. This course is designed to assist human services students who will function as group leaders and co-leaders. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**HMSV 1010** **3 CREDITS**  
**ORIENTATION TO HUMAN SERVICES**  
 Students explore the field of human services as a profession and the historical and philosophical framework of service delivery. Contemporary roles of the human service worker will be covered including areas such as typical duties and tasks of human service workers, working with a diverse array of client issues, intervention strategies and the sociocultural aspects of providing services in a multicultural diverse society. Students also examine the competencies and qualifications required to become an effective human service worker. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**HMSV 1060** **3 CREDITS**  
**CASE MANAGEMENT**  
 An introductory course focusing on observation, evaluation and record keeping in the human services field. Successful students demonstrate observation skills, analyze behavioral scales and checklists, and develop informal assessment tools. Students discuss objectivity in assessment, evaluation and documentation. Prerequisite: Completion of HMSV 1010 or permission of instructor.

**HMSV 1110 3 CREDITS****ETHICS FOR HELPING PROFESSIONS**

Students explore an overview of the ethical and professional issues that Human Services workers face in the field. Included are such topics as ethical decision making, professional responsibilities, liability, confidentiality, records and rights of clients, professional code of ethics, core values and personal issues, supervision, leadership and working with the legal system. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**HMSV 1460 3 CREDITS****FIELD EXPERIENCE IN HUMAN SERVICES I**

Students gain knowledge and experience in the Human Services field by participating in on-the-job training. This 90 hour field experience is scheduled, structured and supervised by a state and/or nationally certified or licensed professional. In addition to the field experience, students meet for a weekly seminar with their instructor. Students perform relevant job duties and tasks within their community agency, attend supervision meetings, identify community resources that are applicable, and perform other job duties as assigned. Instructor permission is required for site choice. Prerequisite: Completion of HMSV 1010, HMSV 1060, HMSV 1110 and CNSL 2300.

**HMSV 2030 3 CREDITS****BEHAVIORAL HEALTH AND WELLNESS**

Students explore the dimensions of wellness including the physical, emotional, social and spiritual components. Strategies for personal behavioral health and wellness including coping strategies, personal boundaries, self-awareness and how to avoid burnout on the job are practiced during the course of the class. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**HMSV 2110 4 CREDITS****FIELD EXPERIENCE IN HUMAN SERVICES II**

This is the second field experience course in the Human Services program. Students gain practical knowledge and experience in the Human Services field by participating in on-the-job training. This 120 hour field experience is scheduled, structured, and supervised by a state and/or nationally certified or licensed professional. In addition to the field experience, students meet for a weekly seminar with the instructor. Students perform relevant job duties and tasks within their community agency, attend supervision meetings, identify community resources that are applicable, and perform other job duties as assigned. Instructor permission is required for site choice. Prerequisite: Completion of HMSV 1200.

## Humanities

**HUMN 1010 3 CREDITS****INTRODUCTORY HUMANITIES I**

In Introductory Humanities I, students explore visual and performing arts, architecture, literature, music, philosophy and religions in their historical and social contexts from prehistory through the Middle Ages. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**HUMN 1020 3 CREDITS****INTRODUCTORY HUMANITIES II**

In Introductory Humanities II, students explore visual and performing arts, architecture, literature, music, philosophy and religions in their historical and social contexts from the Renaissance into postmodernism. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**HUMN 1080 3 CREDITS****INTRODUCTION TO WOMEN'S STUDIES**

An introduction to the key issues in women's studies. Students examine women's participation in, and relationship to, institutions of society such as family and school, as well as processes and activities such as work, art, literature and politics in historical and cross-cultural analysis. Cross-listed with SOC 1080. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**HUMN 2395 3 CREDITS****MEXICAN CIVILIZATION**

This is a historical and cultural survey of Mexico to include the study of pre-Hispanic civilizations, the Spanish conquest, the independence movement, the Mexican Revolution, and the modern era. Students gain an appreciation of the development of Mexican culture through its history and artistic thought and the influence that Mexico has had upon the United States. Cross-listed with HIST 2390. Prerequisites: Completion of ENGL 0810 or equivalent placement.

## Independent Studies

A student may enroll for specialized study in most departments. Independent studies are closely supervised by the instructor, and courses must be pertinent to the student's goals.

## Information Management

**IMGT 2400 3 CREDITS****INTRO TO INFORMATION MANAGEMENT**

This course is concerned with the role of information systems in managing organizations to make them more competitive and efficient. Specific topics include organizational and technical foundation of informational systems and building and managing systems. Prerequisite: Completion of ACCT 2020 or CMAP 1200.

**IMGT 3020 3 CREDITS****INFORMATION MANAGEMENT AND SECURITY**

Students explore the role of information systems in managing organizations to make them more competitive and efficient. Students also examine methods and security issues related to managing information and information flows of organizations. Additionally, students analyze practices for communicating secure information to internal and external stakeholders in a professional setting. Students will utilize industry-standard information management tools. Prerequisite: Completion of MGT 3210.

## Integrated Systems Technology

**IST 1520 3 CREDITS****INTRO TO INDUSTRIAL SAFETY**

Students identify sources of and describe safety rules, regulations and practices related to job site hazards, personal protective equipment, hazard communication and electrical safety. Students will demonstrate the ability to solve problems related to rigging loads and proper forklift operations. Students earn an OSHA 10 General Industry card upon completion.

**IST 1560 3 CREDITS****TRADE SKILLS FUNDAMENTALS**

Students add, subtract, multiply, divide, and convert decimals, percentages, and fractions; students also solve for unknown quantities with a focus on how they can use these mathematical principles and operations in an industrial setting. Students identify, explain and demonstrate the safe handling and use of industrial hand and power tools. Students identify and explain the types of plans, prints, drawings, and specifications designed for industrial equipment and facilities.

**IST 1610 1 CREDIT****FLUID POWER**

Students identify, explain, describe and predict changes to hydraulic and pneumatic systems. Students increase their knowledge of the basic components found in industrial fluid powered systems. Students must enroll concurrently in IST 1611 to apply the topics of this course in a hands-on environment. Corequisite: Concurrent enrollment in IST 1611.

**IST 1611 1 CREDIT****FLUID POWER CIRCUITS**

Students gain knowledge and demonstrate the safe use of fluid-powered components, the assembly of fluid-powered systems, the measurement of system characteristics, and the creation of system prints. Students apply knowledge to evaluate the components of a fluid-powered system for any required maintenance. All course exercises are performed in a lab environment. Prerequisite: Completion of or concurrent enrollment in IST 1610.

**IST 1660 1 CREDIT****MECHANICAL DRIVES**

Students identify and explain the safety rules, regulations, test procedures, installation, removal and operation of mechanical couplings, shafts and bearings. Students must enroll concurrently in IST 1661 to apply the topics of this course in a hands-on environment. Corequisite: Concurrent enrollment in IST 1661.

**IST 1661 1 CREDIT****MECHANICAL DRIVE ASSEMBLIES**

Students learn to apply mechanical theories while safely installing belt drives, chain drives, gears, couplings, and bearings. Students apply knowledge to evaluate if any of the mechanical components of drive assemblies require maintenance. All course exercises are performed in a lab environment. Prerequisite: Completion of or concurrent enrollment in IST 1660.

**IST 1710 2 CREDITS****DC ELECTRICITY**

Students identify and explain electrical safety rules, concepts, and operating characteristics of direct current (DC) electrical circuits. Students also identify the operation and use of common electrical test equipment. Students must concurrently enroll in IST 1711 to apply the topics of this course in a hands-on environment. Corequisite: Concurrent enrollment in IST 1711.

**IST 1711 1 CREDIT****DC ELECTRICAL CIRCUITS**

Students gain knowledge and produce circuit measurements for circuit calculation and assembly while maintaining electrical safety. Students develop knowledge about direct current electrical circuit concepts and apply this knowledge to evaluate the components of the direct current electrical circuits for any required maintenance. All course exercises are performed in a lab environment. Prerequisite: Completion of or concurrent enrollment in IST 1710.

**IST 1712 2 CREDITS****AC ELECTRICITY**

Students identify and explain electrical safety rules, concepts, and operating characteristics of alternating current (AC) electrical circuits. Students also identify the operation and use of common electrical test equipment. Students must concurrently enroll in IST 1713 to apply the topics of this course in a hands-on environment. Prerequisite: Completion of IST 1710 and IST 1711. Corequisite: Concurrent enrollment in IST 1713.

**IST 1713 1 CREDIT****AC ELECTRICAL CIRCUITS**

Students gain knowledge and interpret circuit measurements for circuit calculation and assembly while maintaining electrical safety. Students develop knowledge about Alternating Current (AC) electrical circuit concepts and apply this knowledge to evaluate the components of the AC electrical circuits for required maintenance. All course exercises are performed in a lab environment. Prerequisite: Completion of or concurrent enrollment in IST 1712.

**IST 1770 2 CREDITS****MOTOR CONTROLS**

Students identify and explain safety rules, concepts, and operating characteristics of electric motor controls. Students must concurrently enroll in IST 1771 to apply the topics of this course in a hands-on environment. Prerequisite: Completion of IST 1712. Corequisite: Concurrent enrollment in IST 1771.

**IST 1771 1 CREDIT****MOTOR CONTROL CIRCUITS**

Students practice mechanical and electrical system safety, build motor control circuits, and measure the operating characteristics of those motor control circuits. Students must have a thorough understanding of the knowledge related to these skills before attempting any maintenance actions. Students complete all course outcomes in a lab environment. Prerequisite: Completion of IST 1712, and completion of or concurrent enrollment in IST 1770.

**IST 1780 2 CREDITS****ELECTRIC MOTORS**

Students learn to identify safety procedures, regulations, and operating characteristics of Direct Current (DC) and Alternating Current (AC) motors. Students identify and predict how environmental changes affect motor operations. Course exercises are a combination of self-paced online materials and classroom activities. Prerequisite: Completion of IST 1712. Corequisite: Concurrent enrollment in IST 1781.

**IST 1781 1 CREDIT****ELECTRIC MOTOR CIRCUITS**

Students configure, install, and operate direct current and alternating current motors. Students also select, inspect, use, and maintain electrical test equipment. Students must have a thorough understanding of the knowledge related to these skills before attempting to perform any maintenance actions. Students complete all course outcomes in an industrial maintenance laboratory environment. Prerequisite: Completion of IST 1712, and completion of or concurrent enrollment in IST 1780.

**IST 1810 2 CREDITS****PROGRAMMABLE LOGIC CONTROLLERS**

Students explore the hardware and software used to control automated industrial equipment. Students identify, classify and predict the operational characteristics of fixed and modular programmable logic controllers. Students must concurrently enroll in IST 1811 to apply the topics of this course in a hands-on environment. Prerequisite: Completion of IST 1710 and IST 1712. Corequisite: Concurrent enrollment in IST 1811.

**IST 1811 1 CREDIT****PLC CIRCUITS I**

Students learn to assemble, program, and operate Programmable Logic Controllers (PLCs) and develop knowledge of PLC industrial system components. Students learn to identify PLCs hardware and software interface for input and output of system components. Students construct computer programs to control system operation. Students apply this knowledge to evaluate the components of the PLC for any required maintenance. All course exercises are performed in a lab environment. Prerequisite: Completion of or concurrent enrollment in IST 1810.

## Japanese

**JAPN 1010 4 CREDITS****FIRST YEAR JAPANESE I**

Students develop basic speaking, listening, reading and writing skills in the Japanese language and explore cultural aspects of the Japanese-speaking world.

**JAPN 1020 4 CREDITS****FIRST YEAR JAPANESE II**

Students continue their development of basic speaking, listening, reading and writing skills in the target language and explore cultural aspects of the Japanese-speaking world. Prerequisite: Completion of JAPN 1010 or equivalent course.

**JAPN 2030 4 CREDITS****SECOND YEAR JAPANESE I**

Students refine their reading, speaking and writing in original Japanese syllabaries including elementary kanji characters for daily practical application. Students also explore various elements of Japanese culture. Prerequisite: Completion of JAPN 1020 or equivalent course.

**JAPN 2040 4 CREDITS****SECOND YEAR JAPANESE II**

Students continue to develop reading, speaking and writing skills in original Japanese syllabaries, including hiragana and Katakana and elementary kanji for daily practical application. Prerequisite: Completion of JAPN 2030.

## Kinesiology

**KIN 1006 2 CREDITS****FITNESS COMPONENT: FLEXIBILITY**

Students examine the multiple facets that comprise the fitness component of flexibility. Students develop knowledge of the health benefits of flexibility, test flexibility, design flexibility programs, and identify multiple methods of flexibility including, but not limited to static, dynamic, active, passive, and proprioceptive neuromuscular facilitation (PNF). Prerequisite: Previous or concurrent enrollment in PEAC 1295.



**KIN 1007 2 CREDITS****FITNESS COMPONENT: CARDIOVASCULAR ENDURANCE**

Students examine the multiple facets that comprise the fitness component of cardiovascular endurance. Students develop an understanding of the heart and lungs and the role exercise and physical activity play in either improving or maintaining this critical body system. Students explore the energy systems, recovery, target heart rate, training zone, and perceived rate of exertion as elements of this fitness component. Students evaluate and design cardiovascular endurance programs. Prerequisite: Completion of or concurrent enrollment in PEAC 1295.

**KIN 1008 2 CREDITS****FITNESS COMPONENT: MUSCULAR STRENGTH/ MUSCULAR ENDURANCE**

Students examine the fitness component of muscular strength/endurance. Students develop multi-joint pushing, pulling, and lower body exercises. Students understand pros/cons of resistance training tools, including but not limited to barbells, dumbbells, kettlebells, medicine balls, body weight and weight machines. Students distinguish the differences between muscular strength and muscular endurance and the unique role each one plays in their overall fitness. Prerequisite: Previous or concurrent enrollment in PEAC 1295.

**KIN 1010 3 CREDITS**  
**INTRODUCTION TO SPORT MANAGEMENT**

Students examine the historical development, current trends, best practices, and future trends of sport management. Foundational principles will be taught within the framework of professional, collegiate, interscholastic, non-traditional, and youth and community sport in select subject areas including: the history of sport management and current curriculum, careers in sport management, marketing, ethics, finance, law, management, communications, facility design and management, and sociology.

**KIN 1100 3 CREDITS**  
**KINESIOLOGY, THE SCIENCE OF HUMAN MOVEMENT**

Students examine the science of human movement and its many associated professional sub-disciplines including biomechanics, motor control/learning/development, injury prevention, community and public health, teaching physical and health education, exercise physiology, sport and exercise psychology, sport sociology, and athletic training. Students explore the various professional and educational requirements associated with each field and participate in job shadows to gain a better understanding of professionalism in selected fields of study.

**KIN 2000 3 CREDITS**  
**HISTORY AND PHILOSOPHY OF SPORT**

Students examine the breadth, scope, and nature of the sport profession. Students discuss the history and philosophy of sport and the factors that influence its evolution. Special consideration is given to the history of sport from antiquity to the present, particularly the Olympic Games. Prerequisite: Completion of KIN 1010.

**KIN 2135 3 CREDITS****PERSONAL TRAINER EDUCATION**

Students are introduced to the principles of exercise physiology and client assessment. Students learn to properly screen clients for safe participation in an exercise program, utilize different tools for assessing a clients' fitness level, and identify appropriate assessment techniques for a wide variety of clientele. Students learn components of program design for resistance, cardiorespiratory, comprehensive, and personal training sessions. Prerequisite: Completion of PEAC 1295. Corequisite: Concurrent enrollment in HLTK 1210 and HOEC 1140.

**KIN 2200 2 CREDITS****RECREATION AND LEISURE IN MODERN SOCIETY**

Students examine the meaning, problems, and scope of the recreation and leisure industry. The students evaluate the history, philosophy, and principles of recreation and explore the agencies providing recreation programs. Students also investigate facility and personnel development, management, and programming for recreation and leisure activities. Prerequisite: Completion of KIN 1010.

**KIN 2450 1 CREDIT****EXERCISE SCIENCE INTERNSHIP**

Students have the opportunity to apply their knowledge from the Exercise Science program coursework in a professional environment. Students select a subdiscipline of Exercise Science, such as Physical Therapy, and participate in 30 hours of internship experience. Prerequisite: KIN 2470 Exercise Science Practicum I with a minimum grade of C or better. Corequisite: KIN 2471 Exercise Science Practicum II. Must either have completed KIN 2471 with a minimum grade of C or better or be concurrently enrolled in KIN 2471.

**KIN 2470 1 CREDIT****EXERCISE SCIENCE PRACTICUM I**

Students work in conjunction with Exercise Science instructors to provide individual planning and programming for a variety of populations. Students also observe professionals in Exercise Science related fields in a variety of settings. This is the first of a two practicum sequence. Prerequisite: Completion of KIN 2135.

**KIN 2471 2 CREDITS****EXERCISE SCIENCE PRACTICUM II**

Students work in conjunction with Exercise Science instructors to provide individual exercise planning and programming for a variety of populations. Students also observe professionals in Exercise Science related fields. This is the second of a two practicum sequence. For successful completion of the program, students must complete the course with a C or higher. Prerequisite: Completion of KIN 2470 and concurrent enrollment in KIN 2450.

**KIN 2490 3 CREDITS****HISTORY AND PHILOSOPHY OF SPORT**

Students examine the breadth, scope, and nature of the sport profession. Students discuss the history and philosophy of sport and the factors that influence its evolution. Special consideration is given to the history of sport from antiquity to the present, particularly the Olympic Games. Prerequisite: Completion of KIN 1010

## **Management**

**MGT 1000 3 CREDITS****INTRODUCTION TO SUPERVISION**

Students acquire techniques to improve or establish themselves as first-line supervisors. The student will understand and be able to apply basic management principles in solving problems encountered by first-line supervisors. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**MGT 1200 3 CREDITS****INTRO TO HUMAN RESOURCES MANAGEMENT**

Students obtain knowledge of the components of human resource management. Major areas of focus are human behavior, human resource planning, job analysis and design, employee assistance programs, wage and salary administration, performance appraisal system, collective bargaining, and labor law. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**MGT 1500 3 CREDITS****LEADERSHIP ESSENTIALS**

Students focus on the leadership skills necessary to bring about change in an organization. Students learn to develop and communicate a shared vision, to empower employees, to manage conflict, to negotiate, and to develop organizations so that all are working toward common goals. Student recognize that different situations require different approaches to leadership. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**MGT 2100 3 CREDITS****PRINCIPLES OF MANAGEMENT**

Students examine the theory and practice of management. Utilizing goal-oriented action, students work collaboratively to create a service project for a non-profit agency integrating the four functions of management: planning, organizing, leading and controlling. Students examine the roles and responsibilities of modern managers in an organization. Prerequisite: Completion of ACCT 2020.

**MGT 2471 3 CREDITS****INTERNSHIP I**

Students integrate academic experiences with professional experience under the supervision of a manager in a cooperating organization. Students engage in the daily operations of the organization as a professional intern. Prerequisite: Instructor approval.

**MGT 2472 3 CREDITS**  
**INTERNSHIP II**

Students integrate academic experiences with professional experience under the supervision of a manager in a cooperating organization. Students engage in the daily operations of the organization as a professional intern. Prerequisite: Completion of MGT 2471 and instructor approval.

**MGT 2475 3 CREDITS**  
**MANAGEMENT INTERNSHIP I**

Students integrate academic experiences with professional experience under the supervision of a manager in a cooperating organization. Students engage in the daily operations of the organization as a professional intern. Prerequisite: Approval of instructor.

**MGT 2476 3 CREDITS**  
**MANAGEMENT INTERNSHIP II**

Students integrate academic experiences with professional experience under the supervision of a manager in a cooperating organization. Students engage in the daily operations of the organization as a professional intern. Prerequisite: Completion of MGT 2475 and instructor approval.

**MGT 3210 3 CREDITS**  
**MANAGEMENT AND ORGANIZATION**

Students examine the theory and practice of management. Students discuss small group behavior, design and structure of organizations, and the relationship between the organization and its environment. Students examine the roles, responsibilities, and challenges of modern managers in an organization. Students prepare the foundation of the Capstone Project which will be developed, refined, and completed throughout the four semesters of the BAS program. Prerequisite: Completion of or concurrent enrollment in BADM 3010.

**MGT 3410 3 CREDITS**  
**HUMAN RESOURCES MANAGEMENT**

Students analyze the strategic role of the human resource manager in performing functions of recruitment, hiring, training, and career development within a business. Students study the formal systems used to manage people at work, such as job analysis and evaluation, wage and salary administration, performance evaluation, safety, employee services and fringe benefits. Students evaluate procedural compliance of EEO, diversity, and other legal aspect of managing people. Students develop comprehensive management plans to recruit, evaluate, and promote employees within a successful organization. Prerequisite: Completion of MGT 3210.

**MGT 3420 3 CREDITS**  
**ORGANIZATIONAL BEHAVIOR AND LEADERSHIP**

Students study individual, group, and organizational processes that affect employee behavior at work. Students analyze successful leadership practices. Students examine the impact of individual differences, organizational politics, and culture on organizational behavior. Prerequisite: Completion of MGT 3210.

**MGT 4010 3 CREDITS**  
**SUPERVISORY AND EMPLOYEE COMMUNICATIONS**

Students develop techniques to improve or establish themselves as first-line supervisors with direct and influential communications with employees. Students apply management principles in solving problems encountered by first-line supervisors. Students evaluate the influential roles that managers play in addressing issues, challenges, and opportunities facing employees. Students develop guidance for future internal communications, as organizational leaders, in order to build beneficial relationships and engage employees in the fast-changing business and media environment. Prerequisites: MGT 3410 and MGT 3420

**MGT 4800 3 CREDITS**  
**BUSINESS STRATEGY AND POLICY (CAPSTONE)**

This course is intended to be the culmination of your applied management curriculum. As a capstone course, it provides a framework for integrating knowledge from foundational courses taken throughout the applied management curriculum. Students analyze and assess internal operations of a firm and the external, competitive environment of an industry. Students are asked to formulate effective competitive strategies for firms under conditions of uncertainty. Students utilize comprehensive case studies, readings and industry simulations to understand the difficulties and challenges of effectively implementing strategic plans. Students' decision-making skills are challenged as they develop interpersonal skills important for moving their employment situation from a tactical to a strategic environment.

## Marketing

**MKT 1000 3 CREDITS**  
**SALES**

An introduction to personal selling. Students gain skills and knowledge necessary to take a relationship approach to selling themselves, their ideas, and even their products/services to others. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**MKT 2100 3 CREDITS**  
**PRINCIPLES OF MARKETING**

Students investigate the marketing discipline with emphasis on vocabulary, principles, functional interrelationships, marketing strategies, as well as practices and problems in national and international environments. Prerequisite: Completion of ECON 1020.

**MKT 3210 3 CREDITS**  
**INTRO TO MARKETING**

Students investigate the marketing discipline, with a focus on business environment, market potential of products and services, consumer target marketing, and advertising and promotion. Students develop a marketing strategy, emphasizing the overall customer experience. Prerequisite: Instructor approval.

## Mass Media/Multimedia

**MMMM 1111 3 CREDITS**  
**JOURNALISTIC WRITING**

A study of the form, structure, and style of writing for the mass media. Topics include the Associated Press Stylebook, copy editing symbols, word usage, concise and precise sentence structure, basic news leads, alternative news leads, and inverted pyramid style. Extensive practice in grammar and punctuation. An excellent course for professionals who want to update or refresh their skills. Prerequisite: Completion of ENGL 0810 or equivalent placement some keyboarding skills required.

**MMMM 1370 3 CREDITS**  
**PUBLICATIONS PRODUCTION I**

This course prepares students to assume the responsibility of publishing the college's four-color newspaper four times a semester. Students are expected to write news and feature stories; to sell effective advertising; to follow a dummy to design pages using desktop publishing; to meet deadlines, perform under pressure, and work in teams; and to become knowledgeable about journalism ethics and decision-making.

**MMMM 1371 3 CREDITS**  
**MULTIMEDIA PRODUCTIONS I**

Students develop the basic skill set to contribute to publishing the college's newspaper content in a weekly online format. Students write breaking news and feature stories quoting at least one source, recognizing appropriate style for online publishing; copyedit their own stories; sell effective advertising, tracking contacts with potential advertisers; and design pages using Web page design software.

**MMMM 1375 3 CREDITS**  
**PUBLICATIONS PRODUCTION II**

This course prepares students to assume the responsibility of publishing the college's four-color newspaper four times a semester. Students are expected to originate and write multiple-source stories; to make editorial judgments about copy; to scale photographs and illustrations; to design effective advertising page; to meet deadlines, perform under pressure, and work in teams; and to become knowledgeable about journalism ethics and decision-making. Prerequisite: Completion of MMMM 1370.

**MMMM 1376 3 CREDITS**  
**MULTIMEDIA PRODUCTIONS II**

Students continue to develop the basic skill set to contribute to publishing the college's newspaper content in a weekly online format. Students write breaking news and feature stories, interviewing at least two sources for each story; copyedit their own stories as well as other staffers, demonstrating a strong understanding of copy editor's marks; interview an advertising client and execute advertising to their satisfaction; design pages using Web page design software and HTML and upload them to the site; prepare photos for use on the Web; record audio for audio clips; and edit audio. Prerequisite: Completion of MMMM 1371.

**MMMM 2100 3 CREDITS**  
**REPORTING AND NEWSWRITING**  
 Intensive practice in gathering and writing news. Topics include journalistic jargon, news judgment, interviewing techniques, law and ethics, computer-assisted reporting, and careers. Students write the following kinds of stories: news, features, roundups, sidebars, follow-ups, obituaries, legislative, statistical, controversial, speeches, meetings, brights, public affairs, news conference, and public relations releases. Prerequisites: Completion of ENGL 0810 or equivalent placement and MMMM 1111, and some keyboarding skills required.

**MMMM 2222 3 CREDITS**  
**DESKTOP AUDIO/VIDEO PRODUCTION**  
 Students work in a desktop audio and video production environment learning the techniques of traditional audio and video production and applying them to a modern, small staff digital production studio. Students also learn techniques and acquire production skills related to production for MPEG compression and bandwidth-restricted delivery environments. Working as a production team, students create content for multimedia delivery. Keyboarding skills and knowledge of Windows is recommended.

**MMMM 2310 3 CREDITS**  
**DESKTOP PUBLISHING**  
 Desktop publishing (DTP) merges the fields of writing and editing, typography, photography and graphics, layout and design, and printing. Using industry-standard desktop publishing software, students create a variety of practice publications as well as their own original documents. Students work with text and graphic frames, manipulate text formatting, incorporate process and spot colors, develop tables and use tabs properly, create graphics and work with transparency, and package and export documents for commercial printing.

**MMMM 2320 3 CREDITS**  
**ADVANCED DESKTOP PUBLISHING**  
 In this advanced DTP course, students focus on creating longer and more complicated documents using industry-standard desktop publishing software. Students develop multiple master pages and templates; create a table of contents and index for a book; prepare color separations; write headlines and photo cutlines; and apply principles of color theory, good design, and proper typography. Projects include advertisements, logos, fliers, business forms, informational graphics, newsletters, newspapers, and books. Prerequisite: Completion of MMMM 2310.

**MMMM 2325 3 CREDITS**  
**COMPUTER GRAPHICS**  
 Students are introduced to a sophisticated computer graphics software package. Using a variety of electronic tools, students create, draw, edit, and manipulate objects. Students incorporate color and typography, particularly special effects, into a variety of design projects and establish a relationship of computer-generated art to other software applications, such as multimedia, digital photography, and desktop publishing.

**MMMM 2326 3 CREDITS**  
**INTERACTIVE MEDIA DESIGN**  
 Students learn to plan and design interactive media products for use in multimedia presentations, web pages and internet applications. Students apply principles of usability design and understanding the medium by planning, developing, and evaluating user requirements, personas, navigation, information architecture, site maps, wire-framing, visual hierarchy, paper prototyping and user tests.

**MMMM 2370 3 CREDITS**  
**PUBLICATIONS PRODUCTION III**  
 This course prepares students to assume the responsibility of publishing the college's four-color newspaper four times a semester. Students are expected to originate and write specialty stories; to copyedit stories, make editorial judgments, and analyze readability; to select photographs and illustrations/graphics for publication; to market effective advertising campaigns; to design multiple-page spreads using desktop publishing; to meet deadlines, perform under pressure, and work in teams; and to become knowledgeable about journalism ethics and decision-making. Prerequisite: Completion of MMMM 1375.

**MMMM 2371 3 CREDITS**  
**MULTIMEDIA PRODUCTIONS III**  
 Students take a lead role as an editor in publishing the college's newspaper content in a weekly online format. Students write stories, taking additional responsibility to ensure each story is enriched with multimedia components; copyedit stories and write meaningful headlines and subheads; develop a marketing campaign for a new advertiser; design pages using Web page design software and HTML, including taking responsibility for one or more of the main content pages; create galleries and audio slideshows; and record video for clips. Prerequisite: Completion of MMMM 1376.

**MMMM 2375 3 CREDITS**  
**PUBLICATIONS PRODUCTION IV**  
 This course prepares students to assume the responsibility of publishing the college's four-color newspaper four times a semester. Students are expected to originate and write investigative stories; to review all copy for libel; to apply standards of good taste to publication photographs and graphics; to develop conflict resolution skills; to coordinate the overall publication design using desktop publishing; to work with a professional printer; to meet deadlines, perform under pressure, and work in teams; and to become knowledgeable about journalism ethics and decision-making. Prerequisite: Completion of MMMM 2370.

**MMMM 2376 3 CREDITS**  
**MULTIMEDIA PRODUCTIONS IV**  
 Students take a lead role as an editor in publishing the college's newspaper content in a weekly online format. Students write breaking news, feature stories, and a weekly blog; copyedit and approve all content prior to posting; make assignments to junior staff members and assign deadline dates; organize publication advertising and resolve conflicts with advertisers; design pages using Web page design software and HTML; develop templates using Cascading Style Sheets (CSS); troubleshoot coding issues; and edit video for narrowcasting. Prerequisite: Completion of MMMM 2371.

**MMMM 2400 3 CREDITS**  
**INTRODUCTION TO PHOTOGRAPHY**  
 Students learn to manually compose photographs with single lens reflex cameras in both the digital and film formats; apply compositional guidelines to photography; critique images emphasizing artistic and journalistic methods; discuss image aesthetics in relation to historic process and forms of photographic involvement.

**MMMM 2408 3 CREDITS**  
**DIGITAL PHOTOGRAPHY**  
 In this introduction to digital image capture and manipulation media course, students create digital images with a digital camera. Students demonstrate camera capture modes, evaluate compositional guidelines in their images, recognize appropriate color modes, resolution, and file formats for standard methods of output, analyze ethical and legal issues, and recognize and apply color correction, retouching and restoration techniques.

## Mathematics

**MATH 0900 3 CREDITS**  
**PRE-ALGEBRA ARITHMETIC**  
 Students acquire knowledge of addition, subtraction, multiplication, and division of whole numbers, fractions, and decimals; averages; exponents; percents; ratios and proportions; weights and measures including metric system; signed numbers; and introductory geometry and algebra.

**MATH 0921 3 CREDITS**  
**ALGEBRA I**  
 Students study algebraic expressions and algebraic equations. Students acquire knowledge and develop skills that enable them to solve algebraic expressions, solve linear equations, use the rules of exponent, and perform operations on polynomials and factor polynomials. Prerequisite: Completion of MATH 0900 or equivalent placement.

**MATH 0925 3 CREDITS**  
**ALGEBRA II**  
 This course involves a study of algebraic equations and functions. Successful students acquire knowledge and develop skills that enable them to solve linear systems of equations and inequalities, solve quadratic equations, perform operations on rational and radical expressions, and identify functions and use function notation. Prerequisite: Completion of MATH 0921 or equivalent placement.



**MATH 0965** **3 CREDITS**  
**SKILLS DEVELOPMENT FOR PROBLEM SOLVING**  
 Students practice mathematical and reasoning skills to improve their success in MATH 1000 Problem Solving. Topics covered in this course include those defined in MATH 1000 and/or any pre-requisite skills needed by the student. Prerequisite: Math 0900 or equivalent placement. Corequisite: MATH 1000.

**MATH 0975** **3 CREDITS**  
**SKILLS DEVELOPMENT FOR COLLEGE ALGEBRA**  
 Students practice mathematical and reasoning skills to improve their success in MATH 1400 College Algebra. Topics covered in this course include those defined in MATH 1400 and/or any pre-requisite skills needed by the student. Prerequisite: Math 0900 or appropriate placement. Corequisite: MATH 1400.

**MATH 1000** **3 CREDITS**  
**PROBLEM SOLVING**  
 Students acquire college-level knowledge and develop skills that will enable them to formulate, analyze, and interpret quantitative arguments in a variety of settings; use calculators in problem solving; and solve applicable problems in a variety of real-world situations.

**MATH 1100** **3 CREDITS**  
**NUMBERS AND OPERATIONS FOR ELEMENTARY SCHOOL TEACHERS**  
 This is the first of a three-course sequence involving a study of the mathematics necessary for teaching basic arithmetic to elementary school students. Successful students demonstrate knowledge of place value; acquire knowledge and develop skills in the four basic arithmetic operations using both standard and alternative algorithms for whole numbers, fractions, and decimals; and apply logic and problem-solving strategies to deepen their understanding of math concepts and content of elementary school curriculum. Prerequisite: Completion of or concurrent enrollment in MATH 0980, or equivalent placement. Corequisite: Concurrent enrollment in EDEL 1410.

**MATH 1105** **3 CREDITS**  
**DATA, PROBABILITY, AND ALGEBRA FOR ELEMENTARY SCHOOL TEACHERS**  
 This is the second of a three-course sequence involving a study of the mathematics necessary for teaching basic arithmetic to elementary school students. Successful students demonstrate knowledge of appropriate statistical methods, representations, graphical displays, and technological tools to analyze and draw conclusions using data. Using elementary probability theory, students predict the chance of future events. Using algebra students generalize and communicate patterns. Prerequisite: Completion of MATH 1100.

**MATH 1400** **3 CREDITS**  
**COLLEGE ALGEBRA**  
 Students learn fundamental mathematical concepts using numeric, graphic, and symbolic methods. Successful students will acquire knowledge and develop skills to investigate linear, quadratic, polynomial, rational, exponential, and logarithmic functions; and understand and use function notation.

**MATH 1405** **3 CREDITS**  
**TRIGONOMETRY**  
 Students acquire knowledge and develop skills that enable them to define, evaluate, and graph trigonometric functions and their inverses; solve trigonometric equations; find the measure of all angles and sides associated with a triangle; solve applications using vectors. Students receiving credit for MATH 1450 cannot receive credit for MATH 1405. A specific calculator is required for this course. See the math instructor for acceptable models. Prerequisite: Completion of MATH 1400 or MATH 1401 or equivalent placement.

**MATH 1450** **5 CREDITS**  
**ALGEBRA AND TRIGONOMETRY**  
 MATH 1450 is an accelerated course that includes content from both MATH 1400 and MATH 1405. Successful students acquire knowledge and develop skills that prepare them to succeed in Calculus. Students study polynomial, rational, logarithmic, exponential, and trigonometric functions and their inverses. Students investigate and graph functions and their translations. Students solve equations and inequalities using a variety of methods. Students solve triangles and solve applications using vectors. This course replaces credit for MATH 1400 and/or MATH 1405. A specific calculator is required for this course. See the math instructor for acceptable models. Prerequisite: Equivalent placement.

**MATH 1510** **3 CREDITS**  
**TECHNICAL MATHEMATICS I**  
 Students study the use of basic mathematical principles in work-related situations. Successful students acquire skills in basic math, algebra, problem-solving techniques, measurement systems, basic geometry, ratio and proportion, graphs, charts, and tables. Prerequisite: Completion of MATH 0900 or equivalent placement.

**MATH 2120** **3 CREDITS**  
**GEOMETRY AND MEASUREMENT FOR ELEMENTARY SCHOOL TEACHERS**  
 This is the third of a three-course sequence involving a study of the mathematics necessary for teaching basic arithmetic to elementary school students. In this course students develop spatial reasoning. Successful students demonstrate knowledge of geometric objects and their relationships and use geometry, measurement, and estimation in problem solving. Prerequisite: Completion of MATH 1100 and concurrent enrollment in EDEL 2410.

**MATH 2200** **4 CREDITS**  
**CALCULUS I**  
 Students acquire knowledge and develop skills that enable them to find derivatives numerically, graphically, and analytically, use the derivative to solve application problems, and find the integral numerically, graphically, and in some cases analytically. Prerequisite: Completion of MATH 1405 or MATH 1450, or equivalent placement.

**MATH 2205** **4 CREDITS**  
**CALCULUS II**  
 Math 2205 is the second semester of Calculus. Students acquire knowledge and develop skills that enable them to use various integration techniques; solve application problems using integration; and approximate elementary function using Taylor and Maclaurin Series. A specific calculator is required for this course. See the math instructor for acceptable models. Prerequisite: Completion of MATH 2200 or equivalent placement.

**MATH 2210** **4 CREDITS**  
**CALCULUS III**  
 Students acquire knowledge and develop skills that enable them to differentiate and integrate functions; analyze the equations of lines, planes, and some solid figures in space; use two- and three-dimensional vectors; use vector-valued functions in solving application problems; and apply vector fields to various application problems. A specific calculator is required for this course. See the instructor for acceptable models. Prerequisite: Completion of MATH 2205 or equivalent placement.

**MATH 2250** **3 CREDITS**  
**ELEMENTARY LINEAR ALGEBRA**  
 Students study matrices, systems of linear equations, linear transformations, and vector spaces. Successful students acquire knowledge and develop skills which enable them to perform matrix operations, solve systems of equations using Gaussian elimination, find a basis for a given set of vectors, orthogonalize a matrix, find the eigenvalues and eigenvectors for a given matrix, and solve applications. A specific calculator is required for this course. See the instructor for acceptable models. Prerequisite: Completion of MATH 2200.

**MATH 2300** **3 CREDITS**  
**DISCRETE STRUCTURES**  
 Students are introduced to the mathematical concepts that serve as foundations of computer science: logic, set theory, relations and functions, graphs (directed and undirected), inductively defined structures (lists and trees), and applications of mathematical induction. Provides an introduction to abstract and rigorous thinking in advanced mathematics and computer science. Cross-listed with COSC 2300. Prerequisite: Completion of COSC 1030 or MATH 2200 or MATH 2350.

**MATH 2310 3 CREDITS****APPLIED DIFFERENTIAL EQUATIONS**

Students study ordinary differential equations and integral transforms. Students solve ordinary differential equations using multiple techniques (including the Laplace transform) and investigate properties of the solutions. Students also construct differential equations as mathematical models to solve application problems. Prerequisite: Completion of MATH 2205.

**MATH 2350 4 CREDITS****BUSINESS CALCULUS I**

Students study calculus through business, economic, and social applications. Successful students acquire knowledge and develop skills that enable them to apply unique modeling approaches to the material throughout the course. Students develop a conceptual understanding of calculus, the use of data, and technology applications. A specific calculator is required for this course. See the math instructor for acceptable models. Prerequisite: Completion of MATH 1380, MATH 1390, MATH 1400, or MATH 1401.

**MATH 2355 4 CREDITS****MATHEMATICAL APPLICATIONS FOR BUSINESS**

Students study mathematical applications for business by examining equations and systems of equations, matrices, linear programming, set theory, probability, statistics, logic, and the mathematics of finance. Students acquire knowledge about and develop skills in solving linear equations and least square regression, matrices, linear programming, sets and counting problems, probability, statistics, logic and finance (including simple and compound interest, inflation and population growth, annuities, and amortization), and other selected topics. A specific calculator is required for this course. See the math instructor for acceptable models. Prerequisite: Completion of MATH 1380, MATH 1390, MATH 1400, or MATH 1401.

**MATH 2800 2 CREDITS****MATHEMATICS MAJOR SEMINAR**

Students use mathematical logic; acquire and develop skills to construct and evaluate mathematical conjectures and arguments; explain mathematical reasoning through the writing of formal proofs; and apply results to develop further mathematical concepts. This course is intended for mathematics majors and is an introduction to mathematical investigation and discovery. Prerequisite: Completion of or concurrent enrollment in MATH 2205.

**Medical Coding****MEDC 1500 3 CREDITS****BASIC ICD-10-CM/PCS CODING**

Students are introduced to the basic coding guidelines using the International Classification of Diseases (ICD-10-CM/PCS) coding classification system. Students practice the application of diagnosis and procedure codes, focusing on accuracy and the clinical information found in the medical record. Ethical coding standards are applied and promoted while students focus on current regulations and coding guidelines. Prerequisite: Completion of HLTK 1200 and HLTK 1210.

**MEDC 1600 3 CREDITS****BASIC CPT CODING**

Students are introduced to the basic coding guidelines of the Current Procedural Terminology (CPT) nomenclature. Students practice the application of CPT/HCPCS codes to validate coding accuracy using clinical information found in the medical record. Students gain a fundamental understanding of the general steps in coding and apply the guidelines of the National Correct Coding Initiative. Prerequisite: Completion of HLTK 1200 and HLTK 1210.

**MEDC 1675 4 CREDITS****ADVANCED CODING**

Students build on the base knowledge learned from Basic CPT and Basic ICD-10-CM/PCS Coding. Students link CPT or ICD-10-PCS procedural codes with ICD-10-CM diagnostic codes using examples from medical records. Analyzing both inpatient and outpatient records, students follow the guidelines for reporting codes for procedures, diagnoses, and ancillary services. Students review the current regulations related to coding compliance and evaluate ethics in relation to fraud and incorrect coding. Prerequisites: Completion of MEDC 1500 and MEDC 1600.

**MEDC 1700 3 CREDITS****REIMBURSEMENT METHODOLOGIES**

Students explore health care billing and reimbursement. Students examine the basics of medical insurance and track claims from patient registration through collections, identifying "missing" information and using process principles to avoid gathering incorrect information. Students review claim payments for accuracy and examine the appeals process. Students review the Fair Debt Collection Act and apply the principles of the Act through the accounts receivable process. Prerequisite: Completion of HIT 1550.

**MEDC 1750 3 CREDITS****DISEASE PROCESSES FOR CODING**

This course is the study of common disease processes and the drugs used in their treatment. Students describe various conditions and diseases of the organ systems including etiology, signs and symptoms, and methods of diagnosis and treatment. Students identify disease entities and describe appropriate diagnostic and treatment modalities. Students examine the action of drugs, including the absorption, distribution, metabolism and excretion of drugs by the body. Prerequisite: Completion of HLTK 1200 and HLTK 1210.

**MEDC 1970 2 CREDITS****PROFESSIONAL PRACTICE EXPERIENCE (CODING)**

Students gain real world experience in a virtual health care setting coding authentic patient records from a variety of patient types and settings using the AHIMA Virtual Lab. Focus is placed on improving speed, accuracy and skill in medical coding. Prerequisite: Completion of MEDC 1500 and MEDC 1600. Corequisite: Concurrent enrollment in MEDC 1675.

**Microbiology****MICR 2240 4 CREDITS****MEDICAL MICROBIOLOGY**

In this course designed primarily for allied health and pre-pharmacy majors, students are introduced to microbiology by focusing on the interactions of microorganisms and humans. Students examine important features of microbial cell biology, genetics and the immune system to understand pathogenicity mechanisms of infectious agents, the action of antimicrobial therapies and the selection of antibiotic resistance. Students also discuss communicable diseases affecting public health and compare their transmission. The fundamentals learned in the microbiology lab are applied to safely control, isolate and identify microorganisms. Prerequisite: Successful completion of BIOL 1010, ZOO 2010 or ZOO 2015.

**Music****MUSC 0200 0 CREDITS****CONVOCATION**

This course serves as documentation of student attendance at LCCC Music Convocations. A student must be declared a music major and register for this course every semester they are enrolled at LCCC. Convocation will be held each week in the semester, and will include monthly performances and a sophomore recital. May be repeated up to 8 times. Corequisite: Concurrent enrollment in MUSC 1051, MUSC 1052, MUSC 2071 or MUSC 2072.

**MUSC 1000 3 CREDITS****INTRO TO MUSIC**

Students study the fundamentals of music through listening to and analyzing historical and popular music. Students will learn and apply principles of rhythm, melody, harmony, timbre, texture, and form in class discussions, homework, and in the creation of student compositions. This course is open to both music majors and non-music majors.

**MUSC 1004 0.5 CREDITS****CELTIC CHAMBER ENSEMBLE**

This course is open to all instrumentalists and vocalists. Although students primarily focus on the traditional music of Ireland, they also touch on the music of Celtic Europe and the Celtic diaspora, including Brittany, Galicia, Scotland, England, Canada and the United States. Students study the musical history of these regions, as well as the context, style, and ornamentation. Students learn music by ear and arrange and prepare material for a performance at the end of the course.

<b>MUSC 1010</b> <b>1 CREDIT</b> <b>MUSIC FUNDAMENTALS</b> In this course, students acquire the basic skills of reading and writing music, including standard music notation, all major and minor key signatures, and scales. Prior knowledge of music theory is not required. The course is open to non-music majors.	<b>MUSC 1040</b> <b>3 CREDITS</b> <b>WRITTEN THEORY II</b> The second semester of a four-semester series on the fundamentals of music and written harmony. Students demonstrate an understanding of the principles of late 18th-century harmonic progression, modulation, four-voice composition, Classical period harmony, and forms. Students apply appropriate principles of harmonization, melody, and form to basic musical composition and analyze these elements in musical exemplars. Prerequisite: Completion of MUSC 1030.	<b>MUSC 1290</b> <b>1 CREDIT</b> <b>ELEMENTARY CLASS PIANO I</b> The first semester of a four-semester sequence for the beginning piano student. Students develop skills in finger control, hand independence, and pedal technique. Students acquire and demonstrate skill in note reading, interpreting meter signatures and corresponding rhythms found in that meter, simple harmonization of melodies, and sight-reading. Instructor approval required.
<b>MUSC 1023</b> <b>3 CREDITS</b> <b>MUSIC AND SOUND TECHNOLOGY</b> Students gain a greater understanding of both sound and music/sound technology through direct observation, analysis, laboratory application, and lecture. Students are introduced to the principles of acoustics and learn how to use theoretical models when working with music technology. Students learn how to utilize sound reinforcement equipment to amplify live performances, record live sounds, and edit and mix recorded sounds with editing software. Students collaborate by helping each other find solutions for various set-up, amplification, recording, and editing challenges. Prerequisite: Completion of MATH 0970 or equivalent placement.	<b>MUSC 1045</b> <b>1 CREDIT</b> <b>AURAL THEORY II</b> The second semester of a four-semester series on the fundamentals of ear training, sight-singing, and dictation skills. Students demonstrate an understanding of notation, intervals, major and minor scales, key signatures, basic rhythm (including dotted rhythms and syncopation), and based melodic sequences (diatonic melodies including larger leaps). Students apply appropriate principles of transforming sound into notation through the writing of melodic, harmonic, and rhythmic examples from dictation, and the transformation of notation into sound with sight-singing with solfege. Prerequisite: Completion of MUSC 1035.	<b>MUSC 1295</b> <b>1 CREDIT</b> <b>ELEMENTARY CLASS PIANO II</b> The second semester of a four-semester sequence for the beginning piano student. Students continue to develop skills in finger control, hand independence, and pedal technique. Students continue to acquire and demonstrate skill in sight-reading, interpreting meter and rhythms, simple harmonization of melodies using basic chords and prescribed chord progressions, and all major scales. Prerequisite: Completion of MUSC 1290 or equivalent.
<b>MUSC 1025</b> <b>2 CREDITS</b> <b>INTRO TO MUSIC EDUCATION</b> Students study vocal and instrumental music education and teaching processes in grade levels K-12. Students apply knowledge of classroom management, philosophical approaches to music education, and the various developmental stages of students by designing, writing and implementing lesson plans for the music classroom. Observations and on-site visits of school music programs are required.	<b>MUSC 1051</b> <b>1 CREDIT</b> <b>APPLIED MUSIC INSTRUCTION I</b> Private music lessons in voice, piano, organ, guitar, woodwind, brass, percussion, and string instruments with an approved college instructor. The student pays an additional lesson fee. May be repeated for up to eight times for credit. Instructor approval required.	<b>MUSC 1310</b> <b>1 CREDIT</b> <b>PUBLIC SCHOOL METHODS: BRASS I</b> In this course designed for future music educators, students learn the fundamentals of brass instrument pedagogy and performance for group and individual instruction at the elementary and secondary levels. Students achieve basic playing proficiency on the trumpet and horn, carry out basic maintenance on brass instruments, and develop teaching strategies for brass players in one-on-one and ensemble teaching situations.
<b>MUSC 1030</b> <b>3 CREDITS</b> <b>WRITTEN THEORY I</b> First semester of a four-semester series on the fundamentals of music and written harmony. Students demonstrate an understanding of notation, intervals, major and minor scales, circle of fifths, key signatures, rhythm, major and minor triads in four-part harmony, and cadences. Students apply appropriate principles of harmonization, melody, voicing, and chord connection to part writing four voices and analyze these elements in musical exemplars.	<b>MUSC 1052</b> <b>1 CREDIT</b> <b>APPLIED MUSIC INSTRUCTION II</b> Private music lessons in voice, piano, organ, guitar, woodwind, brass, percussion, and string instruments with an approved college instructor. The student pays an additional lesson fee. May be repeated for up to eight times for credit. Prerequisite: Completion of or concurrent enrollment in MUSC 1051 on the same instrument.	<b>MUSC 1315</b> <b>1 CREDIT</b> <b>PUBLIC SCHOOL METHODS: BRASS II</b> In this course designed for future music educators, students learn the fundamentals of brass instrument pedagogy and performance for group and individual instruction at the elementary and secondary levels. Students achieve basic playing proficiency on the trombone, baritone/euphonium, and tuba, carry out basic maintenance on brass instruments, and develop teaching strategies for brass players in one-on-one and ensemble teaching situations.
<b>MUSC 1035</b> <b>1 CREDIT</b> <b>AURAL THEORY I</b> First semester of a four-semester series on the fundamentals of ear training, sight-singing, and dictation skills. Students demonstrate an understanding of notation, intervals, major and minor scales, key signatures, basic rhythm, and basic melodic sequences. Students apply appropriate principles of transforming sound into notation through the writing of melodic, harmonic, and rhythmic examples from dictation, and the transformation of notation into sound with sight-singing with solfege.	<b>MUSC 1150</b> <b>1 CREDIT</b> <b>GUITAR I</b> This course provides basic instruction in folk and classical techniques on the guitar. Students acquire skills in chord progressions, major scales, strum and pick patterns, note reading, and arpeggio picking. Different styles of music are introduced through class presentations and recordings. Students perform selections in class. Prior music knowledge is unnecessary; however, students must provide their own guitars. May be repeated for up to two times for credit.	<b>MUSC 1320</b> <b>1 CREDIT</b> <b>PUBLIC SCHOOL METHODS: PERCUSSION I</b> In this course designed for future music educators, students learn the fundamentals of percussion instrument pedagogy and performance for group and individual instruction at the elementary and secondary levels. Students achieve basic playing proficiency on the snare drum, marching percussion, and drum set and develop teaching strategies for percussion players in one-on-one and ensemble teaching situations.



**MUSC 1325** 1 CREDIT  
**PUBLIC SCHOOL METHODS: PERCUSSION II**  
 In this course designed for future music educators, students learn the fundamentals of percussion instrument pedagogy and performance for group and individual instruction at the elementary and secondary levels. Students achieve basic playing proficiency on the bass drum, auxiliary percussion, timpani, and keyboard instruments and develop teaching strategies for percussion players in one-on-one and ensemble teaching situations.

**MUSC 1330** 1 CREDIT  
**PUBLIC SCHOOL METHODS: STRINGS I**  
 In this course designed for future music educators, students learn the fundamentals of string instrument pedagogy and performance for group and individual instruction at the elementary and secondary levels. Students achieve basic playing proficiency on the violin and viola, carry out basic maintenance on string instruments, and develop teaching strategies for string players in one-on-one and ensemble teaching situations.

**MUSC 1335** 1 CREDIT  
**PUBLIC SCHOOL METHODS: STRINGS II**  
 In this course designed for future music educators, students learn the fundamentals of string instrument pedagogy and performance for group and individual instruction at the elementary and secondary levels. Students achieve basic playing proficiency on the cello and bass, carry out basic maintenance on string instruments, and develop teaching strategies for string players in one-on-one and ensemble teaching situations.

**MUSC 1340** 1 CREDIT  
**PUBLIC SCHOOL METHODS: VOICE I**  
 In this course designed for future music educators, students learn the fundamentals of vocal pedagogy and performance for group and individual instruction at the elementary and secondary levels. Students learn anatomy and physiology of the vocal mechanism, healthy vocal production, appropriate instructional techniques, classifications of the child and adolescent voices, choose age-appropriate and genre appropriate repertoire, and write and implement lesson plans in peer teaching situations.

**MUSC 1350** 1 CREDIT  
**PUBLIC SCHOOL METHODS: WOODWINDS I**  
 In this course designed for future music educators, students learn the fundamentals of woodwind instrument pedagogy and performance for group and individual instruction at the elementary and secondary levels. Students achieve basic playing proficiency on the flute and saxophone, carry out basic maintenance on woodwind instruments, and develop teaching strategies for woodwind players in one-on-one and ensemble teaching situations.

**MUSC 1355** 1 CREDIT  
**PUBLIC SCHOOL METHODS: WOODWINDS II**  
 In this course designed for future music educators, students learn the fundamentals of woodwind instrument pedagogy and performance for group and individual instruction at the elementary and secondary levels. Students achieve basic playing proficiency on the clarinet, oboe, and bassoon, carry out basic maintenance on woodwind instruments, and develop teaching strategies for woodwind players in one-on-one and ensemble teaching situations.

**MUSC 1360** 1 CREDIT  
**PUBLIC SCHOOL METHODS: GUITAR I**  
 In this course designed for future music educators, students learn the fundamentals of guitar pedagogy and performance for group and individual instruction at the elementary and secondary levels. Students achieve basic playing proficiency on the guitar, carry out basic maintenance on guitar, and develop teaching strategies for guitar players in one-on-one and ensemble teaching situations.

**MUSC 1380** 1 CREDIT  
**WIND ENSEMBLE**  
 In this course, students participate in group instruction and performance on various instruments in an ensemble setting. Students gain an appreciation of wind ensemble music through performing and listening to musical literature, focusing on original works for wind instruments from the 20th century. Some instruments are provided. May be repeated for up to eight times for credit. Prerequisite: Prior wind, brass, or percussion experience required.

**MUSC 1390** 1 CREDIT  
**JAZZ ENSEMBLE**  
 Students explore the jazz idiom, both through the big-band and combo experiences. Students practice the skills necessary to improvise and to become completely familiar with the jazz style as well as to listen knowledgeably to jazz music. May be repeated for up to eight times for credit. Jazz training helpful. Prerequisite: Previous instrumental training on saxophone, trumpet, trombone, piano, bass, guitar, or percussion. New students must have instructor approval.

**MUSC 1400** 1 CREDIT  
**COLLEGIATE CHORALE**  
 Students sing in a choral ensemble. The choir performs a wide variety of choral literature from all periods. Membership is open to anyone. Performances are required. May be repeated for up to eight times for credit.

**MUSC 1408** 0.5 CREDITS  
**MEN'S CHAMBER CHOIR**  
 Students in this ensemble sing four-part choral literature, chosen from all time periods, specifically written for male voices. Membership is open to LCCC students and men in the community. Performances are required. May be repeated for up to eight times for credit.

**MUSC 1410** 1 CREDIT  
**VOCAL ENSEMBLE (CANTOREI)**  
 Membership in this select chorus is by audition. Students are exposed to a variety of challenging and educational choral music. Students perform at a highly polished level, sing in at least two languages other than English, and sight sing a new work. This group may be involved in some limited touring within the state and region. May be repeated for up to eight times for credit. Corequisite: Concurrent enrollment in MUSC 1400.

**MUSC 1445** 1 CREDIT  
**GUITAR ENSEMBLE**  
 In this course, students participate in group instruction and performance on similar instruments in an ensemble setting. Students gain an appreciation of instrumental ensemble music through performing and listening to musical literature, focusing on original works and arrangements for guitar from various stylistic periods in music history. Some instruments are provided. May be repeated for up to eight times for credit. Prerequisite: Prior performance experience on guitar.

**MUSC 1450** 0.5 CREDITS  
**PERCUSSION ENSEMBLE**  
 In this course students participate in group instruction and performance on various instruments in an ensemble setting. Students gain an appreciation of small instrumental chamber ensemble music through performing and listening to musical literature, and focusing on original works for percussion instruments from various stylistic periods in music history. Some instruments are provided. May be repeated for up to eight times for credit. Prior performance experience on a percussion instrument is preferred. Prerequisite: Instructor approval required.

**MUSC 1460** 0.5 CREDITS  
**BRASS ENSEMBLE**  
 Students gain an appreciation of small instrumental chamber ensemble music through performing and listening. This course combines group instruction and performance on similar instruments in an ensemble setting. The music literature focuses on original works for brass instruments from various stylistic periods in music history. May be repeated for up to eight times for credit. Prerequisite: Prior performance experience on a brass instrument and instructor approval.

**MUSC 1470** 0.5 CREDITS  
**WOODWIND CHAMBER ENSEMBLE**  
 Students gain an appreciation of small instrumental chamber ensemble music through performing and listening. This course combines group instruction and performance on similar instruments in an ensemble setting. The musical literature focuses on original works for woodwind instruments from various stylistic periods in music history. May be repeated for up to eight times for credit. Prerequisite: Prior performance experience on a woodwind instrument and instructor approval.

<b>MUSC 1480</b> <b>STRING ENSEMBLE</b> Students gain an appreciation for small instrumental chamber ensemble music through performing and listening. This course combines group instruction and performance on similar instruments in an ensemble setting. The musical literature focuses on original works for string instruments from various stylistic periods in music history. May be repeated for up to eight times for credit. Prerequisite: Prior performance experience on a brass instrument and instructor approval.	<b>1 CREDIT</b>
<b>MUSC 2000</b> <b>INTRODUCTION TO CONDUCTING</b> Students study the basic fundamentals of conducting musical ensembles. Students develop techniques necessary for interpreting music with physical gestures, score reading, and running effective musical rehearsals. Students gain conducting experience by directing ensembles within the class as well as opportunities to direct various LCCC ensembles in actual rehearsal situations. This course is open to both music majors and non-music majors. Prerequisite: Completion of MUSC 1030.	<b>3 CREDITS</b>
<b>MUSC 2024</b> <b>WORLD MUSIC</b> Students develop strategies for listening to and analyzing the sounds of various music in relation to external, structural, and social elements influencing human cultures. Music and cultures to be analyzed and studied include, but are not limited to: Africa, Asia, Indonesia, India, and Eastern Europe. Students analyze the context of musical expressions around the world and interpret the meaning of music through diverse social networks (i.e. race, ethnicity, socioeconomic identity, religion, politics, etc.).	<b>3 CREDITS</b>
<b>MUSC 2030</b> <b>WRITTEN THEORY III</b> The third semester of a four-semester series on the fundamental of music and written harmony. Students demonstrate an understanding of the principles of late 18th-century harmony and forms and early 19th-century harmony and forms, such as altered chords, higher numbered chords, secondary dominants, and compositions in these styles. Students apply appropriate principles of harmonization, melody, and form to basic musical composition and analyze these elements in musical exemplars. Prerequisite: Completion of MUSC 1040.	<b>3 CREDITS</b>
<b>MUSC 2035</b> <b>AURAL THEORY III</b> The third semester of a four-semester series on the fundamentals of ear training, sight-singing, and dictation skills. Students demonstrate an understanding of notation, intervals, major and minor scales, key signatures, rhythm (including triplets and syncopation), and melodic sequences (including chromaticism). Students study and notate harmonic structures including all diatonic triads, dominant, and leading-tone seventh chords. Students apply appropriate principles of transforming sound into notation through the writing of melodic, harmonic, and rhythmic examples from dictation, and the transformation of notation into sound with sight-singing with solfege. Prerequisite: Completion of MUSC 1045.	<b>1 CREDIT</b>
<b>MUSC 2040</b> <b>WRITTEN THEORY IV</b> The final semester of a four-semester series on the fundamentals of music and written harmony. Students demonstrate an understanding of the principles of late 19th-century impressionism, the music of the 20th century, such as modes, pantriadic technique, quartal harmony, 20th-century rhythm, polychords, pandiatonicism, serial, and 12-tone technique. Students apply appropriate principles of harmonization, melody, and form to basic musical composition and analyze these elements in musical exemplars. Prerequisite: Completion of MUSC 2030.	<b>3 CREDITS</b>
<b>MUSC 2045</b> <b>AURAL THEORY IV</b> The fourth semester of a four-semester series on the fundamentals of ear training, sight-singing, and dictation skills. Students demonstrate an understanding of notation, intervals, major and minor scales, key signatures, rhythm (including triplets, syncopation, and complex meter), and melodic sequences (including chromaticism and 20th-century harmonies). Students study and notate harmonic sequences including diatonic, chromatic, secondary dominants, modulation, and 20th century harmonic language. Students apply appropriate principles of transforming sound into notation through the writing of melodic, harmonic, and rhythmic examples from dictation, and the transformation of notation into sound with sight-singing with solfege. Prerequisite: Completion of MUSC 2035.	<b>1 CREDIT</b>
<b>MUSC 2050</b> <b>MUSIC HISTORY SURVEY I</b> The first in a series of two courses on the history and literature of music from the Middle Ages to the present. Students develop strategies for listening to the sounds of music in Western culture. Students identify the instruments, aesthetic structures, major composers, and typical styles of musical works from the Middle Ages through 18th-century Classicism. Including critical comparison with non-Western and contemporary popular forms of music, students analyze the context, meaning, and historical impact of music in Western society.	<b>3 CREDITS</b>
<b>MUSC 2055</b> <b>MUSIC HISTORY SURVEY II</b> The second in a series of two courses on the history and literature of music from the Middle Ages to the present. Student develop strategies for listening to the sounds of music in Western culture. Students identify the instruments, aesthetic structures, major composers and typical styles of musical works from the Romantic era through the present. Including critical comparison with non-Western and contemporary popular forms of music, students analyze the context, meaning, and historical impact of music in Western society.	<b>3 CREDITS</b>
<b>MUSC 2060</b> <b>JAZZ IMPROVISATION I</b> This course provides students with the materials, techniques, and concepts needed for developing basic jazz improvisation skills. Students acquire and apply knowledge about scales, chord structure, common chord progressions, and developing improvisational ideas. Prerequisite: Ability to perform on a musical instrument or voice, including (but not limited to) piano, guitar, bass, trumpet, trombone, and saxophone.	<b>1 CREDIT</b>
<b>MUSC 2065</b> <b>JAZZ IMPROVISATION II</b> This course provides students with the materials, techniques, and concepts needed for developing intermediate and advanced jazz improvisation skills. Students acquire and apply knowledge about scales, chord structure, common chord progressions, and developing improvisational ideas. Prerequisite: Completion of MUSC 2060.	<b>1 CREDIT</b>
<b>MUSC 2071</b> <b>APPLIED MUSIC INSTRUCTION III</b> Private music lessons in voice, piano, organ, guitar, woodwind, brass, percussion, and string instruments with an approved college instructor. The student pays an additional lesson fee. May be repeated for up to eight times for credit. Prerequisite: Completion of MUSC 1052 on the same instrument.	<b>1 CREDIT</b>
<b>MUSC 2072</b> <b>APPLIED MUSIC INSTRUCTION IV</b> Private music lessons in voice, piano, organ, guitar, woodwind, brass, percussion, and string instruments with an approved college instructor. The student pays an additional lesson fee. May be repeated for up to eight times for credit. Prerequisite: Completion of or concurrent enrollment in MUSC 2071.	<b>1 CREDIT</b>
<b>MUSC 2150</b> <b>GUITAR II</b> Students build on fundamentals and review bar chords, major and minor scales, two- and three-part harmony and various arpeggio picking patterns. Melodic development and solo playing will be included. May be repeated for up to two times for credit. Prerequisite: Completion of MUSC 1150.	<b>1 CREDIT</b>
<b>MUSC 2290</b> <b>ELEMENTARY CLASS PIANO III</b> The third semester of a four-semester sequence for the beginning piano student. Students continue to develop skills in finger control, hand independence, and pedal technique. Students continue to acquire and demonstrate skill in sight-reading (homophonic pieces, score part-reading, and hymnal reading), harmonization of melodies using all diatonic chords or prescribed chord progressions, and all harmonic minor scales. Students also demonstrate skills in transposition, basic accompanying techniques, and singing and playing together. Prerequisite: Completion of MUSC 1295 or successful completion of the final exam requirements for MUSC 1295.	<b>1 CREDIT</b>

**MUSC 2295 1 CREDIT****ELEMENTARY CLASS PIANO IV**

The fourth semester of a four-semester sequence for the piano student. Students continue to develop skills in finger control, hand independence, and pedal technique. Students continue to acquire and demonstrate skill in sight-reading (homophonic pieces, score part-reading, and hymnal reading), harmonization of melodies using all diatonic chords or prescribed chord progressions, and all major and harmonic minor scales. Students will also demonstrate skills in transposition, basic accompanying techniques, and singing and playing together. All skills will help students prepare for the piano proficiency exam. Prerequisite: Completion of MUSC 2290 or successful completion of the final exam requirements for MUSC 2290.

**MUSC 2320 2 CREDITS****DICTION FOR SINGERS I**

This class teaches the appropriate pronunciation of Italian and German languages for singing purposes. Students study phonetics, the science of speech sounds. Students will learn to apply the appropriate pronunciation of the languages throughout the use of the International Phonetic Alphabet (IPA).

**MUSC 2325 2 CREDITS****DICTION FOR SINGERS II**

Students study phonetics, the science of speech sounds. This class teaches the appropriate pronunciation of English and French languages for singing purposes. Students learn to apply the appropriate pronunciation of the languages throughout the use of the International Phonetic Alphabet (IPA). Prerequisite: Completion of MUSC 2320.

**MUSC 2395 0 CREDITS****PIANO PROFICIENCY**

Students demonstrate piano proficiency through this course which serves as a final comprehensive exam in piano techniques. The exam focuses on scales, harmonization, sight-reading, transposition, folksong harmonization, accompaniment, prepared patriotic songs, and the correct use of the pedal.

## **Nursing**

**NURS 1100 5 CREDITS****PROFESSIONAL NURSING CARE****IN HEALTH PROMOTION**

Students are introduced to the concepts of health promotion, safety, clinical judgment, leadership, patient centeredness, and professionalism. Health promotion includes learning about self-health and health in children, adults, older adults, and the family experiencing a normal pregnancy. Students will value evidence about healthy lifestyle patterns and risk factors for disease and illness, apply growth, and development theory, develop therapeutic relationships, conduct an age appropriate and culturally sensitive health assessment, and promote health using the nursing process and standards of professional nursing. Prerequisite: Acceptance to the Nursing Program. Corequisite: Concurrent enrollment in NURS 1115.

**NURS 1115 5 CREDITS****PROFESSIONAL NURSING CARE IN HEALTH PROMOTION: CLINICAL ONE**

In the clinical setting, students are introduced to the concepts of health promotion, safety, clinical judgment, leadership, patient-centeredness, and professionalism. Health promotion includes learning about self-health and health in children, adults, older adults, and the family experiencing a normal pregnancy. Students will value evidence about healthy lifestyle patterns and risk factors for disease and illness, apply growth and development theory, develop therapeutic relationships, conduct an age-appropriate and culturally sensitive health assessment, and promote health using the nursing process and standards of professional nursing. Prerequisite: Acceptance to the Nursing Program—Instructor consent required. Corequisite: Concurrent enrollment in NURS 1100.

**NURS 1200 5 CREDITS****PROFESSIONAL NURSING CARE OF THE PATIENT WITH CHRONIC ILLNESS**

This course introduces students to the patient and family with chronic illness using the concepts of health promotion, safety, clinical judgment, leadership, patient-centeredness, and professionalism. Students use caring behaviors, therapeutic communication, and advocacy when providing care to patients with chronic illness across the lifespan. Students identify the roles and values of the members of the interprofessional health care team. The patient and family lived experience is emphasized. Prerequisite: Completion of NURS 1100 and NURS 1115. Corequisite: Concurrent enrollment in NURS 1215.

**NURS 1215 5 CREDITS****PROFESSIONAL NURSING CARE OF THE PATIENT WITH CHRONIC ILLNESS: CLINICAL TWO**

In the clinical setting, students are introduced to the clinical care of a patient and family with chronic illness using the concepts of health promotion, safety, clinical judgment, leadership, patient-centeredness, and professionalism. Students use caring behaviors, therapeutic communication, and advocacy when providing care to patients with chronic illness across the lifespan. Students identify the roles and values of the members of the interprofessional healthcare team. The patient and family lived experience is emphasized. Prerequisite: Completion of NURS 1100 and NURS 1115. Corequisite: Concurrent enrollment in NURS 1200.

**NURS 1980 2 CREDITS****PRACTICAL NURSING ROLE EXPLORATION**

Students participate in activities designed to facilitate the transition to practical nursing. Students utilize the following nursing core components: professional behaviors, communication, assessment, clinical decision making, caring interventions, teaching and learning, collaboration and managing care in applying theory to practice in the role of the practical nurse. Prerequisite: Completion of NURS 1200 and NURS 1215.

**NURS 2300 5 CREDITS****PROFESSIONAL NURSING CARE OF THE PATIENT WITH ACUTE ILLNESS**

Students will be introduced to the patient and family with acute illness using the concepts of health promotion, safety, clinical judgment, leadership, patient centeredness, and professionalism. Students use caring behaviors, therapeutic communication and advocacy when providing care to patients with acute illness across the lifespan. The students facilitate the effectiveness of the interprofessional healthcare team. The patient and family lived experience is emphasized. Prerequisite: Completion of NURS 1200 and NURS 1215. Corequisite: Concurrent enrollment in NURS 2315.

**NURS 2315 5 CREDITS****PROFESSIONAL NURSING CARE OF THE PATIENT WITH ACUTE ILLNESS: CLINICAL THREE**

In the clinical setting, students will be providing care for the patient and family with acute illness using the concepts of health promotion, safety, clinical judgment, leadership, patient centeredness, and professionalism. Students use caring behaviors, therapeutic communication, and advocacy when providing care to patients with chronic illness across the lifespan. The students facilitate the effectiveness of the interprofessional healthcare team. The patient and family lived experience is emphasized. Prerequisite: Completion of NURS 1200, and NURS 1215. Corequisite: Concurrent enrollment in NURS 2300.

**NURS 2400 5 CREDITS****PROFESSIONAL NURSING CARE OF THE PATIENT WITH COMPLEX ILLNESS**

Students are introduced to the patient and family with complex illness using the concepts of health promotion, safety, clinical judgment, leadership, patient centeredness and professionalism. This course is focused on the vulnerable patient which could include multisystem acute and chronic disease processes and physiological, mental and socioeconomic factors that put the patient at risk. The patient and family lived experience is emphasized. Prerequisite: Completion of NURS 2300 and NURS 2315. Corequisite: Concurrent enrollment in NURS 2415.

**NURS 2415 5 CREDITS****PROFESSIONAL NURSING CARE OF THE PATIENT WITH COMPLEX ILLNESS: CLINICAL FOUR**

In the clinical setting, students are introduced to providing care for the patient and family with complex illness using the concepts of health promotion, safety, clinical judgment, leadership, patient centeredness and professionalism. This course is focused on the vulnerable patient which could include multisystem acute and chronic disease processes and physiological, mental and socioeconomic factors that put the patient at risk. The patient and family lived experience is emphasized. Prerequisite: Completion of NURS 2300 and NURS 2315. Corequisite: Concurrent enrollment in NURS 2400.



## **Paralegal**

### **LEGL 1500 3 CREDITS** **INTRO TO PARALEGAL STUDIES**

Introduction to Paralegal Studies is an introductory study of the American legal system with emphasis on the nature of legal processes and institutions. Students examine the American and Wyoming judicial systems, legal reasoning, ethical standards, and those procedural and substantive aspects of the law pertinent to the paralegal. Paralegal Studies majors are strongly encouraged to have completed or be currently enrolled in ENGL 1010. Prerequisite: Completion of MATH 0965 and ENGL 0810 or equivalent placement.

### **LEGL 1710 3 CREDITS** **LEGAL RESEARCH AND WRITING I**

Students explore legal research techniques and methods used in the practice of law, including electronic legal research. The course is designed to develop skills in legal reasoning, identifying and effectively using legal resources, and writing basic legal memoranda. Prerequisite: Completion of or concurrent enrollment in LEGL 1500 or instructor approval.

### **LEGL 1720 3 CREDITS** **LEGAL RESEARCH AND WRITING II**

A continuation of LEGL 1710 with emphasis on the advanced application of legal research principles. Topics covered include the preparation of various documents and memoranda and the application of a variety of research skills and sources. Prerequisite: Completion of LEGL 1500 and LEGL 1710 or equivalent or permission of legal assistant advisor.

### **LEGL 1800 3 CREDITS** **LAW OFFICE MANAGEMENT**

Students acquire skills in managing a law office by developing an understanding of the basic administration, management, and technological aspects of today's firm. Students develop an understanding of law office structures, time and record-keeping systems, and general office procedures. Students will be exposed to ethical considerations faced by non-lawyer professionals as well as to professional development for the non-lawyer. Prerequisite: Completion of LEGL 1500.

### **LEGL 2500 3 CREDITS** **CIVIL PROCEDURE AND LITIGATION**

A continuation of LEGL 2550. A study of the litigation process, including the Federal and Wyoming Rules of Civil Procedure. Students acquire skills in performing the functions and duties of a legal assistant in the litigation process, including the drafting of documents, such as pleadings, motions, discovery documents, and trial notebooks. Prerequisites: Completion of LEGL 1500 and LEGL 1710, or permission of instructor.

### **LEGL 2550 3 CREDITS** **EVIDENCE AND INVESTIGATION**

Students demonstrate skills in interviewing clients and witnesses and locating information necessary when preparing a case for trial. Students apply the basic state and federal rules governing the admissibility of evidence and acquire skills in preparing and handling evidence for courtroom use. Students prepare a variety of pre-trial documents. Paralegal majors must take this course prior to enrolling in LEGL 2500. Because LEGL 2500 is a continuation of this course, students are strongly encouraged to take these courses in consecutive semesters. Prerequisite: Completion of LEGL 1500. Corequisite: LEGL 1710, ENGL 1010, or permission of instructor.

### **LEGL 2560 3 CREDITS** **PROBATE PRACTICES AND PROCEDURES**

Students explore probate and nonprobate assets; with the formation, modification, revocation, execution, and validity of wills; with the laws of intestacy; with the administration and closing of estates. Students examine various forms, procedures, and tax consequences involved in probating an estate. Prerequisite: Completion of or concurrent enrollment in LEGL 1500 or instructor approval.

### **LEGL 2570 3 CREDITS** **TORTS**

A study of the principles behind personal injury settlements and litigation, with an emphasis on Wyoming law. Topics include intentional torts, negligence, and strict liability. Prerequisite: Completion of LEGL 1500 or permission of instructor.

### **LEGL 2610 3 CREDITS** **FAMILY LAW**

Students develop an awareness of the paralegal's role in the practice of family law. Students demonstrate an ability to produce documents concerning the formation and dissolution of marriage, property rights of married and unmarried couples, and parent-child relationships (including adoption, custody, and support). Students demonstrate knowledge of the tax consequences, basic legal procedures, and ethical practices involved in the practice of family law. Prerequisite: Completion of or concurrent enrollment in LEGL 1500 or instructor approval.

### **LEGL 2630 3 CREDITS** **REAL ESTATE AND PROPERTY LAW**

A study of the law of real property and a survey of the more common types of real estate transactions. Students demonstrate the ability to prepare instruments necessary to complete various real estate transactions. Prerequisite: Completion of LEGL 1500 or permission of instructor.

### **LEGL 2650 3 CREDITS** **CRIMINAL LAW AND PROCEDURE**

Students demonstrate knowledge of statutory and common law crimes, including criminal law theory and the construction and interpretation of criminal law statutes. Students draft motions, prepare orders, and learn to interview criminal clients and to provide other office support necessary in criminal law practice. Prerequisite: Completion of LEGL 1500 or permission of instructor.

### **LEGL 2670 3 CREDITS** **CONSTITUTIONAL LAW**

Students study the basic principles and applications of constitutional law in an historical context. Each section of the course material will focus on four key concepts: limited government, the protection of private property, the promotion of commerce, and individual rights, with an emphasis on individual rights and due process. Students explore the impact of state and federal constitutional requirements on the development of the American legal system and the process by which United States Supreme Court accepts and decides cases. Prerequisite: Completion of LEGL 1500 or permission of the instructor. Successful completion of ENGL 1010 is highly recommended.

### **LEGL 2680 3 CREDITS** **ADMINISTRATIVE LAW**

Students develop an understanding of the principles of administrative law, administrative remedies, and administrative hearing procedures in various state and federal governmental agencies. Topics include social security, EEOC, workers' compensation, as well as other areas of administrative law. The course focuses on several practical problems in areas where paralegals frequently are employed. Prerequisite: Completion of or concurrent enrollment in LEGL 1500 or instructor approval.

### **LEGL 2830 3 CREDITS** **COMPUTER APPLICATIONS IN THE LAW**

Students demonstrate an awareness of available materials and demonstrate skills required in working with an automated law practice. Projects in this introductory course include, but are not limited to, the areas of timekeeping and billing, substantive systems, word processing, document composition, litigation control, and legal research. Students also develop skills with WordPerfect software and a variety of spreadsheets. Prerequisites: Completion of LEGL 1500, LEGL 1710, CMAP 1200 or equivalent or permission of instructor.

### **LEGL 2990 3-5 CREDITS** **PARALEGAL INTERNSHIP**

Students demonstrate the ability to apply theoretical knowledge gained in the classroom by interning in a private office, governmental agency, court, or private business which utilizes attorneys. Students participate in any required seminars and produce documents describing and evaluating the internship experience. Prerequisites: Completion of LEGL 1500, LEGL 1710, LEGL 1720, LEGL 2500, and LEGL 2550, and permission of instructor. (S/U grade only.)

## **Philosophy**

### **PHIL 1000 3 CREDITS**

#### **INTRODUCTION TO PHILOSOPHY**

Students explore the fundamental academic disciplines in philosophy and their respective issues and theories including world views, metaphysics, epistemology, logic, ethics, and theology. Prerequisites: Completion of ENGL 0810 or equivalent placement.

### **PHIL 2221 3 CREDITS**

#### **LOGIC**

Students explore the fundamental critical reasoning skills to be developed and practiced in any field of study. Students acquire knowledge of induction, deduction, and informal fallacies as they occur in everyday rhetoric. Prerequisite: Completion of ENGL 0810 or equivalent placement.

### **PHIL 2301 3 CREDITS**

#### **ETHICS**

Students explore major ethical theories and contemporary moral issues as well as gain an understanding of the importance of critical reasoning in analyzing moral situations and forming ethical judgments. Prerequisite: Completion of ENGL 0810 or equivalent placement.

### **PHIL 2311 3 CREDITS**

#### **INTRODUCTION TO RELIGION**

Students explore the basic components of religion and survey the major religions of the world: Judaism, Christianity, Islam, Hinduism, Buddhism, Taoism, Confucianism, and Shinto. Students gain an understanding of the theoretical, practical, and sociological aspects of each religion. Prerequisite: Completion of ENGL 0810 or equivalent placement.

## **Physical and Health Education—PE Activities**

### **PEAC 1011 1 CREDIT**

#### **AQUATIC CONDITIONING**

Students acquire knowledge of fitness components—cardiovascular endurance, flexibility, muscular strength and endurance—and how these components are achieved using water to provide resistance. Students of all swimming abilities are encouraged to take this course.

### **PEAC 1012 1 CREDIT**

#### **BEGINNING SWIMMING**

Students demonstrate basic swimming components—water safety, breathing, kicking, and basic strokes of freestyle, backstroke, and breaststroke.

### **PEAC 1016 1 CREDIT**

#### **SWIMNASTICS**

Students acquire knowledge using water workouts to increase and maintain range of motion, flexibility, and strength. Students will, based on their comfort level, perform workouts in both the shallow and deep end of the pool.

### **PEAC 1026 1 CREDIT**

#### **ZUMBA FITNESS**

Students demonstrate the basic steps involved for different types of dance such as Reggaeton, Cumbia, Salsa, and Merengue. Through the use of dance, students improve their cardiovascular endurance, coordination, muscle tone and flexibility.

### **PEAC 1031 1 CREDIT**

#### **WESTERN AND SOCIAL DANCE**

This course provides instruction in dance steps which relate to contemporary western and social dance. Students apply elementary principles and techniques in western and social dance and develop the ability to perform basic movement patterns and analyze music as it relates to western and social dance.

### **PEAC 1046 1 CREDIT**

#### **INTRODUCTION TO PILATES**

Students demonstrate the principles of Pilates, which are concentration, control, center breath, fluidity, and precision. Students develop functional fitness, which allows students to more efficiently participate in daily lifetime activities.

### **PEAC 1047 1 CREDIT**

#### **INTRODUCTION TO SPINNING**

Spinning is a comprehensive indoor cycling class. Students demonstrate proper basic riding form and techniques as well as knowledge of nutrition and muscle mechanics. In addition, students develop cycling skills and improve muscle tone, cardiovascular conditioning, and strength through a series of performance drills.

### **PEAC 1245 1 CREDIT**

#### **BEGINNING FENCING**

Students apply knowledge of the rules, terminology and skills for the sport of Fencing, particularly the foil. After completing the course, the students will have learned the fundamental skills to continue with Fencing as a lifetime activity or as a competitive sport.

### **PEAC 1294 1 CREDIT**

#### **HATHA YOGA**

Students explore the benefits of combining physical activity (beneficial movements and postures) with mental discipline (body awareness and regulated breathing). Students achieve, according to their abilities and commitment, greater flexibility, strength, better balance, deeper relaxation, regulated breathing, and heightened body awareness.

### **PEAC 1295 1 CREDIT**

#### **INDIVIDUALIZED EXERCISE PROGRAMS**

Students examine their current level of fitness and investigate the relationships between wellness and an active lifestyle and its impact on their overall health. Students develop, implement, and modify a program geared to their specific fitness and wellness needs.

### **PEAC 1298 1 CREDIT**

#### **SNOWSHOEING**

Students demonstrate selection of proper clothing, footwear, and snowshoe equipment. Students demonstrate safety considerations associated with snowshoeing and practice minimum impact principles as well as prevention and treatment of cold weather related injuries such as frostbite, hypothermia and dehydration. Additionally, students are introduced to map reading as well as land navigation.

### **PEAC 1990 1 CREDIT**

#### **ATHLETIC CONDITIONING I**

Students engage in sport specific conditioning that may include weight lifting, plyometrics, sprints, interval workouts, cross-training, or other sport based workouts. Students acquire skills and drills specific to a sport. Instructor approval required.

### **PEAC 2011 1 CREDIT**

#### **INTERMEDIATE SWIMMING**

Students demonstrate advanced skills with four swim strokes—front crawl, backstroke, breaststroke, and butterfly—and improve their skills with treading water, swimming underwater, turns and dives. Students recognize the cardiovascular benefits of swimming. Prerequisite: Completion of PEAC 1012 or instructor approval.

### **PEAC 2072 1 CREDIT**

#### **VARSITY VOLLEYBALL I**

Students enhance knowledge of the sport of volleyball. Students learn offensive and defensive systems, rules, scoring, and other team related concepts. Prerequisite: Instructor consent required.

### **PEAC 2161 1 CREDIT**

#### **VARSITY SOCCER I**

Students enhance knowledge of the sport of soccer. Students learn offensive and defensive systems, rules, scoring, and other team related concepts. Prerequisite: Instructor consent required.

### **PEAC 2163 1 CREDIT**

#### **VARSITY BASKETBALL I**

Students enhance knowledge of the sport of basketball. Students learn offensive and defensive systems, rules, scoring, and other team related concepts. Prerequisite: Instructor consent required.

### **PEAC 2172 1 CREDIT**

#### **VARSITY VOLLEYBALL II**

This is a continuation of Varsity Volleyball I. Students examine strength training principles specific to the sport of volleyball. Students develop individual skills unique to the sport of volleyball. Prerequisite: Instructor consent required.

### **PEAC 2262 1 CREDIT**

#### **VARSITY SOCCER II**

This is a continuation of Varsity Soccer I. Students examine strength training principles specific to the sport of soccer. Students develop individual skills unique to the sport of soccer. Prerequisite: Instructor consent required.

**PEAC 2263** **1 CREDIT**  
**VARSITY BASKETBALL II**  
 This is a continuation of Varsity Basketball I. Students examine strength training principles specific to the sport of basketball. Students develop individual skills unique to the sport of basketball. Prerequisite: Instructor consent required.

**PEAC 2363** **1 CREDIT**  
**VARSITY BASKETBALL III**  
 This is a continuation of Varsity Basketball I and II. Students develop advanced team concepts as well as physical conditioning specific to basketball. Prerequisite: Instructor consent required.

**PEAC 2464** **1 CREDIT**  
**VARSITY BASKETBALL IV**  
 This is the fourth and final class in the varsity basketball sequence. Students focus on strength and cardiovascular conditioning specific to basketball. Students analyze areas of personal strengths and weaknesses. Prerequisite: Instructor approval.

## Physical and Health Education—Professional PE

**PEPR 1470** **1 CREDIT**  
**PETE PRACTICUM I**  
 Students work in conjunction with Exercise Science instructors to provide physical education activities to students from 6-17 years of age in a variety of settings. In this level 1 practicum, students assist in various ways within the Physical Education setting. Students also observe physical education teachers in action at public and private schools in the community. This is the first of a three practicum sequence. Instructor consent required.

**PEPR 2050** **2 CREDITS**  
**PREVENTION AND CARE OF ATHLETIC INJURIES**  
 Students recognize how to prevent and treat specific sport injuries resulting from activities in the home, recreational, intramural, and sport settings. Students identify preventative measures and proper treatment for specific sport injuries. Students demonstrate proper taping and wrapping techniques.

**PEPR 2100** **3 CREDITS**  
**THEORY OF COACHING**  
 Students develop sport specific principles of coaching. Students examine multiple aspects of coaching from the fields of sport psychology, sport pedagogy, sport physiology, sport medicine, and sport management. Students discuss coaching issues and principles of developing and maintaining a sport program with primary focus on the secondary level. Students examine leadership approaches, organization and practice techniques utilized in coaching as well as conditioning for injury prevention. Students also explore the challenges and expectations of the coach in the community.

**PEPR 2110** **3 CREDITS**  
**SCIENTIFIC FOUNDATIONS ATHLETIC COACHING**  
 This introductory course is designed to provide a basic understanding of the foundation of coaching. Students explore the scientific basis for coaching sports and the process of developing competent student-athletes. Students develop an individual coaching philosophy. Students apply scientific training in the psychological, physiological, pedagogical, and managerial basis of sport coaching to demonstrate understanding of the "Athletes First, Winning Second" philosophy.

**PEPR 2470** **1 CREDIT**  
**PETE PRACTICUM II**  
 Students work with Exercise Science instructors to provide physical education activities to students from 6-17 years of age in a variety of settings. In this level 2 practicum, students, with the guidance of Exercise Science faculty, plan and are lead instructor for several lessons within the Physical Education setting. This is the second of a three practicum sequence. Prerequisite: Completion of PEPR 1470.

**PEPR 2475** **1 CREDIT**  
**PETE PRACTICUM III**  
 Students work with Exercise Science instructors to provide physical education activities to students from 6-17 years of age in a variety of settings. In this level 3 practicum under the guidance of Exercise Science faculty, students plan and lead the instruction for two units of study within a Physical Education setting. For successful completion of the course, students must complete the course with a C or higher. Prerequisite: Completion of PEPR 2470.

## Physical Therapist Assistant

**PTAT 1600** **3 CREDITS**  
**INTRODUCTION TO PHYSICAL THERAPIST ASSISTANT**  
 Students examine the field of Physical Therapy (PT) from the development of the profession to current clinical practices. Students discuss the role of the PTA, ethical and legal issues that guide practice, psychosocial aspects of healthcare, specialty areas of PT practice, components of the plan of care, and patient care essentials. Students practice oral and written communication skills including essential documentation skills. Prerequisite: Admission into the Physical Therapist Assistant program.

**PTAT 1650** **4 CREDITS**  
**THERAPEUTIC PROCEDURES I**  
 Students develop knowledge and skills essential to the practice of physical therapy including assessment and utilization of assistive devices, body mechanics, functional training, mobility, pain, positioning and transfer techniques, vital signs, wheelchairs, and other therapeutic procedures. Students practice techniques including edema management, compression wrapping, infection control procedures, massage techniques and taping techniques. Prerequisite: Completion of PTAT 2030.

**PTAT 1660** **3 CREDITS**  
**THERAPEUTIC PROCEDURES II**  
 Students examine the principles and practices of physical therapy including assessment and measurement of pain and inflammation as it relates to the use of modalities. The students also assess and apply a variety of modalities including: thermal agents, cryotherapy, ultrasound, infrared, electrical stimulation (TENS, FES, IFC, EMG, and Biofeedback), diathermy, mechanical traction, manual traction, iontophoresis, and phonophoresis. Prerequisite: Completion of PTAT 1720.

**PTAT 1720** **4 CREDITS**  
**THERAPEUTIC EXERCISE**  
 Students explore the theory, principles, and implementation of therapeutic exercise programs for a variety of patient populations. In addition, they apply specific strategies for stretching (sustained hold, contract/relax, strain/counterstrain), strengthening (isometrics, isotonic, open/closed chain, resistive exercises, weight training, aquatics), and balance and coordination activities. Students also examine theories of motor control and motor learning, and implement these theories into clinical practice. Lab activities will involve therapeutic exercise programs set up, joint mobilizations, and Proprioceptive Neuromuscular Facilitation (PNF) techniques and implementation in the clinical setting. Prerequisite: Completion of PTAT 2030.

**PTAT 1740** **2 CREDITS**  
**CARDIAC REHABILITATION**  
 Students explore an in-depth description of cardiopulmonary rehabilitation and develop skills to implement cardiac protocols, assess and monitor common cardiopulmonary conditions, identify cardiac precautions for a variety of patient populations, and perform postural drainage techniques. Students design fitness and wellness programs for healthy and diseased individuals. Prerequisite: Completion of PTAT 2030.

**PTAT 1800** **3 CREDITS**  
**NEUROLOGY**  
 Students examine multiple pathologies of the nervous system including stroke, demyelinating diseases, spinal cord injury, Parkinson's Disease, cerebral palsy, and traumatic brain injuries (TBI). In addition, students contrast normal structures and function of the nervous system, including motor control centers of the brain and spinal tracts, to a nervous system with specific impairments. Students develop skills to assess, treat, and manage the neurologically impaired patient based on clinical signs and symptoms of neurological disorders. Prerequisite: Completion of PTAT 2970.

**PTAT 1820** **4 CREDITS**  
**ORTHOPEDICS**  
 Students identify and assess common orthopedic conditions and analyze findings to implement intervention strategies and develop comprehensive treatment plans under the direction and supervision of a physical therapist. Students participate in case studies common to orthopedic conditions including amputations. Students learn to progress physical therapy plans of care for a variety of orthopedic and postsurgical conditions. Prerequisite: Completion of PTAT 1720.



**PTAT 1840 1 CREDIT****SPECIALTY REHABILITATION**

Students explore an in-depth overview of specialty areas of physical therapy practice including burns, chronic pain, geriatrics, lymphedema, pediatrics, vestibular rehabilitation, women's health, and wound care. Students utilize assessment tools specific to these areas of specialty to develop intervention strategies for improvements in function and to minimize disability. Prerequisite: Completion of PTAT 2970.

**PTAT 2030 4 CREDITS****FUNCTIONAL KINESIOLOGY FOR THE PHYSICAL THERAPIST ASSISTANT**

Students explore the application of human anatomy to the study of human movement patterns. Students identify normal versus abnormal movement with the use of posture analysis, gait analysis, functional movement and sport activities. Students apply information demonstrated for data collection including manual muscle testing, goniometry measurements, and palpation techniques to the application in the physical therapy field. Prerequisite: Admission into the Physical Therapist Assistant program.

**PTAT 2970 7 CREDITS****PTA CLINICAL PRACTICUM I**

This course provides students with selected experiences to provide practical clinical experience under the direct supervision of a physical therapist/physical therapist assistant and instruction of LCCC's clinical coordinator. The clinical experience gives students the opportunity to correlate didactic course work with clinical skills. Students are required to complete a minimum of 280-hour clinical rotation at an affiliate site that provides physical therapy services. Prerequisite: Completion of PTAT 1720.

**PTAT 2971 7 CREDITS****PTA CLINICAL PRACTICUM II**

This course provides students with selected experiences to provide practical clinical experience under the direct supervision of a physical therapist/physical therapist assistant and instruction of LCCC's clinical coordinator, to meet entry-level PTA requirements. This clinical experience gives students the opportunity to correlate didactic coursework with clinical skills. Students are required to complete a minimum of 280 hours of clinical at an affiliate site that provides physical therapy services. In addition, students must complete a mandatory competency capstone for the program. Prerequisite: Completion of PTAT 2970.

## Physics

**PHYS 1050 4 CREDITS****CONCEPTS OF PHYSICS**

In this introductory course, students become familiar with the science of matter interacting with energy in a variety of fields. Students demonstrate their competencies in the scientific method, properties of matter, mechanics, heat, sound, light, electricity and magnetism, radiation, and atomic and nuclear interactions. This course is recommended for students in the paramedical sciences- medical terminology, radiographic technology, sonography, exercise science, applied technology, and other non-science majors requiring a lab science course. Offered in Spring semester only. Student receiving credit for PHYS 1050 cannot receive credit for PHYS 1110 or PHYS 1310. Prerequisite: Completion of MATH 0975 or higher or instructor permission. Placement or enrollment in ENGL 1010 recommended.

**PHYS 1090 4 CREDITS****FUNDAMENTALS OF THE PHYSICAL UNIVERSE**

Students apply fundamental principles of chemistry and physics to real life situations. The course is designed primarily for elementary education majors. Prerequisite: Completion of MATH 1070 or equivalent placement.

**PHYS 1110 4 CREDITS****GENERAL PHYSICS I**

This is the first course of a two-semester sequence in elementary college-level physics with a laboratory component. Upon successful completion of this course, students gain an understanding of mechanics, vector mechanics for static bodies, dynamic of linear and circular motion, and energy transfer methods. This algebra-based course is intended primarily for pre-professional health science (premedical, pre dental, preoptometry, prephysical therapy, etc.) and biology students. Students receiving credit for PHYS 1110 cannot receive credit for PHYS 1050 or PHYS 1310. Prerequisite: Completion of MATH 1405 or MATH 1450, or equivalent placement.

**PHYS 1120 4 CREDITS****GENERAL PHYSICS II**

A second-semester course in elementary college-level physics that includes a laboratory component. Students learn wave phenomena, electricity, and the fundamental structure of matter. Students receiving credit for PHYS 1120 cannot receive credit for PHYS 1050 or PHYS 1320. Prerequisite: Completion of PHYS 1110 or instructor approval.

**PHYS 1310 4 CREDITS****COLLEGE PHYSICS I**

A calculus-based introductory physics course with a laboratory component intended primarily for engineering, physical science, computer sciences, and mathematics students. Students acquire a working knowledge of vector mechanics, dynamics of linear and circular motion, energy and momentum techniques, and mechanical waves. Typically offered Fall semester only. Students receiving credit for PHYS 1310 cannot receive credit for PHYS 1050 or PHYS 1110. Prerequisite: Completion of MATH 2200. Corequisite: Concurrent enrollment in MATH 2205, or equivalent placement.

**PHYS 1320 4 CREDITS****COLLEGE PHYSICS II**

This is the second course of a two-semester sequence in calculus-based physics with a laboratory component. Students gain knowledge and apply problem solving skills in electricity, magnetism, and thermodynamics. This course is intended primarily for engineering, physical science, computer sciences, and mathematics students. May be offered in Fall or Spring semesters. Students receiving credit for PHYS 1320 cannot receive credit for PHYS 1050 or PHYS 1120. Prerequisite: Completion of PHYS 1310 or completion of or concurrent enrollment in MATH 2210.

## Plumbing Technology

**FMT 1700 3 CREDITS****INTRODUCTION TO PLUMBING**

Students become familiar with the tools and equipment of the plumbing trade. Basic skills needed to enter the plumbing career field will be developed. Students will identify safety practices and methods used in the workplace as described in the Plumbing Code. Prerequisites: Completion of IST 1712 and IST 1713.

**FMT 1710 3 CREDITS****PLUMBING PIPEFITTING**

Students practice the procedures and safety requirements of installing components used for various plumbing applications. Students will complete a typical pipefitting project to include drawing its layout. Completion of IST 1560.

**FMT 1720 3 CREDITS****PLUMBING PIPING, WATER**

Students examine different types of water piping, fittings, and proper installation procedures. Students develop skills in joining and supporting various piping according to the Plumbing Code. Completion of HMDV 1510.

**FMT 1730 3 CREDITS****PLUMBING INSTALLATION**

Students examine the installation and repair of fixtures, faucets, and various valves used in the plumbing trade. Students will also be introduced to manufacturer's installation recommendations, uniform plumbing code, and good housekeeping practices. Prerequisites: Completion of IST 1660 and IST 1661.

## **Political Science**

### **POLS 1000 3 CREDITS AMERICAN AND WYOMING GOVERNMENT**

POLS 1000 is a college-level introductory course in the organization and structure of the governments of the United States and Wyoming. Students explore the three branches of government (legislative, executive, and judicial) and learn to think critically about them. They also evaluate themes in federalism, civil liberties, civil rights, public opinion, political parties, campaigns and elections, and selected public policy topics. This course meets the state statutory requirement for instruction in the United States and Wyoming constitutions. Prerequisites: Completion of ENGL 0810.

### **POLS 1009 3 CREDITS INTRODUCTORY EXPERIENTIAL CIVICS**

Students focus on practical experiences in government while learning values associated with citizenship. This course is taught to participants of Wyoming Boy's State. This course does not satisfy the state statutory requirement for instruction in the United States and Wyoming.

### **POLS 1100 1 CREDIT WYOMING GOVERNMENT**

Students examine the constitution and government of Wyoming. Students review the major principles and institutions of the U.S. government. This course is designed for students who have earned credit for American Government or U.S. History at an out-of-state college or by advanced placement but have not fulfilled the Wyoming Constitution statutory requirement. Prerequisite: Completion of ENGL 0810 or concurrent enrollment in ENGL 1010.

### **POLS 1200 3 CREDITS NON-WESTERN POLITICAL CULTURES**

Students examine the distinctive political institutions and practices that characterize select non-western political cultures. Case studies from Asia and Africa are emphasized in this course. Completion of ENGL 1010 or equivalent is strongly recommended. Prerequisite: Completion of POLS 1000 or consent of instructor.

### **POLS 2000 3 CREDITS CURRENT ISSUES IN AMERICAN GOVERNMENT**

Students investigate select political topics and issues by exploring key public policy problems, the policy-making process, and policy choices. Students are expected to keep abreast of both domestic and global political events and to apply basic political science concepts to analyze them. A variety of American political ideologies are also examined. Prerequisite: Completion of POLS 1000 or instructor approval.

### **POLS 2310 3 CREDITS INTRO TO INTERNATIONAL RELATIONS**

An analysis of the political relations of nations emphasizing methods of explaining and interpreting their behavior. With contemporary problems serving as illustrations, students critically evaluate topics in war and peace, international political economy, and the evolving world order. Because many political science instructors require research papers, ENGL 1010 or its equivalent is strongly recommended. Prerequisite: Completion of POLS 1000 or instructor approval.

### **POLS 2410 3 CREDITS INTRO TO PUBLIC ADMINISTRATION**

Students learn to analyze the principles, methods and practices involved in administering the public sector. Students gain knowledge about government finance, budgeting, organizational theory, personnel practices, human behavior, government and computers, and the responsiveness of governmental administrators to the public. Because many political science instructors require research papers, ENGL 1010 or its equivalent is strongly recommended. Prerequisite: Completion of POLS 1000.

### **POLS 2470 1-4 CREDITS INTERNSHIP I**

The political science internship program is designed to integrate political experiences with academic knowledge. The student is expected to participate in specific assignments, observe activities in the area of interest, and relate the information and experiences gained in a written report. Credit can be earned in any of four areas: legislature, lobbying, campaigns, or public service. A student may receive one to four hours credit depending on the amount of time given to an assignment. Because many political science instructors require research papers, ENGL 1010 or its equivalent is strongly recommended. Prerequisite: Completion of POLS 1000.

## **Psychology**

### **PSYC 1000 3 CREDITS GENERAL PSYCHOLOGY**

Students employ concepts in the field of psychology as they apply to: development of behavior; physiological mechanisms of behavior; perception; motivation and emotion; learning; intelligence; individuality and personality; and mental health. Prerequisite: Completion of or concurrent enrollment in ENGL 1010.

### **PSYC 1100 3 CREDITS ORGANIZATIONAL HUMAN RELATIONS**

Students practice using systematic knowledge from psychology to understand and explain individual human behavior within organizations. Students explore interactions in organizations by examining human perceptions, communications, small group dynamics, power, quality of work life and leadership. Students demonstrate how both organizational goals and personal goals fit within organizations. Prerequisite: Completion of ENGL 0810 or equivalent placement.

### **PSYC 2000 4 CREDITS RESEARCH PSYCHOLOGICAL METHODS**

In this course students use fundamental scientific methods in psychology. Students acquire and employ research strategies ranging from observational to experimental. Students demonstrate the ability to design topic proposals, conduct basic research, gather data, perform statistical analyses, interpret results, critique published research, read and write in scientific style, and use the American Psychological Association format. Prerequisite: PSYC 1000 and STAT 2050 or STAT 2070.

### **PSYC 2080 3 CREDITS BIOLOGICAL PSYCHOLOGY**

This course is designed as a general introduction to the biological bases of behavior. Students learn the structural and functional properties of the human nervous system, although comparisons to other animals will be made. Students examine how environment, genetics, and evolution has influenced the physiological and sensory mechanisms of behavior. Prerequisite: Completion of BIOL 1003 or BIOL 1010 and PSYC 1000.

### **PSYC 2090 3 CREDITS PSYCHOLOGY OF RELIGION**

Students examine the relationship between religion and human behavior, including theories of religion, the history of the psychology of religion, stages of religion development, religious experience and conversion, and religion and well being. Prerequisite: Completion of PSYC 1000 and ENGL 1010.

### **PSYC 2210 3 CREDITS DRUGS AND BEHAVIOR**

Students gain an understanding of how psychoactive substances affect behavior, including both psychotherapeutic agents and other drugs with abuse potential. Students demonstrate awareness of basic brain chemistry and the effects of psychoactive substances on brain functioning. Students explore behavioral, social, historical, and medical aspects of each major class of psychoactive substances. Prerequisite: Completion of PSYC 1000 and ENGL 1010, or instructor approval.

### **PSYC 2300 3 CREDITS DEVELOPMENTAL PSYCHOLOGY**

Students gain knowledge in the development and behavior of children from conception through adolescence with emphasis on the major roles played by maturation and learning. Students examine development theory, research findings, and applications to current issues in child psychology. Prerequisite: Completion of PSYC 1000 and ENGL 1010, or instructor approval.

**PSYC 2330 3 CREDITS**  
**PSYCHOLOGY OF ADJUSTMENT**  
 Students examine the common problems of adjustment with an emphasis on understanding the psychological principles and social factors that bear on mental health. Prerequisite: Completion of ENGL 1010, or instructor approval.

**PSYC 2340 3 CREDITS**  
**ABNORMAL PSYCHOLOGY**  
 Students explore the biological, psychodynamic, cognitive-behavioral, human-existential, and sociocultural models of abnormality, as well as, the psychological and psychopharmacological treatments shown to be effective for specific mental disorders. Prerequisite: Completion of PSYC 1000 and ENGL 1010.

**PSYC 2380 3 CREDITS**  
**SOCIAL PSYCHOLOGY**  
 Students examine general theories and concepts of social psychology. In addition, students demonstrate the ability to apply the theories in the analysis of a specific issue or social setting. Topics include research techniques, social perception, social influence, social relations, and application. The entering student should have a solid understanding of basic concepts of psychology (PSYC 1000) as well as good writing skills (ENGL 1010). Prerequisite: Completion of PSYC 1000 and ENGL 1010, or instructor approval.

**PSYC 2395 1 CREDIT**  
**PSYCHOLOGY CAPSTONE**  
 Students consolidate the entire spectrum of their educational experience to design a post-graduation plan for transfer and/or employment. Students engage in a service learning project to enhance civic responsibility. Students reflect upon major competencies developed over their time as a student at LCCC. Students integrate their cumulative knowledge into a portfolio. Prerequisite: Completion of ENGL 1010, PSYC 2000, PSYC 2300, PSYC 2340, and PSYC 2380 or instructor consent.

## **Radiology Technology**

**RDTK 1503 4 CREDITS**  
**INTRODUCTION TO RADIOGRAPHY**  
 An introductory course covering the history of radiography, radiographic and general medical terminology; introductory radiographic equipment, radiation protection; and abdomen, chest, and upper-extremity positioning. Students become knowledgeable about ethical and legal issues and basic radiology safety. During the last half of the semester, students begin clinical rotations and by semester end, competency and proficiency in chest, abdomen, and upper extremity radiography are achieved. Prerequisites: Acceptance into the Radiography program, competency to enter into ENGL 1010, and MATH 1000 or MATH 1400 or equivalent placement.

**RDTK 1520 1 CREDIT**  
**RADIOGRAPHIC PATIENT SKILLS**  
 An introduction to patient care skills used in the radiography field. Students demonstrate skills in communicating, evaluating, protecting, and providing physical care for the patient while in the radiology department. This course fulfills a course requirement of the Radiography Program. Prerequisite: Acceptance into the program.

**RDTK 1583 3 CREDITS**  
**RADIOGRAPHIC PROCEDURES I**  
 A continuation of RDTK 1503. This course is designed to introduce the student to the anatomy and positioning of additional radiographic examinations. Specifically, the student learns and develops positioning skills for the shoulder girdle, lower extremity, pelvis, entire spine, sternum, ribs, portables, trauma, and reviews geriatric and pediatric radiography. The student also demonstrates competency in the anatomy, positioning, and radiographic demonstration of the gastrointestinal (alimentary canal) system, the genitourinary system. Students complete I.V. training and identify and describe the characteristics of various contrast media, radiologic pharmaceuticals, contrast reactions, and the responsibilities of the radiographer in such situations. Prerequisite: Completion of RDTK 1503.

**RDTK 1584 1 CREDIT**  
**RADIOGRAPHIC LAB I**  
 A course to be taken concurrently with RDTK 1583, which allows the simulated application of the principles learned in RDTK 1583 and film critique. The student radiographer becomes proficient at exposing, developing, and critiquing radiographs of the shoulder, lower extremity, pelvis, entire spine, sternum, and ribs in the campus lab. Students also perform gastrointestinal, genitourinary, and biliary procedures in a competent manner through simulated applications. Corequisite: Concurrent enrollment in RDTK 1583.

**RDTK 1590 4 CREDITS**  
**CLINICAL EDUCATION I**  
 This course provides clinical experience in the radiology department and is to be taken during the Spring I semester. Students refine positioning and critique skills learned in RDTK 1503, RDTK 1583, and RDTK 1584. Under supervision in the clinical setting, students will be able to competently perform routine diagnostic imaging of the chest, abdomen, extremities, and spines. Students will be expected to pass a competency-based imaging test at the end of the semester. Prerequisites: Completion of RDTK 1503.

**RDTK 1610 3 CREDITS**  
**RADIOGRAPHIC IMAGING I**  
 In this course, students outline the physical theories of X-ray production and the atomic interactions which take place during the radiologic image acquisition process. Students analyze radiographic images and calculate the effects that various technical factors, equipment, accessory devices, and receptor systems have upon radiographic image qualities and patient dose. Prerequisite: Completion of RDTK 1503. Corequisite: Concurrent enrollment in RDTK 1583, RDTK 1584, and RDTK 1611.

**RDTK 1611 1 CREDIT**  
**RADIOGRAPHIC IMAGING LAB I**  
 Students demonstrate and experiment with the effects of various technical factors, accessories, and receptor systems on radiographic image qualities. Through laboratory experiences, students use the equipment and measuring devices available in the energized lab, evaluate collected data, and apply the concepts covered in RDTK 1610. Prerequisite: Completion of RDTK 1503. Corequisite: Concurrent enrollment in RDTK 1610.

**RDTK 1620 3 CREDITS**  
**RADIATION BIOLOGY AND PROTECTION**  
 Students investigate the types and sources of radiation, outlining radiation's biological effects on atoms, cells, and human populations at various doses and delivery methods. Students describe the United States governmental regulations regarding radiation and practice effective radiation protection and measurement methods for patients and occupational personnel while in a medical setting. Prerequisite: Completion of ZOO 2025 or instructor approval, and acceptance into the Radiography program.

**RDTK 1683 3 CREDITS**  
**RADIOGRAPHIC PROCEDURES II**  
 Students analyze and perform routine procedures of bone densitometry (DEXA), routine contrast media fluoroscopy examinations, and C-arm use in surgical and non-surgical settings. Students safely administer contrast media for routine procedures such as arthrography, myelography, and angiography. Prerequisites: Completion of RDTK 1583 and RDTK 1584.

**RDTK 1684 1 CREDIT**  
**RADIOGRAPHIC LAB II**  
 A course to be taken concurrently with RDTK 1683. Upon successful completion of this course, students are able to perform routine and special fluoroscopic exams such as arthrography, myelography, and angiography, and operate a C-arm fluoroscopic unit in both a surgical and departmental setting in a competent manner through simulated applications. Corequisite: Concurrent enrollment in RDTK 1683.

**RDTK 1713 4 CREDITS**  
**CLINICAL EDUCATION II**  
 This is a clinical experience in the radiology department. The course is to be taken during Summer Session I. Students refine positioning skills previously learned and positioning learned in RDTK 1683. Under supervision in the clinical setting, the student will be able to competently perform routine diagnostic imaging of extremity, spines, chest, and abdominal work. In addition, 20 hours of shift work after 4 p.m. or on weekends is required. The student will be expected to pass a competency-based imaging test at the end of the semester. Prerequisite: Completion of RDTK 1503.



**RDTK 2510 7 CREDITS****CLINICAL EDUCATION III**

This is a clinical experience course in the radiology environment. The course is to be taken during Fall II. Students refine skills learned previously, including patient skills, implementing new technical skills, further building their practical experience in fluoroscopy diagnostic studies and introducing skull work. Students demonstrate competency in gastrointestinal, urinary, trauma, and portable work. Prerequisite: Completion of RDTK 1713.

**RDTK 2583 3 CREDITS****RADIOGRAPHIC PROCEDURES III**

This course covers anatomy and positioning of the cranium and facial bones as well as basic cross-sectional anatomy of the cranium. Students demonstrate proficiency in and knowledge of skull radiography through didactic and competency testing. Prerequisites: Completion of RDTK 1683 and RDTK 1684.

**RDTK 2584 1 CREDIT****RADIOGRAPHIC LAB III**

This lab course is to be taken concurrently with RDTK 2583 and affords the student the opportunity to expose and critique skull radiographs in the radiographic laboratory. The student radiographer positions, exposes, and critiques skull procedures as well as identifies basic cross-sectional anatomy of the head. Corequisite: Concurrent enrollment in RDTK 2583.

**RDTK 2603 2 CREDITS****SURVEY OF TECHNICAL SPECIALTIES**

Students examine current and developing imaging and/or therapeutic technologies such as computed tomography (CT), mammography, magnetic resonance imaging (MRI), ultrasonography, nuclear medicine, and radiation therapy. Students have the opportunity to apply this knowledge to Clinical Education IV. Prerequisite: Completion of RDTK 2583.

**RDTK 2613 7 CREDITS****CLINICAL EDUCATION IV**

A course to be taken during Spring II semester. Students practice all general radiographic and fluoroscopic procedures with emphasis on advanced fluoroscopic and skull techniques. Under supervision students will be applying technical knowledge learned in the classroom lab. Students will be expected to pass a competency-based imaging test at the end of the semester. Students demonstrate identified skills needed by a fully functional radiographer. Prerequisite: Second-year radiography status and completion of RDTK 2510.

**RDTK 2623 3 CREDITS****RADIOGRAPHIC EQUIPMENT, DIGITAL IMAGING AND QUALITY ASSURANCE**

In this course, students develop skills conducting quality assurance tests, artifact analysis, troubleshooting imaging problems, and standardizing numerous exposure variables. Students describe the components and function of fluoroscopic imaging equipment and digital imaging equipment used in contemporary radiology departments and review basic electrical circuitry with special emphasis on the circuits of X-ray equipment. Prerequisite: Completion of RDTK 1610 and RDTK 1611.

**RDTK 2624 1 CREDIT****RADIOGRAPHIC LAB IV**

A course to be taken concurrently with RDTK 2623. Students gain experience using fluoroscopic and digital imaging equipment and analyzing the resulting images. Students also conduct routine equipment quality control tests used in the maintenance and testing of radiographic equipment, analyze radiographs for artifacts, and problem solve through various laboratory experiments. Prerequisite: Completion of RDTK 1610 and RDTK 1611. Corequisite: Concurrent enrollment in RDTK 2623.

**RDTK 2630 1 CREDIT****RADIOGRAPHIC PATHOLOGY**

Students survey the radiographic demonstration of pathology for all of the major human body systems. Students evaluate radiographs and develop radiographic case studies within the scope of practice of a radiographer and as they relate to the medical diagnostic process. Students evaluate patient histories and conditions, altering appropriate technical factors and exam protocols as appropriate. Prerequisite: Completion of RDTK 2583 and RDTK 2584.

**RDTK 2900 4 CREDITS****RADIOGRAPHY SEMINAR**

Students prepare for successful completion of the American Registry of Radiologic Technologists' national certifying examination by completing a comprehensive review of all prior courses in the radiography curriculum. Students develop and refine the analytical and test-taking skills necessary for passing the national certifying examination in Radiography. Students complete personal research and participate in group activities and discussions to synthesize knowledge, attitudes, and skills in professional radiographic practice. (Students are required to complete a minimum of two computerized Mock Registry Sessions as part of the course. Time to be arranged with instructor.) Prerequisite: Completion of RDTK 2623 and RDTK 2624.

**RDTK 2950 3 CREDITS****COMPUTED TOMOGRAPHY REGISTRY PREPARATION FOR TECHNOLOGISTS**

A course preparing registered radiologic technologists for the American Registry of Radiologic Technologists national certifying examination for Computed Tomography (CT). Students complete a comprehensive review of radiation physics and are introduced to elements that will be included in the examination, such as CT instrumentation and image production, radiation safety and dosimetry, patient communication and contrast administration principles, and medical CT protocols for musculoskeletal, trunk, and neurological examinations. Enrollment qualification: Students must be registered in radiography (or registry-eligible) by the American Registry of Radiologic Technologists (ARRT).

**RDTK 2952 1-5 CREDITS****ADVANCED MODALITY****CLINICAL EDUCATION**

This is a clinical experience in a medical imaging department. Under supervision in the clinical setting, the student performs the medical imaging procedures and competencies required by the American Registry of Radiologic Technologists (ARRT) in the specified area of advanced modality practiced. Student will demonstrate safe patient care techniques and will acquire and analyze medical images/data for diagnostic quality. This course may be repeated if additional clinical time or experience is needed to complete all of the specified ARRT competencies for advanced certification or if the student is pursuing a credential in a new advanced modality. Credit hours are awarded on a 1:45 contact hour basis. The amount of credit hours enrolled will be determined on a case-by-case basis. Prerequisites: ARRT-certified, satisfaction of clinical clearance requirements (such as background checks, immunizations, and drug screening), and permission of the instructor.

**RDTK 2991 3 CREDITS****MRI REGISTRY PREP FOR THE TECHNOLOGIST**

A course preparing registered radiologic technologists for the American Registry of Radiologic Technologists national certifying examination for Magnetic Resonance Imaging (MRI). Students complete a comprehensive review of MRI and are introduced to elements that will be included in the examination, such as MRI instrumentation and image acquisition, MRI screening and magnetic field safety requirements, patient communication and contrast administration principles, and medical MRI protocols for neurological, trunk, and musculoskeletal examinations. Enrollment qualifications: Instructor permission required. Students must be registered by the American Registry of Radiologic Technologists (ARRT) in Radiography, or be Registry-eligible.

## Sheetmetal Apprenticeship

**SMAP 1910 3 CREDITS****INTRO TO SHEET METAL DUCT AND DUCT FABRICATION**

Students learn the basic techniques of the sheet metal trade and how it is utilized in heating, ventilation, and air conditioning applications. Students summarize the history and development of the sheet metal trades and learn how to use the trade tools including hand, power, layout, cutting, bending, and forming machine tools. Students learn the layout of sheet metal, sheet metal trade mathematics, and the first steps of fabrication. Prerequisite: Instructor approval.

**SMAP 1920 3 CREDITS**  
**SHEET METAL FIELD MEASUREMENTS AND DUCT DESIGN**

Students expand on knowledge from SMAP 1910 and apply techniques in real-world settings. Students describe the techniques and practice them in-field measuring and layout of duct runs and fittings. Students learn sheet metal layout software and the use of a CNC plasma cutting system. The processes of planning, designing, drawing, fabricating, and installing duct runs are introduced. Students also learn effective communication techniques to utilize between field and shop personnel. Prerequisite: Completion of SMAP 1910.

**SMAP 1930 3 CREDITS**  
**MECHANICAL PLANS AND SPECIFICATIONS IN CONSTRUCTION AND LEADERSHIP**

Students use case-studies to develop skills to utilize building plans and specifications to lay-out, fabricate, and install HVAC systems. Students understand skills required to supervise personnel, build teams, and to communicate and motivate employees. Students discuss gender and cultural issues within the industry. Principles of project planning and management, including problem solving and decision making are emphasized. Prerequisite: Completion of SMAP 1920.

**SMAP 1940 3 CREDITS**  
**JOURNEYMAN PREPARATION COURSE**

Students learn to navigate and interpret the International Mechanical Code Book, International Fuel Gas Code Book and the National Electrical Code Book. Students learn test taking and time management skills while taking mock journeymen tests. Students simulate going before a mock board comprised of local industry members to present a portfolio of recent jobs where they demonstrate skills learned during their apprenticeship. Prerequisite: Completion of SMAP 1930.

**SMAP 1950 3 CREDITS**  
**SHEETMETAL APPRENTICE V**  
Provide students with the job skills necessary to enter, remain or advance as a member of the local sheetmetal workforce.

**SMAP 1960 3 CREDITS**  
**SHEETMETAL APPRENTICE VI**  
Provide students with the job skills necessary to enter, remain or advance as a member of the local sheetmetal workforce.

**SMAP 1970 3 CREDITS**  
**SHEETMETAL APPRENTICE VII**  
Provide students with the job skills necessary to enter, remain or advance as a member of the local sheetmetal workforce.

**SMAP 1980 3 CREDITS**  
**SHEETMETAL APPRENTICE VIII**  
Provide students with the job skills necessary to enter, remain or advance as a member of the local sheetmetal workforce.

## Social Work

**SOWK 2000 3 CREDITS**  
**INTRO TO SOCIAL WORK**

Students examine the history, mission, values, and activities of social work practice. Students also investigate how social workers interact with a diverse client population and contribute to solving social problems. Lastly, students develop awareness of the knowledge and value base of the social work profession. Prerequisite: Completion of ENGL 1010 or equivalent placement.

## Sociology

**SOC 1000 3 CREDITS**  
**SOCIOLOGICAL PRINCIPLES**

An introductory course in sociology in which students demonstrate an understanding of the basic principles involved in interpersonal relationships, social group behavior, and institutional structures ranging from small groups, networks, and families to bureaucracies, social stratification, and urban living.

**SOC 1080 3 CREDITS**  
**INTRODUCTION TO WOMEN'S STUDIES**

An introduction to the key issues in women's studies. Students examine women's participation in, and relationship to, institutions of society such as family and school, as well as processes and activities such as work, art, literature and politics in historical and cross-cultural analysis. Cross-listed with HUMN 1080. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**SOC 1150 3 CREDITS**  
**SOCIOLOGY OF SPORT**

Students investigate the institution of organized sport from a sociological perspective. Students examine the ways sport is a microcosm of society as well as how sport creates, reproduces and changes society. Students examine how common sociological concepts such as stratification, discrimination, norms, mobility, violence, and social structure are evidenced in professional and amateur athletics.

**SOC 2400 3 CREDITS**  
**CRIMINOLOGY**

An introductory overview of criminal behavior and its impact on the criminal justice system. Students discover theories of criminal behavior, examination and analysis of statistics on crime, explanations of crime causation, and the relationship between crime and the criminal justice process. Cross-listed with CRMJ 2400. Prerequisite: Completion of CRMJ 2120 or SOC 1000, or instructor approval.

## Spanish

**SPAN 1010 4 CREDITS**  
**FIRST YEAR SPANISH I**

Students develop basic speaking, listening, reading and writing skills in the Spanish language and explore cultural aspects of the Spanish-speaking world.

**SPAN 1020 4 CREDITS**  
**FIRST YEAR SPANISH II**

Students continue their development of basic speaking, listening, reading and writing skills in the target language and explore cultural aspects of the Spanish-speaking world. Prerequisite: Completion of Spanish 1010.

**SPAN 1070 2 CREDITS**  
**SPANISH FOR HEALTHCARE PERSONNEL I**

This course is designed for students and professionals in the healthcare field. Students focus on the communication skills and specialized vocabulary needed to be able to communicate effectively with Spanish-speaking patients. Students also examine types of cultural differences which need to be considered when communicating with someone from a different country.

**SPAN 1071 3 CREDITS**  
**INTENSIVE SPANISH ABROAD CONVERSATION**

Students improve skills in Spanish oral proficiency by participating in a three-week intensive Spanish course abroad. Students take part in class at a private language school. Students develop an understanding of the host country's culture through living with a local family for the duration of the program; visits to local museums, churches, markets, and other cultural historical sites; and travel outside of the host city during two of the three weekends spent in the host country. Students are required to use their oral linguistic skills by participating in volunteer programs at area orphanages, hospitals, and schools during the week. Students enrolling in this course are required to participate in four monthly informative meetings prior to their study abroad. Prerequisite: Completion of SPAN 1020.

**SPAN 1080 2 CREDITS**  
**SPANISH FOR HEALTHCARE PERSONNEL II**

This course is a continuation of Spanish 1070 and is designed for students and professionals in the healthcare field. Students continue their development of communication skills and specialized vocabulary to communicate effectively with Spanish-speaking patients. Students interpret cultural differences and apply appropriate communication with Spanish-speaking patients. Students demonstrate ability to identify and employ diagnostic language for ailments that are studied in the course. Prerequisite: Completion of SPAN 1070 or instructor approval.

**SPAN 2030 4 CREDITS**  
**SECOND YEAR SPANISH I**

In this intermediate-level Spanish course students refine their conversation skills and integrate intermediate level grammatical structures into conversations and compositions. Students are exposed to Spanish literature and develop more advanced writing skills in Spanish. Prerequisite: Completion of SPAN 1020 or equivalent.

**SPAN 2040 4 CREDITS****SECOND YEAR SPANISH II**

In this continuation of Spanish, students improve their self-expression skills in conversation as well as their reading comprehension. Students practice usage of the language through composition, oral presentations, and grammar review. Prerequisite: SPAN 2030 or equivalent 3rd semester course.

**SPAN 2070 3 CREDITS****INTENSIVE SPANISH ABROAD**

Students develop skills in speaking, reading, and writing Spanish by participating in a three-week intensive Spanish course/program abroad. As part of the program, students take part in a small class at a private language school. Students also develop an understanding of the host country's culture through living with a local family for the duration of the program; visits to local museums, churches, markets, and other cultural and historical sites; and travel outside of the host city during two of the three weekends spent in the host country. In addition, students may be requested to participate in volunteer programs at area orphanages, hospitals, and schools during the week. Furthermore, students participate in two weekends of planned group travel outside the host city for further cultural enhancement. Students enrolling in this course participate in four monthly informative meetings prior to their study abroad. Besides tuition students pay fees which include their round trip airfare, room and board with local family, classes, local tours, and other activities to the host academic institution and/or other participating travel agencies. A travel waiver and other documents will be required. LCCC provides a faculty escort during the length of the program. Note: This may vary from year to year according to the country where the program takes place. More information will be given during the first meeting. Students must abide by the study abroad short term policy. Prerequisite: Completion of SPAN 2030 or instructor approval.

**SPAN 2140 3 CREDITS****INTRODUCTION TO SPANISH LITERATURE IN SPANISH**

This course introduces Hispanic literature. Students analyze major literary types and elements of criticism. Prerequisites: SPAN 2030 or equivalent 3rd semester course. STAMP or other equivalent placements scores might be used to place students in this level course. Note: STAMP scores do not grant credit for previous courses.

## **Speech— Language Pathology**

**SLPA 1500 3 CREDITS****INTRODUCTION TO SPEECH LANGUAGE PATHOLOGY ASSISTANT**

Students explore the field of speech-language pathology, including professional standards, legal and ethical issues, and scope of responsibilities of the speech-language pathologist and the speech-language pathology assistant in health care and educational settings. Prerequisite: Instructor approval required.

**SLPA 1502 1 CREDIT****FIELD OBSERVATION I  
FIELD OBSERVATION I**

Students begin clinical observation of practices and procedures in speech-language pathology and combine on-site observations with online discussions and writing of observational reports. A minimum of 10 hours of observation in educational and medical settings is required. Prerequisite: Completion of SLPA 1500.

**SLPA 1503 1 CREDIT****SLPA SEMINAR**

Students explore the roles and responsibilities of the SLPA. Students explore tools and skills necessary for employment and professional development as an SLPA. Prerequisite: Completion of SLPA 2502.

**SLPA 1504 3 CREDITS****ANATOMY & PHYSIOLOGY OF SPEECH AND HEARING**

Students examine the fundamentals of anatomy, physiology and neurology related to speech production and hearing. Systems reviewed include respiration, phonation, articulation, resonance, hearing and neurological. Prerequisite: Instructor approval required.

**SLPA 1505 3 CREDITS****INTRODUCTION TO SPEECH AND LANGUAGE DEVELOPMENT**

This course provides a theoretical and descriptive framework in the study of language development. In this course students explore the fundamental stages and processes of language development. Students study the components of the language system (phonology, morphology, semantics, syntax, and pragmatics) as well as the development of these components. The primary focus is on typical patterns of development; however, the development of language in special populations: speakers of a variety of dialects, second-language learners, and individuals with a variety of disabilities and impairments such as autism, SLI (specific language disorder), and hearing impairment will also be explored. Prerequisite: Instructor approval.

**SLPA 1506 3 CREDITS****INTRODUCTION TO PHONETICS**

Students are introduced to the articulatory foundations regarding the description and classification of speech sounds. Students learn the International Phonetic Alphabet (IPA), physiological properties of the speech mechanism, methods of transcription and dialectal variations. Students describe sounds based on distinctive features. Students discriminate and identify the correct production of phonemes. Prerequisite: SLPA 1500.

**SLPA 1511 3 CREDITS****INTRODUCTION TO COMMUNICATION DISORDERS AND TREATMENT**

Students are introduced to an overview of communication disorders, including classification, assessment and remediation of speech, language, literacy, swallowing and hearing disorders in children and adults. Students describe the role of the speech-language pathologist and audiologist in educational and medical settings and examines multicultural and multilingual diversity, developmental disabilities, augmentative and alternative communication, as well as collaboration with other professionals. Prerequisite: Instructor Approval

**SLPA 1520 3 CREDITS****VOICE AND FLUENCY**

Students examine the impact of voice and fluency on oral communication. Prerequisite: Completion of SLPA 1506.

**SLPA 1600 2 CREDITS****INTRODUCTION TO AUDIOLOGY AND AURAL REHABILITATION**

Students are introduced to audiology, audiograms, hearing screening and hearing assessments. Students are also introduced to aural rehabilitation, and work with hearing aids and hearing assistive technologies (HAT). Prerequisite: Completion of SLPA 1511.

**SLPA 1605 3 CREDITS****ADULT COMMUNICATION DISORDERS**

Students examine adult neurogenic communication disorders including aphasia, dysarthria, apraxia, right hemisphere disorders, dementia, and traumatic brain injury. Students also identify and practice the speech and language treatment techniques used to treat these disorders. Prerequisite: Completion of SLPA 1511.

**SLPA 1630 3 CREDITS****LANGUAGE DISORDERS AND INTERVENTION**

Students explore treatment techniques and approaches appropriate for treating language delays and disorders with toddler, preschool, and school-aged populations. Students demonstrate interventions for culturally and linguistically diverse children, as well as intervention for students with learning and developmental disabilities. Prerequisite: Completion of SLPA 1511.



**SLPA 2500** **2 CREDITS**  
**INTRODUCTION TO AUDIOLOGY AND AURAL REHABILITATION**  
 Students are introduced to audiology, audiograms, hearing screening and hearing assessments. Students are also introduced to aural rehabilitation, and work with hearing aids and hearing assistive technologies (HAT). Prerequisite: Completion of SLPA 1511.

**SLPA 2502** **2 CREDITS**  
**FIELD OBSERVATION II**  
 Students continue clinical observation of practices and procedures required in speech-language pathology in preparation for clinical fieldwork. Student observations occur in diverse settings including educational, medical, assisted living facilities, and private clinics. Students will have a total of 20 hours of field observation in a variety of the settings noted above. Students write observation reports, lesson plans, treatment objectives, SOAP notes, and complete data collection activities. Prerequisite: Completion of SLPA 1502.

**SLPA 2503** **1 CREDIT**  
**SLPA SEMINAR**  
 Students explore the roles and responsibilities of the SLPA. Students explore tools and skills necessary for employment and professional development as an SLPA. Prerequisite: Completion of SLPA 2502.

**SLPA 2505** **3 CREDITS**  
**ADULT COMMUNICATION DISORDERS**  
 Students examine adult neurogenic communication disorders including aphasia, dysarthria, apraxia, right hemisphere disorders, dementia, and traumatic brain injury. Students also identify the speech and language therapy techniques used to treat these disorders. Prerequisite: Completion of SLPA 1511.

**SLPA 2520** **3 CREDITS**  
**SPEECH SOUND DISORDERS AND INTERVENTION**  
 Students discriminate between articulation and phonological disorders as well as treatment approaches specific to each. Students examine session planning, reporting progress and organization of therapy interaction. Students demonstrate cueing, reinforcement, feedback and choosing materials. Prerequisite: Completion of SLPA 1506.

**SLPA 2530** **3 CREDITS**  
**LANGUAGE DISORDERS AND INTERVENTION**  
 Students explore therapy techniques appropriate for treating language delays and acquired disorders with toddler, preschool, and school-aged populations. Students demonstrate interventions for culturally and linguistically diverse children, as well as intervention for students with learning and developmental disabilities. Prerequisite: Completion of SLPA 1511.

**SLPA 2535** **2 CREDITS**  
**SPECIAL POPULATIONS FOR SLPA**  
 Students focus on speech and language treatment techniques and approaches with childhood low-incidence populations (such as craniofacial anomalies, TBI, Cerebral Palsy, genetic disorders, Autism Spectrum Disorder, and syndromes). Prerequisite: SLPA 1511.

**SLPA 2540** **3 CREDITS**  
**SPEECH DISORDERS**  
 Students examine the impact of speech disorders on oral communication. Students identify treatment approaches specific to various speech disorders including voice, resonance, fluency and apraxia. Students examine session planning, progress reporting and organization of treatment sessions. Students practice treatment approaches and techniques for various speech disorders. Prerequisite: Completion of SLPA 1504.

**SLPA 2600** **2 CREDITS**  
**ALTERNATIVE AND AUGMENTATIVE COMMUNICATION**  
 Students utilize common forms of augmentative and alternative communication, including sign language, communication boards, and electronic or computer-based communication. Prerequisite: Completion of SLPA 1630.

**SLPA 2601** **3 CREDITS**  
**SCREENING PROCESSES**  
 Students implement screening tools and processes used for speech, language, and hearing screening, including the administration of screenings and the completion of protocols with clients of varied ages. Prerequisite: Completion of SLPA 1630.

**SLPA 2602** **4 CREDITS**  
**INTERNSHIP MANAGEMENT AND PROCEDURES**  
 Students examine organizational and functional skills required in the speech-language pathology workplace. It includes interdisciplinary and supervisory relationships, client and public interaction, safety issues, ethical issues, technical writing, lesson plan development, data collection, record keeping, multicultural issues, and behavior management. Corequisite: SLPA 2970

**SLPA 2970** **6 CREDITS**  
**SLPA INTERNSHIP**  
 Students practice the skills necessary for screening and treatment of language and speech disorders. Students are required to obtain 270 hours at the internship site with a minimum of 100 hours of those 270 hours providing direct speech and language treatments or screenings with clients under the direct supervision of an ASHA-certified Speech Language Pathologist. Corequisite: SLPA 2602.

## **Speech—Pathology and Audiology**

**SPPA 1100** **4 CREDITS**  
**AMERICAN SIGN LANGUAGE I**  
 An introductory course presenting basic syntactic knowledge, vocabulary, and conversational skills in American Sign Language (ASL). Students use the direct experience method (using ASL with no voice) to enhance language acquisition. Students also explore vital aspects of the deaf culture and community and the concept of deafness as a cultural minority. Prerequisite: Completion of ENGL 0810.

**SPPA 1110** **4 CREDITS**  
**AMERICAN SIGN LANGUAGE II**  
 A continuation of American Sign Language I, in which the direct experience method (ASL with no voice) is again used to enhance language acquisition. Successful students demonstrate increased syntactic knowledge, vocabulary, and conversational skills in ASL. Successful students also expand their understanding of Deaf culture and community and the concept of Deafness as a cultural minority. Prerequisite: Completion of SPPA 1100 or instructor approval.

**SPPA 2100** **4 CREDITS**  
**AMERICAN SIGN LANGUAGE III**  
 A course in which students build ASL fluency while demonstrating their increased sign language vocabulary and practicing their conversational and storytelling skills. They also demonstrate improved receptive and expressive skills, begin to explore interpreting skills, and experience Deaf culture through interaction with the Deaf community. Prerequisite: Completion of SPPA 1110 with a grade of B or better, or instructor approval.

**SPPA 2110** **2 CREDITS**  
**SIGN LANGUAGE PRACTICAL APPLICATIONS**  
 A course in which students use deaf simulation exercises and storytelling to apply skills acquired in previous sign language courses. Students improve spelling and signing expression and recognition, understand the dynamics of deaf conversations and culture, and express themselves clearly. Prerequisite: Completion of SPPA 1100 or instructor approval.

## **Statistics**

**STAT 0980** **3 CREDITS**  
**SKILLS DEVELOPMENT FOR FUNDAMENTALS OF STATISTICS**  
 Students practice mathematical and reasoning skills to improve their success in STAT 2050 Fundamentals of Statistics. Topics covered in this course include those defined in STAT 2050 and/or any prerequisite skills needed by the student. Students must concurrently enroll in a corresponding section of STAT 2050. Prerequisite: MATH 0900 or equivalent placement. Corequisite: STAT 2050.

**STAT 0990 3 CREDITS****SKILLS DEVELOPMENT FOR INTRODUCTORY STATISTICS FOR THE SOCIAL SCIENCES**

Students practice mathematical and reasoning skills to improve their success in STAT 2070 Introductory Statistics for the Social Sciences. Topics covered in this course include those defined in STAT 2070 and/or any prerequisite skills needed by the student. Students must concurrently enroll in a corresponding section of STAT 2070. Prerequisite: Math 0900 or equivalent placement. Corequisite: STAT 2070.

**STAT 2010 4 CREDITS****STATISTICAL CONCEPTS—BUSINESS**

Students examine statistical concepts used in business applications. Students identify types of data and their appropriate descriptive and inferential statistics; calculate and interpret descriptive measures for data sets; explore the role of probability distributions in statistical inference; construct confidence intervals; conduct and interpret one-group and two-group hypothesis tests; apply the appropriate statistical technique to solve various business applications; and use statistical computer software. Credit cannot be earned in more than one of the following courses: STAT 2010, STAT 2050 and STAT 2070. Prerequisite: Completion of ENGL 1010 or equivalent placement and MATH 1400 or higher, or equivalent placement.

**STAT 2050 4 CREDITS****FUNDAMENTALS OF STATISTICS**

Students examine statistical methods used in the natural sciences and health sciences. Students explore the central ideas of descriptive statistics and statistical inference including center and variability, probability and probability models, estimation, hypothesis testing and relationships between variables. Credit cannot be earned in more than one of the following: STAT 2010, STAT 2050, or STAT 2070.

**STAT 2070 4 CREDITS****INTRODUCTORY STATISTICS FOR THE SOCIAL SCIENCES**

Students examine statistical methods used in behavioral and social sciences. Topics include study design, tables and graphs, center, variability, probability models, estimation, and hypothesis testing. Credit cannot be earned in more than one of the following: STAT 2010, STAT 2050, or STAT 2070.

## **Strategies for Success**

**STRT 1000 3 CREDITS****STRATEGIES FOR SUCCESS**

Students develop meaningful relationships with College employees and Pathway professionals while developing a mindset for success throughout life. Through collaboration, problem solving, exploration and action, students will identify transferable skills, develop a network of support and career mentors, and identify strategies to guide continued growth and persistence throughout their lives.

## **Surgical Technology**

**SURG 1500 7 CREDITS****CENTRAL STERILE PROCESSING**

This course is designed to provide the didactic content and lab experience to meet the standards of the Sterile Processing Technician profession. Students learn the fundamentals of central processing including supplies, services, and distribution of hospital instrumentation, supplies, and equipment. Students learn aseptic techniques, patient care concepts, and theories and practices of central services departments. Students demonstrate cleaning, decontamination, and disinfection of instrumentation and equipment, preparation and packaging, sterilization process, sterile storage and inventory management, documentation and record maintenance which are integral skills of the Sterile Processing Technician. Corequisite: Concurrent enrollment in SURG 1501.

**SURG 1501 9 CREDITS****CENTRAL STERILE PROCESSING CLINICAL**

Students demonstrate expertise in ten areas that include general cleaning, wrapping packaging, assemble instrument/procedure trays, sterilization, storage (clean and sterile), patient care equipment, case carts, linen folding, and distribution. Students complete 405 hours of hands-on experience in Central Processing. Corequisite: Concurrent enrollment in SURG 1500.

**SURG 1600 3 CREDITS****INTRODUCTION TO SURGICAL TECHNOLOGY**

This course is designed to introduce the students to the profession of surgical technology. Students acquire knowledge of professional requirements and expectations, scope of practice, the surgical team, hospital and other health care delivery systems, the physical environment of surgery, hazards and safety practices, ethical and legal aspects, risk management and liability, credentialing, and professional organizations. In addition, students gain an understanding of the various roles for surgical technologists and specific tasks required to deliver surgical patient care before, during, and after a surgical procedure. Students learn safe surgical practice. Students attain competence in aseptic technique, sterilization and disinfection, surgical equipment, instruments, and supplies. Students apply these concepts to surgical case management. Prerequisite: Acceptance into the Surgical Technology Program.

**SURG 1610 4 CREDITS****SURGICAL TECHNOLOGY THEORY**

Students learn the theory of safe surgical practice, including aseptic technique, sterilization and disinfection, surgical equipment, instruments, and supplies. Students apply these concepts to surgical case management. Prerequisite: Acceptance into the Surgical Technology Program.

**SURG 1620 3 CREDITS****SURGICAL TECHNOLOGY SKILLS LAB I**

Students practice entry-level surgical technology skills such as scrubbing, gowning, and gloving, aseptic technique, instrument identification, preparation of the sterile field, safe sharps handling, procedure steps anticipation, and professional behaviors. Prerequisite: Acceptance into the Surgical Technology Program.

**SURG 1630 1 CREDIT****SURGICAL TECHNOLOGY SKILLS LAB II**

Students practice and develop intermediate and advanced level surgical technology skills with an emphasis on critical thinking competence in aseptic practice, surgical specialty instrumentation, and advanced anticipation skills. Prerequisite: Completion of SURG 1610. Corequisite: Concurrent enrollment in SURG 1750, SURG 2750 and SURG 1850.

**SURG 1685 2 CREDITS****SURGICAL PHARMACOLOGY**

Students gain information necessary for safe medication practice in surgery. Students attain competence in the metric system, medication calculations, fundamental concepts of pharmacology, medication identification and handling, medications used in surgery and at the surgical site, and aspects of anesthesia. Prerequisite: Acceptance into the Surgical Technology Program.

**SURG 1750 4 CREDITS****SURGICAL PROCEDURES I**

Students gain knowledge and skill in the theoretical aspects of surgical procedures pertinent to initial clinical experiences. Students identify anatomy, physiology, pathophysiology, diagnostic tests, equipment, instruments, supplies, procedural steps, and postoperative patient care concepts for surgical procedures in general, gastrointestinal, obstetrics, gynecology, genitourinary, ophthalmology, and orthopedics. Prerequisite: Completion of SURG 1600, SURG 1620 and SURG 1685.

**SURG 1850 5 CREDITS****SURGICAL TECHNOLOGY CLINICAL I**

Students correlate theory to practice in an actual surgical setting. Students apply previously learned foundational information and hands-on skills as they perform in the first scrub role in assigned surgical procedures under the supervision of clinical site preceptors. An emphasis is placed on developing competence in basic surgical procedures. Students rotate through various surgical specialties at multiple clinical sites. Students meet with LCCC instructors during Clinical Site visits. Prerequisite: Completion of SURG 1600, SURG 1620 and SURG 1685.

**SURG 2750 4 CREDITS****SURGICAL PROCEDURES II**

Students gain knowledge and skill in the theoretical aspects of surgical procedures pertinent to advanced clinical experiences. Students identify anatomy, physiology, pathophysiology, diagnostic tests, equipment, instruments, supplies, procedural steps, and perioperative patient care concepts for surgical procedures in otorhinolaryngology, peripheral vascular, cardiovascular, thoracic, and neurosurgery. Prerequisite: Completion of SURG 1750.

**SURG 2810 1 CREDIT****SURGICAL TECHNOLOGY CLINICAL SYNTHESIS I**

Students assess and analyze the clinical experience. Students maintain accurate documentation of case experiences, research and present case studies, and prepare for the certification examination. Prerequisite: Completion of SURG 1600.

**SURG 2850 7 CREDITS****SURGICAL TECHNOLOGY CLINICAL II**

Students continue to correlate theory to practice in an actual surgical setting. Students apply previously learned foundational information and hands-on skills as they perform in the first scrub role in more complex surgical procedures under the supervision of clinical site preceptors. An emphasis is placed on competence in more complicated surgical procedures as available. Students continue to rotate through various surgical specialties at multiple clinical sites. Students meet with LCCC instructors during Clinical Site visits. Prerequisite: SURG 1850.

**SURG 2895 1 CREDIT****SURGICAL TECHNOLOGY CLINICAL SYNTHESIS II**

Students continue assessment and analysis of the clinical experience with an emphasis on advanced practice specialties. Students maintain accurate documentation of case experiences, research and present case studies, and prepare for the certification examination. Prerequisite: SURG 2810.

## Theatre

**THEA 1000 3 CREDITS****INTRODUCTION TO THEATRE**

Students describe, interpret and appraise the roles and working processes of theatre practitioners. Students analyze the history and collaborate on the assembly and process of a play performance. Prerequisite: Completion of ENGL 0810 or equivalent placement.

**THEA 1100 3 CREDITS****BEGINNING ACTING**

Students explore beginning acting. Students demonstrate acting skills including objective, obstacle, strategy and tactics through the performance of monologues and scenes. Prerequisite: Completion of ENGL 0810 or appropriate placement.

**THEA 2000 3 CREDITS****THEATRE PRODUCTION**

Students participate in a theatrical production. Students may either perform in the production or work behind the scenes in a technical area. Performers are cast based on an audition. Students demonstrate professionalism and work with others to achieve a polished production. Performances are required. This course may be repeated for up to 12 credit hours for theatre majors.

**THEA 2010 3 CREDITS****THEATRICAL BACKGROUNDS OF DRAMA I**

Students explore dramatic literature in Western culture, from the Greeks through the 19th century, studying plays in terms of style, content, theme, theatrical conventions and structure. Students examine each play as a representation of its age and as a placeholder in the dramatic canon. Students watch productions of plays on video and in live performance to supplement the readings.

**THEA 2020 3 CREDITS****THEATRICAL BACKGROUNDS OF DRAMA II**

Students explore dramatic literature in western culture, from 19th century to the present, studying plays in terms of style, content, theme, theatrical conventions, and structure. Students examine each play as a representation of its age and as a placeholder in the dramatic canon. Students watch productions of plays on video and in live performance to supplement readings.

**THEA 2100 3 CREDITS****ACTING II**

A course to develop the actor's voice and body for character development and character interaction through the performance of monologues and scenes.

**THEA 2160 3 CREDITS****STAGE MAKE-UP**

Stage Make-Up is designed for the beginning student. Students demonstrate and apply basic theatrical make-up principles and practices. Students implement practical artistic problem-solving and critical thinking skills as they apply stage make-up techniques and theory.

**THEA 2220 3 CREDITS****STAGECRAFT**

An introduction to the various aspects of stagecraft. Prerequisite: Completion of MATH 0970 or MATH 0980, or equivalent placement.

**THEA 2720 3 CREDITS****INTRODUCTION TO STAGE COMBAT**

Students learn safety and proper technique in staging acts of swordplay and hand-to-hand combat for the theatre. Students practice critical thinking skills in using violence to advance character and story in a dramatic context.

## Welding Technology

**WELD 1555 2 CREDITS****WELDING TECHNOLOGY SAFETY**

Students identify common hazards in welding, appraise material safety data sheets, assess safe techniques to avoid welding fumes, and determine safe techniques for storing and handling compressed gas cylinders. In addition, students verify safe techniques for using electrical components, validate power tool safety, and justify proper lock-out/tag-out procedures. They also evaluate forklift safety procedures, critique proper rigging techniques, and demonstrate correct respirator selection and use along with correct fire extinguisher use.

**WELD 1650 3 CREDITS****PRINT READING AND WELDING SYMBOLS**

Students interpret welding prints used in the welding industry to include welding symbols, sketching, view representation, orthographic projection, measurement formulas, basic layout, and distortion control. Students build skills in layout, cutout, and assembly of weldments.

**WELD 1655 2 CREDITS****ALLIED CUTTING PROCESSES**

Students set up equipment and perform cutting and gouging operations utilizing the oxy fuel, air carbon arc, and plasma arc cutting processes. This course will also provide an introduction to blueprint reading. Prerequisite: Completion of or concurrent enrollment in WELD 1555.

**WELD 1755 4 CREDITS****SHIELDED METAL ARC WELDING I**

Students gain knowledge about equipment and setup, electrodes, and electrode selection used in shielded metal arc welding, utilizing the American Welding Society standards of acceptability to develop manual skills necessary to produce quality single and multiple pass welds in all positions using filler metals such as low hydrogen, non-low hydrogen, and iron powder electrodes commonly used in the welding industry. Prerequisite: Completion of or concurrent enrollment in WELD 1555.

**WELD 1756 4 CREDITS****SHIELDED METAL ARC WELDING II**

Students explain equipment and setup, electrodes, and electrode selection used in shielded metal arc welding. Students develop manual skills necessary to produce single and multiple pass welds with backing plate in all positions as defined by the American Welding Society standards of acceptability. Students demonstrate proper use of filler metals such as low hydrogen, non-low hydrogen, and iron powder electrodes commonly used in the welding industry and also specified by the American Welding Society. Prerequisite: Completion of WELD 1755.



**WELD 1760 4 CREDITS****ADVANCED SHIELDED METAL ARC WELDING**

Students gain knowledge about equipment and setup, electrodes, and electrode selection used in shielded metal arc welding, utilizing the American Welding Society standards of acceptability to develop manual skills necessary to produce quality single and multiple pass welds in all positions using filler metals such as low hydrogen, non-low hydrogen, and iron powder electrodes commonly used in the welding industry. Prerequisite: WELD 1755.

**WELD 1771 4 CREDITS****GAS METAL ARC WELDING/ FLUX CORED ARC WELDING**

Students gain knowledge about equipment, setup and filler metal selection used in gas metal arc welding, utilizing the American Welding Society standards of acceptability to develop manual skills necessary to produce quality single and multiple pass welds in all positions using filler metals commonly used in the welding industry. Prerequisite: Completion of WELD 1755.

**WELD 1805 4 CREDITS****PIPE WELDING I**

Students gain knowledge about equipment and setup, and electrodes and electrode selection used in shielded metal arc welding. Students utilize the American Welding Society standards of acceptability to develop manual skills necessary to produce quality single and multiple pass welds in 2G and 5G pipe positions using filler metals such as low hydrogen, non-low hydrogen, and iron powder electrodes commonly used in the welding industry. Prerequisites: Completion of WELD 1760.

**WELD 1810 4 CREDITS****PIPE WELDING II**

Students continue to learn about equipment and setup, electrodes, and electrode selection used in shielded metal arc welding. Utilizing the American Welding Society's standards of acceptability, students develop manual skills necessary to produce single and multiple pass welds in 6G SMAW pipe and 5G SMAW downhill pipe positions. Students demonstrate proper use of filler metals such as low hydrogen, non-low hydrogen, and iron powder electrodes commonly used in the welding industry and also specified by the American Welding Society. Prerequisite: Completion of WELD 1805.

**WELD 1815 4 CREDITS****PIPE WELDING III**

Students gain knowledge about equipment and setup, electrodes, and electrode selection used in shielded metal arc welding, utilizing the American Welding Society standards of acceptability to develop manual skills necessary to produce quality single and multiple pass welds in 2G, 5G, and 6G pipe positions using filler metals such as low hydrogen, non-low hydrogen, and iron powder electrodes and GTAW and SMAW welding processes commonly used in the welding industry. Prerequisite: Completion of WELD 1810.

**WELD 1860 3 CREDITS****WELDING FABRICATION**

Students design and fabricate welding projects to demonstrate knowledge of a working print, estimation of cost and time, and a list of materials required. They use visual and non-destructive testing materials to evaluate for correct and sound welds. Prerequisite: Completion of WELD 1650.

**WELD 2650 4 CREDITS****GAS TUNGSTEN ARC WELDING**

Students gain knowledge of the gas tungsten arc welding process. They gain knowledge of theory, fundamentals, equipment, and safety information as well as hands-on practice with ferrous and non-ferrous metals to develop skills. Students demonstrate a high degree of eye-hand coordination to develop proficiencies necessary to complete course requirements. Prerequisite: Completion of WELD 1755.

**WELD 2680 2 CREDITS****WELDING METALLURGY**

Students gain knowledge and proficiencies to identify physical and mechanical properties, metal identification, carbon equivalency, selection of filler metal based on the parent metal, heat input (Joules), and the effects of heat on the weld zone. Students identify properties of heat treatment and stress relief applications within the weld zone.

## Wind Energy

**WTT 1000 3 CREDITS****INTRODUCTION TO WIND ENERGY**

This course introduces students to the fundamental concepts of converting energy from the wind into electricity. Students explore the past, present and future of wind energy. They discuss the various wind turbine designs, the pros and cons of each design and what designs are most prevalent in the field today. Students identify the major components that make up wind turbines, discuss in-depth the function of each component and determine the maintenance required to keep them operating at peak performance. Students calculate the capacity factor, availability rates, production rates and revenues of an individual wind turbine and discover how the wind technician contributes to each of these factors.

**WTT 1100 2 CREDITS****CLIMB SAFETY AND TOWER RESCUE TRAINING**

Students describe the requirements of a managed fall protection program. Students identify common hazards associated with working at heights as a wind turbine technician. Students calculate fall clearance requirements and determine the minimum proper fall protection equipment needed for each task. They formulate rescue plans and perform actual rescues commonly associated with wind turbines. Students complete requirements for OSHA 10-hour General Industry and First Aid/CPR certifications.

**WTT 1200 3 CREDITS****WIND TURBINE MECHANICAL SYSTEMS**

Students examine the operation and construction of wind turbine mechanical systems. They explain and perform preventive maintenance procedures and lubrication requirements. Emphasis is placed on identifying potential mechanical failures that are associated with the maintenance procedures. Students develop the skills to inspect, disassemble, and reassemble wind turbine mechanical systems using specialized tools and equipment. They demonstrate proper lubrication and preventive maintenance techniques and mechanical repair procedures. Prerequisites: Completion of IST 1660 and IST 1661.

**WTT 1300 3 CREDITS****THEORETICAL CONCEPTS OF ROTATING MACHINES**

Students engage in a comprehensive study of the operational theory of DC motors and generators, three phase AC motors and generators, and single phase and three phase transformers. Students examine the principal characteristics of these machines through lecture and demonstration. Emphasis is on motors, generators, and transformers that are used in the wind industry. Prerequisite: Completion of WTT 2500.

**WTT 2200 3 CREDITS****ADVANCED WIND TURBINE GENERATOR MECHANICAL SYSTEMS**

Students perform advanced preventative maintenance and repair procedures on wind turbine mechanical systems. They analyze failed components and identify root cause failures. Students demonstrate proper inspection techniques and provide written documentation of their results. Students interpret technical manuals and perform a job safety analysis for each task. Prerequisite: Completion of WTT 1200.

**WTT 2300 2 CREDITS****WIND TURBINE DATA ACQUISITION**

Students identify National and European schematic symbols, analyze operating characteristics, and explain the operation of interrelated wind turbine systems. Students examine measurement variables in wind turbines and explain how these variables are compiled/evaluated and then transmitted through a SCADA (Supervisory Control and Data Acquisition) system. Students analyze how data, control and feedback functions related to wind turbines are determined. This course is a comprehensive exercise in both applied schematics as well as the overall operation of a wind turbine. Prerequisites: Completion of WTT 1300 and WTT 2500.

**WTT 2400** **3 CREDITS**  
**POWER GENERATION, TRANSMISSION, AND DISTRIBUTION**

Students identify and explain the Occupational Health and Safety Administration and National Fire Protection Agency requirements as well as the risks and hazards associated with working on high voltage systems. Students apply three-phase electrical power generation characteristics to utility-scale transformers, relays, capacitors, switchgear, and related components for common configurations. Prerequisites: Completion of WTT 1300 and WTT 2500.

**WTT 2500** **3 CREDITS**  
**ADVANCED AC ELECTRICITY**

Students identify and explain semiconductor operating principles as they apply to DC and AC electrical drives and power conversion systems used in wind turbine power generation. Students also examine electrical instrumentation used for control in the operating systems of wind turbines. Prerequisite: Completion of IST 1712.

**WTT 2600** **4 CREDITS**  
**ADVANCED INDUSTRIAL MOTOR CONTROL APPLICATIONS**

Students engage in practical wiring exercises involving installation, wiring, and troubleshooting of electrical devices and equipment used in wind turbine control systems. Students demonstrate electrical and troubleshooting safety while working on both de-energized and energized circuits up to 600 volts three phase. Students examine electrical diagrams, design of electrical systems, and electrical safety. Prerequisites: Completion of WTT 1300 and WTT 2500.

## **Women's Studies**

**WMST 2389** **3 CREDITS**  
**HISTORY OF WOMEN AND THE AMERICAN WEST**

Students survey the roots of society's marginal historical depiction of women in the American West from the colonial period through the twentieth century. Students develop a multi-dimensional understanding of women's roles using an interdisciplinary approach from the perspectives of race, class, ethnicity, and gender. Cross-listed with HIST 2389. Prerequisite: Completion of ENGL 0810 or placement into ENGL 1010.

## **Zoology**

**ZOO 2010** **4 CREDITS**  
**ANATOMY AND PHYSIOLOGY I**

The first semester of a two-semester course in which students explore the structure and function of the human body. Students examine the following systems: integumentary, skeletal, muscular, nervous systems, and the special senses. Students develop vocabulary including histology and directional and anatomical terms. Students explore homeostatic and functional mechanisms from a molecular, cellular, and organ level. Students are recommended to complete CHEM 1000 or higher prior to enrolling in this course. Prerequisite: Completion of or concurrent enrollment in MATH 1400 or completion of BIOL 1010.

**ZOO 2015** **4 CREDITS**  
**HUMAN ANATOMY**

Students study the structure of the human body. Students consider each organ system from a basis of tissue and gross structure. Students also explore the impact of the study of human anatomy upon history and upon modern society. Prerequisite: Completion of or concurrent enrollment in MATH 1400 or higher, or completion of BIOL 1010.

**ZOO 2020** **4 CREDITS**  
**ANATOMY AND PHYSIOLOGY II**

The second semester of a two-semester course in which the student continues to explore the structure and function of the human body. During the second semester, students examine the following organ systems: endocrine, lymphatic and immune, cardiovascular, respiratory, digestive, urinary, and reproductive. Additionally, students expand their vocabulary of histology, directional, and anatomical terms and acquire knowledge in homeostatic and functional mechanisms from a molecular, cellular, and organ level. Prerequisite: Completion of ZOO 2010.

**ZOO 2025** **4 CREDITS**  
**HUMAN PHYSIOLOGY**

Students explore function in the human body including homeostatic and functional mechanisms at the molecular and cellular levels through the level of organ systems. Students apply fundamental principles to explain the performance and regulation of body functions. Students are recommended to complete BIOL 1010, or CHEM 1000 or higher prior to enrolling in this course. Prerequisite: Completion of ZOO 2015.

**ZOO 2450** **3 CREDITS**  
**WILDLIFE MANAGEMENT**

Students acquire knowledge in this introductory course in wildlife management history on policy, and ecology related to wildlife management, the importance of human dimensions, differing wildlife values of stakeholders, economic considerations, and current issues in wildlife management. Students develop a wildlife management plan on a current wildlife management issue. Students also gain knowledge in the education, skills sets, and experience needed to gain employment in a wildlife management field and develop a resume. Offered in spring semesters. Prerequisite: Completion of BIOL 1010.

# Administration and Full-Time Faculty

**Kristin Abraham**, Instructor, English, BA, Central Michigan University; MFA, West Virginia University

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**Megan Shifflett**, Trainer, Athletics  
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**Sarah Smith**, Analyst, Data  
**Michael Smith**, Specialist, Visual Media  
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