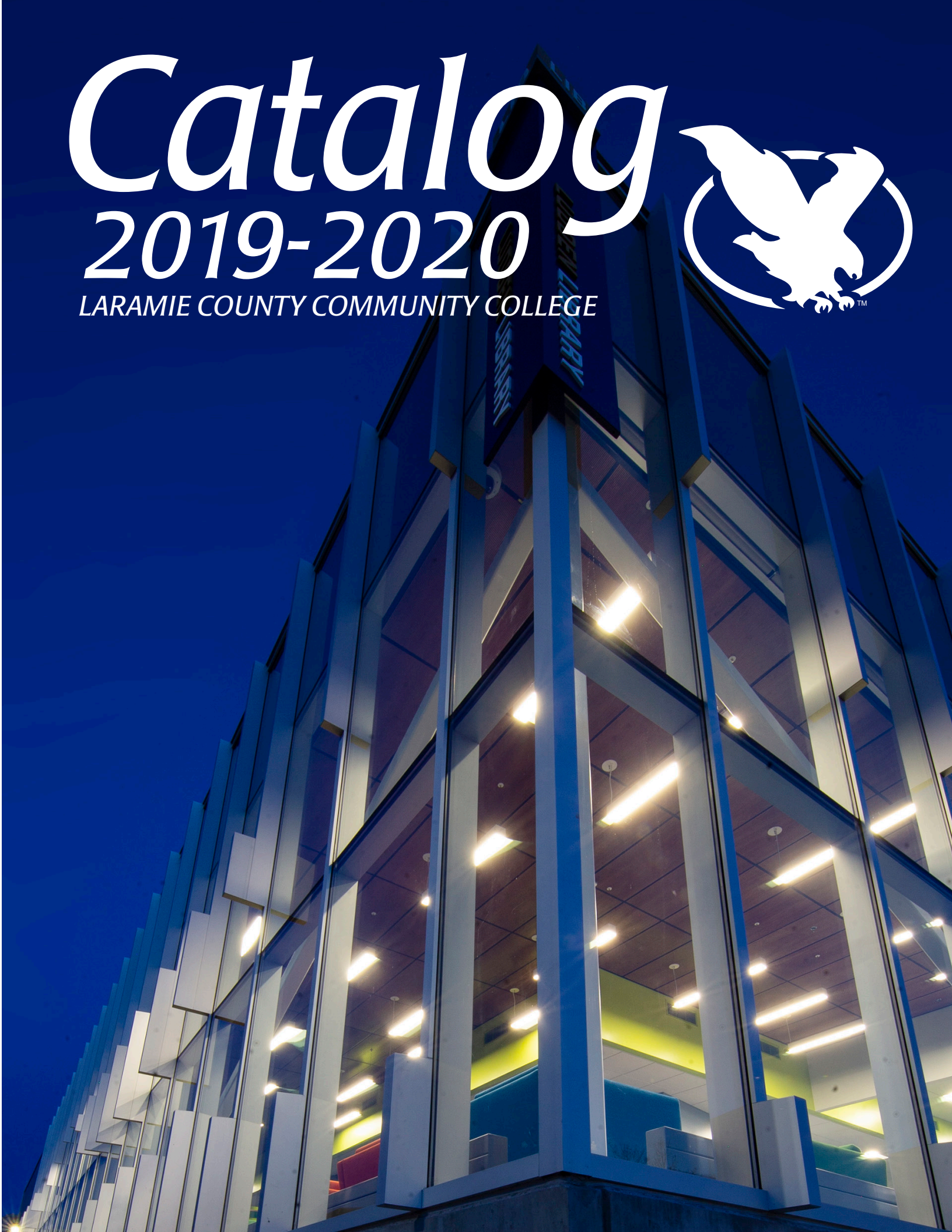


# Catalog

## 2019-2020



LARAMIE COUNTY COMMUNITY COLLEGE





# Laramie County Community College

## Catalog 2019-2020

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### **Serving Southeast Wyoming**

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The College has a designated person to monitor compliance and to answer any questions regarding the college's non-discrimination policies. Please contact: Title IX and ADA Coordinator, Suite 205, Clay Pathfinder Building, 1400 E College Drive, Cheyenne, WY 82007, 307.778.1217, [TitleIX\\_ADA@lccc.wy.edu](mailto:TitleIX_ADA@lccc.wy.edu).

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# LCCC Academic Calendar 2019-2020

## Fall Semester 2019

Aug. 2 . . . . . Fall tuition payments due (after this date, payment is due upon registration)

Aug. 9 . . . . . Administrative Drop for Nonpayment

Aug. 14-20 . . . . Faculty Planning and College In-Service

**Aug. 20** . . . . . Last Day to Register **A Block (A16, A8)**

**Aug. 21** . . . . . Fall Semester **A Block (A16, A8)** week) Classes Begin

**Aug. 27** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**A8**)

Aug. 31-Sept. 1 . Saturday and Sunday Classes Do Not Meet This Weekend Prior to Labor Day

Sept. 2 . . . . . Labor Day, College closed

**Sept. 3** . . . . . Last Day to Register **B Block (B14)**

**Sept. 4** . . . . . First Day of Classes (**B14**)

**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. 10 . . . . . First Financial Aid Disbursement

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

Sept. 13 . . . . . First Financial Aid Refunds Issued by Accounting

**Sept. 16** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**B14**)

**Sept. 17** . . . . . Midterm (**A8**)

**Sept. 17** . . . . . Last Day to Register **B Block (B12)**

**Sept. 18** . . . . . First Day of Classes (**B12**)

**Sept. 23** . . . . . End of 50% Refund Period (**B14**)

**Sept. 26** . . . . . Last Day to Withdraw (**A8**)

**Sept. 26** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**B12**)

Sept. 27 . . . . . Fall 2019 Graduation Applications Due

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

Oct. 11 . . . . . Fall Break, College closed

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

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

**Oct. 15** . . . . . Last Day to Register **B Block (B8)**

**Oct. 16** . . . . . First Day of Classes (**B8**)

**Oct. 22** . . . . . Midterm (**B14**)

**Oct. 22** . . . . . 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**)

**Oct. 30** . . . . . Last Day to Withdraw (**A16**)

**Nov. 4** . . . . . Last Day to Withdraw (**B14**)

Nov. 5 . . . . . Spring and Summer Registration Begins for Currently Enrolled Students

**Nov. 11** . . . . . Last Day to Withdraw (**B12**)

Nov. 12 . . . . . Spring and Summer Registration Open for All Students

**Nov. 12** . . . . . Midterm (**B8**)

**Nov. 21** . . . . . Last Day to Withdraw (**B8**)

Nov. 27-Dec. 1 . Thanksgiving Holiday, College closed

Dec. 2 . . . . . Classes Resume

Dec. 6 . . . . . Spring Tuition Payments Due

Dec. 13 . . . . . Spring Semester Administrative Drop for Nonpayment

**Dec. 13** . . . . . Last Day of Fall Semester (**A16, B14, B12, B8**)

Dec. 16 . . . . . Grading Day (Grades Due noon)

Dec. 24-Jan. 1 . Winter Break, College closed

## Spring Semester 2020

Dec. 6 . . . . . Spring Tuition Payments Due

Dec. 13 . . . . . Spring Semester Administrative Drop for Nonpayment

Jan. 14-17 . . . . Faculty Planning and College In-Service

Jan. 20 . . . . . Martin Luther King/Equality Day, College closed

**Jan. 20** . . . . . Last Day to Register **A Block (A16, A8)**

**Jan. 21** . . . . . Spring Semester **A Block (A16, A8)** Classes Begin

**Jan. 27** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**A8**)

**Feb. 3** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**A16**)

**Feb. 3** . . . . . End of 50% Refund Period (**A8**)

**Feb. 3** . . . . . Last Day to Register **B Block (B14)**

**Feb. 4** . . . . . First Day of Classes **B Block (B14)**

Feb. 4 . . . . . First Financial Aid Disbursement

Feb. 7 . . . . . First Financial Aid Refunds Issued by Accounting

**Feb. 10** . . . . . End of 50% Refund Period (**A16**)

**Feb. 14** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**B14**)

Feb. 14 . . . . . 2020 Spring Graduation Applications Due

Feb. 17 . . . . . President's Day, College closed

**Feb. 17** . . . . . Last Day to Register **B Block (B12)**

**Feb. 18** . . . . . First Day of Classes (**B12**)

**Feb. 18** . . . . . Midterm (**A8**)

**Feb. 21** . . . . . End of 50% Refund Period (**B14**)

**Feb. 26** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**B12**)

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

**March 4** . . . . . End of 50% Refund Period (**B12**)

March 14-15 . . Saturday and Sunday Classes Meet this Weekend

March 16-20 . . Spring Break No Classes (college services available Monday through Thursday)

March 20 . . . . . College Closed

March 23 . . . . . Classes Resume

**March 23** . . . . . Midterm (**A16**)

**March 23** . . . . . Last Day of Classes (**A8**)

**March 23** . . . . . Last Day to Register **B Block (B8)**

**March 24** . . . . . First Day of Classes (**B8**)

**March 30** . . . . . Midterm (**B14**)

**March 30** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**B8**)

**April 6** . . . . . Midterm (**B12**)

**April 6** . . . . . End of 50% Refund Period (**B8**)

**April 6** . . . . . Last Day to Withdraw (**A16**)

April 7 . . . . . Fall Registration Begins for Currently Enrolled Students

**April 13** . . . . . Last Day to Withdraw (**B14**)

April 14 . . . . . Fall Registration Open for All Students

**April 17** . . . . . Last Day to Withdraw (**B12**)

**April 20** . . . . . Midterm (**B8**)

**April 27** . . . . . Last Day to Withdraw (**B8**)

**May 15** . . . . . Last Day for Spring Semester (**A16, B14, B12, B8**)

May 16 . . . . . Commencement

May 18 . . . . . 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 2020

April 7 . . . . .	Summer Financial Aid Applications Available
May 8 . . . . .	Summer Tuition Payments Due (after this date, payment is due upon registration)
May 25 . . . . .	Memorial Day, College closed
<b>May 31</b> . . . . .	Last Day to Register for <b>A Block (A8, A5)</b>
<b>June 1</b> . . . . .	Summer Semester <b>A Block (A8, A5)</b> Classes Begin
<b>June 4</b> . . . . .	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund <b>(A5)</b>
June 5 . . . . .	2020 Summer Graduation Applications Due
<b>June 5</b> . . . . .	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund <b>(A8)</b>
June 9 . . . . .	First Financial Aid Disbursement
<b>June 11</b> . . . . .	End of 50% Refund Period <b>(A5)</b>
<b>June 12</b> . . . . .	End of 50% Refund Period <b>(A8)</b>
June 12 . . . . .	First Financial Aid Refunds Issued by Accounting
June 12 . . . . .	College Closed at Noon/No Classes, afternoon only
<b>June 17</b> . . . . .	Midterm <b>(A5)</b>
<b>June 21</b> . . . . .	Last Day to Register <b>B Block (B5)</b>
<b>June 22</b> . . . . .	First Day of Classes <b>(B5)</b>
<b>June 22</b> . . . . .	Last day to Withdraw <b>(A5)</b>
<b>June 25</b> . . . . .	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund <b>(B5)</b>
<b>June 26</b> . . . . .	Midterm <b>(A8)</b>
<b>July 2</b> . . . . .	End of 50% Refund Period <b>(B5)</b>
<b>July 2</b> . . . . .	Last day of Classes <b>(A5)</b>
July 3 . . . . .	Independence Day, College closed
<b>July 6</b> . . . . .	Last day to Withdraw <b>(A8)</b>
<b>July 8</b> . . . . .	Midterm <b>(B5)</b>
July 10 . . . . .	Laramie Jubilee Day (no classes/Albany County Campus Closed)
<b>July 13</b> . . . . .	Last Day to Withdraw <b>(B5)</b>
July 22 . . . . .	Cheyenne Day (no classes/Cheyenne Campus Closed)
<b>July 24</b> . . . . .	Last Day of Summer Classes <b>(A8, B5)</b>
July 27 . . . . .	Grades Due at 12 Noon

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

## Calendar Blocks — Fall 2019

### A16 – August 21 to December 13

**Aug. 20** . . . . . Last Day to Register **A Block (A16)**  
**Aug. 21** . . . . . Fall Semester **A Block (A16)** week) Classes Begin  
 Aug. 31-Sept. 1 . . . . . Saturday and Sunday Classes Do Not Meet This Weekend Prior to Labor Day  
 Sept. 2 . . . . . Labor Day, College closed  
**Sept. 4** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund **(A16)**  
 Sept. 10 . . . . . First Financial Aid Disbursement  
**Sept. 11** . . . . . End of 50% Refund Period **(A16)**  
 Sept. 13 . . . . . First Financial Aid Refunds Issued by Accounting  
 Sept. 27 . . . . . Fall 2019 Graduation Applications Due  
 Oct. 11 . . . . . Fall Break, College closed  
**Oct. 15** . . . . . Midterm **(A16)**  
**Oct. 30** . . . . . Last Day to Withdraw **(A16)**  
 Nov. 5 . . . . . Spring and Summer Registration Begins for Currently Enrolled Students  
 Nov. 12 . . . . . Spring and Summer Registration Open for All Students  
 Nov. 27-Dec. 1 . . . . . Thanksgiving Holiday, College closed  
 Dec. 2 . . . . . Classes Resume  
 Dec. 6 . . . . . Spring Tuition Payments Due  
 Dec. 13 . . . . . Spring Semester Administrative Drop for Nonpayment  
**Dec. 13** . . . . . Last Day of Fall Semester **(A16)**  
 Dec. 16 . . . . . Grading Day (Grades Due noon)

### B14 – September 4 to December 13

**Sept. 3** . . . . . Last Day to Register **B Block (B14)**  
**Sept. 4** . . . . . First Day of Classes **(B14)**  
 Sept. 10 . . . . . First Financial Aid Disbursement  
 Sept. 13 . . . . . First Financial Aid Refunds Issued by Accounting  
**Sept. 16** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund **(B14)**  
**Sept. 23** . . . . . End of 50% Refund Period **(B14)**  
 Sept. 27 . . . . . Fall 2019 Graduation Applications Due  
 Oct. 11 . . . . . Fall Break, College closed  
**Oct. 22** . . . . . Midterm **(B14)**  
**Nov. 4** . . . . . Last Day to Withdraw **(B14)**  
 Nov. 5 . . . . . Spring and Summer Registration Begins for Currently Enrolled Students  
 Nov. 12 . . . . . Spring and Summer Registration Open for All Students  
 Nov. 27-Dec. 1 . . . . . Thanksgiving Holiday, College closed  
 Dec. 2 . . . . . Classes Resume  
 Dec. 6 . . . . . Spring Tuition Payments Due  
 Dec. 13 . . . . . Spring Semester Administrative Drop for Nonpayment  
**Dec. 13** . . . . . Last Day of Fall Semester **(B14)**  
 Dec. 16 . . . . . Grading Day (Grades Due noon)

### B12 – September 18 to December 13

Sept. 10 . . . . . First Financial Aid Disbursement  
 Sept. 13 . . . . . First Financial Aid Refunds Issued by Accounting  
**Sept. 17** . . . . . Last Day to Register **B Block (B12)**  
**Sept. 18** . . . . . First Day of Classes **(B12)**  
**Sept. 26** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund **(B12)**  
 Sept. 27 . . . . . Fall 2019 Graduation Applications Due  
**Oct. 3** . . . . . End of 50% Refund Period **(B12)**  
 Oct. 11 . . . . . Fall Break, College closed  
**Oct. 29** . . . . . Midterm **(B12)**  
 Nov. 5 . . . . . Spring and Summer Registration Begins for Currently Enrolled Students  
**Nov. 11** . . . . . Last Day to Withdraw **(B12)**  
 Nov. 12 . . . . . Spring and Summer Registration Open for All Students  
 Nov. 27-Dec. 1 . . . . . Thanksgiving Holiday, College closed  
 Dec. 2 . . . . . Classes Resume  
 Dec. 6 . . . . . Spring Tuition Payments Due  
 Dec. 13 . . . . . Spring Semester Administrative Drop for Nonpayment  
**Dec. 13** . . . . . Last Day of Fall Semester **(B12)**  
 Dec. 16 . . . . . Grading Day (Grades Due noon)

### A8 – August 21 to October 15

**Aug. 20** . . . . . Last Day to Register **A Block (A8)**  
**Aug. 21** . . . . . Fall Semester **A Block (A8)** week) Classes Begin  
**Aug. 27** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund **(A8)**  
 Aug. 31-Sept. 1 . . . . . Saturday and Sunday Classes Do Not Meet This Weekend Prior to Labor Day  
 Sept. 2 . . . . . Labor Day, College closed  
**Sept. 4** . . . . . End of 50% Refund Period **(A8)**  
 Sept. 10 . . . . . First Financial Aid Disbursement  
 Sept. 13 . . . . . First Financial Aid Refunds Issued by Accounting  
**Sept. 17** . . . . . Midterm **(A8)**  
**Sept. 26** . . . . . Last Day to Withdraw **(A8)**  
 Sept. 27 . . . . . Fall 2019 Graduation Applications Due  
 Oct. 11 . . . . . Fall Break, College closed  
**Oct. 15** . . . . . Last Day of Classes **(A8)**  
 Nov. 5 . . . . . Spring and Summer Registration Begins for Currently Enrolled Students  
 Nov. 12 . . . . . Spring and Summer Registration Open for All Students  
 Nov. 27-Dec. 1 . . . . . Thanksgiving Holiday, College closed  
 Dec. 2 . . . . . Classes Resume  
 Dec. 6 . . . . . Spring Tuition Payments Due  
 Dec. 13 . . . . . Spring Semester Administrative Drop for Nonpayment  
 Dec. 16 . . . . . Grading Day (Grades Due noon)

### B8 – October 16 to December 13

Sept. 10 . . . . . First Financial Aid Disbursement  
 Sept. 13 . . . . . First Financial Aid Refunds Issued by Accounting  
 Sept. 27 . . . . . Fall 2019 Graduation Applications Due  
**Oct. 15** . . . . . Last Day to Register **B Block (B8)**  
**Oct. 16** . . . . . First Day of Classes **(B8)**  
**Oct. 22** . . . . . 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. 5 . . . . . Spring and Summer Registration Begins for Currently Enrolled Students  
 Nov. 12 . . . . . Spring and Summer Registration Open for All Students  
**Nov. 12** . . . . . Midterm **(B8)**  
**Nov. 21** . . . . . Last Day to Withdraw **(B8)**  
 Nov. 27-Dec. 1 . . . . . Thanksgiving Holiday, College closed  
 Dec. 2 . . . . . Classes Resume  
 Dec. 6 . . . . . Spring Tuition Payments Due  
 Dec. 13 . . . . . Spring Semester Administrative Drop for Nonpayment  
**Dec. 13** . . . . . Last Day of Fall Semester **(B8)**  
 Dec. 16 . . . . . Grading Day (Grades Due noon)

## Calendar Blocks — Spring 2020

### A16 – January 21 to May 15

Jan. 20 . . . . . Martin Luther King/Equality Day, College closed  
**Jan. 20** . . . . . Last Day to Register **A Block (A16)**  
**Jan. 21** . . . . . Spring Semester **A Block (A16)** Classes Begin  
**Feb. 3** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**A16**)  
 Feb. 4 . . . . . First Financial Aid Disbursement  
 Feb. 7 . . . . . First Financial Aid Refunds Issued by Accounting  
**Feb. 10** . . . . . End of 50% Refund Period (**A16**)  
 Feb. 14 . . . . . 2020 Spring Graduation Applications Due  
 Feb. 17 . . . . . President's Day, College closed  
 March 14-15 . . Saturday and Sunday Classes Meet this Weekend  
 March 16-20 . . Spring Break No Classes (college services available Monday through Thursday)  
 March 20 . . . . . College Closed  
 March 23 . . . . . Classes Resume  
**March 23** . . . . . Midterm (**A16**)  
**April 6** . . . . . Last Day to Withdraw (**A16**)  
 April 7 . . . . . Fall Registration Begins for Currently Enrolled Students  
 April 14 . . . . . Fall Registration Open for All Students  
**May 15** . . . . . Last Day for Spring Semester (**A16**)  
 May 16 . . . . . Commencement  
 May 18 . . . . . Grading Day (Grades Due at noon)

### B14 – February 4 to May 15

**Feb. 3** . . . . . Last Day to Register **B Block (B14)**  
**Feb. 4** . . . . . First Day of Classes **B Block (B14)**  
 Feb. 4 . . . . . First Financial Aid Disbursement  
 Feb. 7 . . . . . First Financial Aid Refunds Issued by Accounting  
**Feb. 14** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**B14**)  
 Feb. 14 . . . . . 2020 Spring Graduation Applications Due  
 Feb. 17 . . . . . President's Day, College closed  
**Feb. 21** . . . . . End of 50% Refund Period (**B14**)  
 March 14-15 . . Saturday and Sunday Classes Meet this Weekend  
 March 16-20 . . Spring Break No Classes (college services available Monday through Thursday)  
 March 20 . . . . . College Closed  
 March 23 . . . . . Classes Resume  
**March 30** . . . . . Midterm (**B14**)  
 April 7 . . . . . Fall Registration Begins for Currently Enrolled Students  
**April 13** . . . . . Last Day to Withdraw (**B14**)  
 April 14 . . . . . Fall Registration Open for All Students  
**May 15** . . . . . Last Day for Spring Semester (**B14**)  
 May 16 . . . . . Commencement  
 May 18 . . . . . Grading Day (Grades Due at noon)

### A8 – January 21 to March 23

Jan. 20 . . . . . Martin Luther King/Equality Day, College closed  
**Jan. 20** . . . . . Last Day to Register **A Block (A8)**  
**Jan. 21** . . . . . Spring Semester **A Block (A8)** Classes Begin  
**Jan. 27** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**A8**)  
**Feb. 3** . . . . . End of 50% Refund Period (**A8**)  
 Feb. 4 . . . . . First Financial Aid Disbursement  
 Feb. 7 . . . . . First Financial Aid Refunds Issued by Accounting  
 Feb. 14 . . . . . 2020 Spring Graduation Applications Due  
 Feb. 17 . . . . . President's Day, College closed  
**Feb. 18** . . . . . Midterm (**A8**)  
**Feb. 28** . . . . . Last Day to Withdraw (**A8**)  
 March 14-15 . . Saturday and Sunday Classes Meet this Weekend  
 March 16-20 . . Spring Break No Classes (college services available Monday through Thursday)  
 March 20 . . . . . College Closed  
 March 23 . . . . . Classes Resume  
**March 23** . . . . . Last Day of Classes (**A8**)  
 April 7 . . . . . Fall Registration Begins for Currently Enrolled Students  
 April 14 . . . . . Fall Registration Open for All Students  
 May 16 . . . . . Commencement  
 May 18 . . . . . Grading Day (Grades Due at noon)

### B12 – February 18 to May 15

Feb. 4 . . . . . First Financial Aid Disbursement  
 Feb. 7 . . . . . First Financial Aid Refunds Issued by Accounting  
 Feb. 14 . . . . . 2020 Spring Graduation Applications Due  
 Feb. 17 . . . . . President's Day, College closed  
**Feb. 17** . . . . . Last Day to Register **B Block (B12)**  
**Feb. 18** . . . . . First Day of Classes (**B12**)  
**Feb. 26** . . . . . 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 14-15 . . Saturday and Sunday Classes Meet this Weekend  
 March 16-20 . . Spring Break No Classes (college services available Monday through Thursday)  
 March 20 . . . . . College Closed  
 March 23 . . . . . Classes Resume  
**April 6** . . . . . Midterm (**B12**)  
 April 7 . . . . . Fall Registration Begins for Currently Enrolled Students  
 April 14 . . . . . Fall Registration Open for All Students  
**April 17** . . . . . Last Day to Withdraw (**B12**)  
**May 15** . . . . . Last Day for Spring Semester (**B12**)  
 May 16 . . . . . Commencement  
 May 18 . . . . . Grading Day (Grades Due at noon)

### B8 – March 24 to May 15

Feb. 4 . . . . . First Financial Aid Disbursement  
 Feb. 7 . . . . . First Financial Aid Refunds Issued by Accounting  
 Feb. 14 . . . . . 2020 Spring Graduation Applications Due  
**March 23** . . . . . Last Day to Register **B Block (B8)**  
**March 24** . . . . . First Day of Classes (**B8**)  
**March 30** . . . . . Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund (**B8**)  
**April 6** . . . . . End of 50% Refund Period (**B8**)  
 April 7 . . . . . Fall Registration Begins for Currently Enrolled Students  
 April 14 . . . . . Fall Registration Open for All Students  
**April 20** . . . . . Midterm (**B8**)  
**April 27** . . . . . Last Day to Withdraw (**B8**)  
**May 15** . . . . . Last Day for Spring Semester (**B8**)  
 May 16 . . . . . Commencement  
 May 18 . . . . . Grading Day (Grades Due at noon)





# 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 meets on the third Wednesday of each month for its regular business meeting, with study sessions on the first Wednesday of each month. 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.

### **2019 LCCC Foundation Board of Directors**

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

### **LCCC Foundation Staff**

Lisa Trimble, Associate VP of Institutional Advancement  
Melissa Dishman, Coordinator of Scholarships and Annual Giving  
Kimberly Freimuth, Executive Administrative Assistant  
Lisa Murphy, Director of Event Planning and Alumni Affairs  
Scott VanHorn, Development Officer, Major Gifts

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.
- 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.
- 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 (Emergency Medical Services–Paramedics and Surgical Technology).
- 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.
- 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 23 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 fall of 2020 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, Fine Arts (to undergo major renovation in 2019-20), 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.

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

### **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 placement testing are provided, along with Adult Education programming, non-credit community life enrichment courses, English language assistance, and much more.

The Laramie campus is expanding its classroom space and will open two new larger classrooms and one renovated classroom in the fall of 2019, adding 931 square feet to the building. One of the new classrooms will be a wet lab/art room, and the other will be a large classroom that will accommodate up to 50 students. The renovated classroom will be a new science lab to better serve the science education needs.

The Laramie campus holds classes at the Laramie High School for Automotive Mechanics and Certified Nurses Assistant programs 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 eDSSST 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; and one-person, private, super-single rooms. These halls have an overall capacity of 276 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.

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 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.

## **Ludden Library**

307.778.1205 (circulation desk);  
307.778.1206 (information desk);  
libref@lccc.wy.edu (email); lccc.wy.edu/library

The library strives to meet the research needs of LCCC students through integrated access to print and electronic resources, technology services, and a knowledgeable staff to support student learning. The library catalog provides access to the Ludden Library physical and electronic collections as well as library collections throughout the state of Wyoming via the WYLD Network.

The Ludden Library offers an inviting atmosphere, including computer workstations, study rooms, a family study room, Innovation Lab, Apple Computers, anatomy models, and laptops for checkout. Copying, scanning, faxing, and laminating capabilities are also available. Information literacy instruction is provided formally, and on-demand. Contact the staff with any questions regarding how to access materials, find quality research sources, and correctly cite and use those resources in assignments. To take advantage of library resources, call or visit the library to activate the library card barcode on the back of the student ID.

## **Recreation and Athletics Complex**

Recreation & Athletics Complex (RAC), 307.778.1385

The College has a physical education recreation facility that is fully equipped to provide a variety of physical education courses and recreational and athletic opportunities for LCCC students and the residents of Laramie County. The physical education recreational facilities include a training room, a climbing wall, weight room, strength center, aerobic center, swimming pool, two-lane indoor running track, indoor tennis courts, racquetball courts, and basketball and volleyball courts.

Outdoor recreational and athletic facilities include soccer fields, disk golf course, sand volleyball, and on-campus access to the Greater Cheyenne Greenway bicycle and walking paths.

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

The Student Computer Center offers computer stations, color and black and white printing capabilities (using the semester printing allowance), as well as 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/](http://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.

## **Smart Classrooms**

Most of the classrooms at LCCC are Smart Classrooms equipped with either an Interactive LCD touch screen monitor, or SMART boards with ceiling mounted projectors. Other equipment installed in the classrooms include a podium computer, webcam, sound system, wireless lapel microphone, document camera, laptop connection, and touch screen control panel.

## **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 307.721.5138.

## **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 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 educational programs or activities.

Inquiries concerning Title VI, Title VII, Title IX, Section 504, and the Americans with Disabilities Act may be referred to Vice President of Student Services, Suite 205, Clay Pathfinder Building, 307.778.1217 or Executive Director of Human Resources, Room 148, Administration Building, 307.778.1258. Inquiries also may be made to the Office for Civil Rights, U.S. Department of Education, 1244 Speer Boulevard, Suite 310, Denver, CO 80204, or Equal Employment Opportunity Commission, 303 East 17th Avenue, Suite 510, Denver, CO 80203. The Nondiscrimination and Anti-Harassment Procedure is available at [lccc.wy.edu/nds](http://lccc.wy.edu/nds).

Title IX of the Education Amendments 1972 (20 U.S.C. § 1681 et seq.) and its implementing regulations, 34 C.F.R. Part 106, prohibit discrimination on the basis of sex in education programs or activities operated by recipients of federal financial assistance. Sexual harassment of student or employee, which includes acts of sexual violence, is a form of sex discrimination prohibited by Title IX. For further information, go to the LCCC website at [lccc.wy.edu](http://lccc.wy.edu), or contact the Title IX and ADA Coordinator, Suite 205, Clay Pathfinder Building, 1400 E College Drive, Cheyenne, WY 82007, 307.778.1217, [TitleIX\\_ADA@lccc.wy.edu](mailto:TitleIX_ADA@lccc.wy.edu).

## 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 without either of the above measures will be directed to prepare for and take the tests provided in the Testing Center for placement into the correct levels of math and English.
- C. 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 (listed above); see Page 22 for information regarding transferability of courses from other institutions.
- D. Students auditing courses do not need to provide proof of academic eligibility (see Page 19).
- E. Students who doubt their own readiness for college-level courses, regardless of their high school GPA or ACT scores, are welcomed to take placement exams for better advice.

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

### **Exemptions**

Students must take the placement tests in order to show proof of meeting course prerequisites. The placement test may be waived if the following applies:

- A. The Office of the Registrar will evaluate transcripts to determine if courses taken will meet college prerequisites. Students transferring from a regionally accredited college/university who present official transcripts indicating successful completion of course work may be exempted as follows:
  1. Exemption from math placement exam: Completion of a college-level mathematics course with a grade of C or higher. It is highly recommended that those students who still need to enroll in MATH 1000 or MATH 1400 take the math placement exam to ensure appropriate math course selection.
  2. Exemption from English placement exam: Completion of a college English course equivalent to ENGL 1010 with a grade of C or higher.
- B. Students who audit courses.

### **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 declared major. *Students working more than 15 hours a week are strongly advised to reduce their course loads accordingly.*

### **Course or Class Schedule Changes**

In order to make changes to his/her class schedule, the student must do the following:

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. The school dean's signature and a Withdrawal After the Deadline (also available at the Student Hub) form is required for dropping a course after the withdrawal date.
4. Return the completed form to the Student Hub.

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.

## Withdrawal Procedures

If a student must withdraw from a course, that student should initiate the process by obtaining and completing an Add/Drop or Withdrawal After the Deadline form from the Student Hub. For a 16-week course, a student may withdraw any time prior to the last day to withdraw listed in the Academic Calendar. A grade of "W" will be noted on the transcript for any course from which the student withdraws after the 10th business day of the semester for 16 week course. All courses that are less than a full semester in length will have the "drop period" and the grade of "W" adjusted accordingly.

Students completely withdrawing from the College are required to see an academic advisor prior to the withdrawal. Students receiving federal financial aid are also strongly encouraged to discuss the financial aid ramifications with their advisor and/or the Student Hub prior to the withdrawal. Any exception to this withdrawal policy must be presented by the student or the instructor to the appropriate school dean.

Students seeking a retroactive withdrawal must seek approval from the Registrar prior to the withdrawal.

## 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, but is not limited to, 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 student fees are for the academic year 2019-2020. Tuition and fees are subject to change. Please check the website for current rates.

### Wyoming Resident (15 or more hours)

Tuition .....	\$ 1,485.00 a semester
Student Fees .....	\$ 731.25 a semester
Total.....	\$ 2,216.25 a semester

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

Tuition .....	\$ 4,455.00 a semester
Student Fees .....	\$ 731.25 a semester
Total.....	\$ 5,186.25 a semester

### WUE (Western Undergraduate Exchange)

(15 or more hours)\*

Tuition .....	\$ 2,220.00 a semester
Student Fees .....	\$ 731.25 a semester
Total.....	\$ 2,951.25 a semester

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
Total.....	\$ 147.75 a credit hour/semester

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

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

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

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

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
Compressed 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 2019	* July 25	15%	4	Aug-Nov
	* August 24	25%	3	Sept-Nov
	* September 9 B Block Only	35%	2	Oct & Nov
Spring 2020	* December 13	15%	4	Jan-Apr
	* January 22	25%	3	Feb-Apr
	* February 4 B Block Only	35%	2	Mar & Apr
Summer 2020	* May 8	25%	2	June & July
	* June 9 B Block Only	50%	1	July Only

**\*Dates are subject to change. Please check Eagles Eye 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 refund checks 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 continuing education and life enrichment noncredit courses. Please see the current Life Enrichment 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 majors determines the degree or certificate requirements for graduation. Students who have a break in attendance of one (1) semester, excluding summer semester, must meet the degree or certificate requirements of the catalog in use at the time of readmission even if they are not changing majors.

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, scored at an equivalent level on the college placement test, 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 15.

### **Class Attendance**

Students are expected to attend all classes for which they enroll. 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.

### **Withdrawal**

For any course that is officially dropped after the 10th business day of the semester, a grade of "W" will be noted on the transcript. All courses that are less than a full semester in length will have the "drop period" and the grade of "W" adjusted accordingly.

### **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 compressed video 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.

### **Compressed Video Courses**

Compressed video courses use communication technology to allow students at separate locations to receive instruction simultaneously. While students in a compressed video 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 Testing Center, Clay Pathfinder Building, Suite 119, 307.778.1105, [testcenter@lccc.wy.edu](mailto:testcenter@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 Testing Center (Clay Pathfinder Building, Suite 119, 307.778.1105, [testcenter@lccc.wy.edu](mailto:testcenter@lccc.wy.edu)).
2. CLEP and DSST examinations will be administered by scheduled appointment.
3. All CLEP and DSST subject examinations are administered in the LCCC Testing Center. CLEP and DSST subject examinations are also administered at F.E. Warren Air Force Base.
4. Students may contact the Testing Center 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 23-24. 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 <b>and</b> 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 <b>and</b> 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 <b>and</b> 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 <b>and</b> 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 <b>and</b> CHEM 1030	8	General Chemistry I General Chemistry II
Chemistry SL	5+	CHEM 1000	4	Introductory Chemistry
Physics HL	4	PHYS 1110 <b>and</b> 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 and 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 defines diversity as that quality of its physical, social, cultural, and intellectual environment that embraces the rich differences within the multiplicity of human expression and characteristics, including but not limited to, age; culture; ethnicity; gender identification and presentation; health status; language and linguistic ability; life experiences; nationality; political viewpoints; race; religion; sexual orientation; socioeconomic status; veteran status; and mobility, sensory, or perceptual ability.

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

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.  
[lccc.wy.edu/dsshandbook](http://lccc.wy.edu/dsshandbook)

## 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 is a federally funded program thTRIO Student Support Services 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 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.

## Testing Center

Clay Pathfinder Building, Suite 119, 307.778.1105  
Albany County Campus, Room 218A, 307.772.4246

The LCCC Testing Center offers a variety of testing opportunities for students and the community. Tests offered include: College Level Examination Program (CLEP) tests, DSST (formerly DANTEs), LCCC departmental exams, Nursing exams for entry level and advanced placement, and other standardized testing instruments. Academic skills assessment (placement test) is described on Page 15.

## 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). If a student is convicted of drug distribution or possession, the court may suspend eligibility for Title IV financial aid.

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 CCC 138 (interim location for Fall 2018), 307.778.4315 [tutors@lccc.wy.edu](mailto:tutors@lccc.wy.edu) [lccc.wy.edu/academics/services/studentsuccess.aspx](http://lccc.wy.edu/academics/services/studentsuccess.aspx)

Tutoring in all core academic subjects, as well as reading, writing, and public speaking support is available seven days a week, in person and online from LCCC tutors. Students can contact the Learning Commons to schedule an appointment or to ask about drop-in hours. 24x7 online tutoring is also available through NetTutor.com which students can access via Canvas. All services are free to currently enrolled LCCC students.

## Exam Lab

Clay Pathfinder Building, Suite 121, 307.778.1274 [lccc.wy.edu/academics/services/examLab.aspx](http://lccc.wy.edu/academics/services/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 Campus,  
Clay Pathfinder Building, First Floor, 307.778.1114  
Albany County Campus, 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 at the offices of Campus Safety (outside of Modular 106; outside of Business Technology 213), in the Ludden Library and Learning Commons, and on the first floor lobby bulletin board in the Clay Pathfinder Building. 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 (AT112 and AT115). 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 2015 fall semester, 485 first-time, full-time, degree- or certificate-seeking students enrolled at Laramie County Community College (LCCC). Of this group, referred to as the fall 2015 graduation rate cohort, 138 (28.45%) had graduated from LCCC and 103 (21.24%) had transferred to another college or university by August 31, 2018.

The fall 2015 graduation rate cohort included 45 students who received student aid related to an athletics program. Of this group, 11 (24.44%) had graduated from LCCC and 15 (33.33%) had transferred to another college or university by August 31, 2018.

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 <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 2017 semester, 444 first-time, full-time, degree- or certificate-seeking students enrolled at Laramie County Community College (LCCC). Of this group, 287 (64.64%) were still enrolled at LCCC or had graduated as of October 2018.

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 107D, 107E, 307.778.1182

The Student Life team provides co-curricular opportunities for students to develop friendships and skills to successfully achieve their academic and personal goals. Student Life activities and services build a strong campus community by

sponsoring quality educational, leadership, social, recreational, diversity, family, and community service activities, providing personal support, and guiding student conduct.

Getting involved with Student Life 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 Life provides a playful but 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 107E, 307.778.1199

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 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 photo student identification card. There is no charge for the initial card; however, a replacement fee will be assessed for lost or stolen cards. Cards must be validated each semester the student is enrolled in class. 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 identification 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 and the student computer center.

The student identification card is also the library card and is required to check out library materials.

## 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), LCCC has teams competing in National Junior College Athletic Association sanctioned men's and women's basketball, women's volleyball, men's soccer and women's soccer. The LCCC rodeo team is a member of the National Intercollegiate Rodeo Association. For more information, call 307.778.1323 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:

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

### **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.

### **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.

## General Education Completion

### **General Education Transfer Block**

The LCCC General Education Transfer Block is the designation for the completion of the LCCC General Education Core and assists in transfer to a baccalaureate program. The Transfer Block carries no specific designation of field of study and is incorporated within all LCCC Associate of Arts (AA) and Associate of Science (AS) degree programs. The LCCC Transfer Block is designed to align with the general education requirements of partnering universities and in many cases transfers as completion of the receiving institution's general education core. Students do not pursue the Transfer Block as a stand-alone program, but rather satisfy the requirements along the pathway to completing an AA or AS degree.

### **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. 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. Students with an interest in achieving the Passport should contact their Advisor.

## 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 core abilities. Students applying for graduation with an associate degree will complete an academic evaluation of their learning experience at LCCC.

## 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 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 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. Obtain an advisor's signature indicating that program requirements have been met before filing an application for graduation.

6. File a graduation application at the Student Hub. 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 at a later date completes them, the student should reapply.

## 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 graduation 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 a degree.

## 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.

### **General Education/ Institutional Competencies**

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 curriculum is derived from the College's general education/institutional competencies. Institutional 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 interconnect 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.

#### **Reasoning**

1. Quantitative reasoning – Students' ability to represent and interpret mathematical information and apply it to a task
2. Scientific reasoning – Students' ability to observe, hypothesize, test, analyze, interpret and reflect on scientific phenomena



3. Problem solving – Students’ ability to analyze a task, apply tools, execute a plan, and reflect on its effectiveness
4. Information literacy – Students’ ability to access, evaluate and synthesize appropriate resources for a project, and to use resources ethically.

**Effective Communication**

1. Written communication – Students’ ability to effectively communicate in writing
2. Verbal communication – Students’ ability to effectively communicate verbally when giving presentations
3. Interpersonal Communication – Students’ ability to effectively communicate interpersonally in various situations to create meaning together.

**Collaboration**

1. Students’ ability to foster teamwork, consider needs of partners, and work toward a specific goal as part of a team.

**Human Culture**

1. Cultural awareness – Students’ ability to distinguish the complexity of cultural elements important to members of a culture
2. Aesthetic analysis – Students’ ability to analyze objective and subjective characteristics of art, music, performance art, literature, architecture, mass media, humanities and other forms of artistic expression.

**Core Curriculum Requirements for the Associate Degree**

The general education component and core curriculum are 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 require specific core courses from the list 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 majors due to these specific course requirements. 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).

<b>LCCC Competency-Based General Education Requirements</b>		
<b>Credits</b>	<b>LCCC General Education Core Requirements</b>	<b>Approved Courses</b>
<b>College Seminar</b> (Required for AA, AS, AAS, ADN and Certificates of Completion)		
3	College Seminar (CS)	<b>College Seminar (CS) Approved Courses:</b> <ul style="list-style-type: none"> <li>COLS 1000* . . . . . Introduction to College Success: First Year Seminar (3 cr.) (see Page 37 for more information)</li> </ul>
<b>Communication: Written and Verbal</b> (Required for AA, AS, AAS, ADN and Certificates of Completion)		
3	At least three credits from a course that satisfies the Written Communication (CW) competencies.	<b>Written Communication (CW) Approved Courses:</b> <ul style="list-style-type: none"> <li>ENGL 1010 . . . . . English I: Composition (3 cr.)</li> </ul>
3	At least three credits from a course that satisfies the Verbal Communication (CV) competencies.	<b>Verbal Communication (CV) Approved Courses:</b> <ul style="list-style-type: none"> <li>CO/M 2010 . . . . . Public Speaking (3 cr.)</li> <li>CO/M 1015 . . . . . Foundations of Communication (3 cr.) (for AAS and Certificate Programs only)</li> </ul>

## LCCC Competency-Based General Education Requirements

Credits	LCCC General Education Core Requirements	Approved Courses
<b>Quantitative Reasoning</b> (Required for AA, AS, AAS, ADN and Certificates of Completion)		
3	At least three credits from a course that satisfies the Quantitative Reasoning <b>(QR)</b> competencies	<p><b>Quantitative Reasoning (QR) Approved Courses:</b></p> <ul style="list-style-type: none"> <li>• MATH 1000 . . . . . Problem Solving (3 cr.)</li> <li>• MATH 1070 . . . . . Quantitative Reasoning II (3 cr.)</li> <li>• MATH 1100 . . . . . Numbers and Operations for Elementary Teachers (3 cr.)</li> <li>• MATH 1380 . . . . . Integrated College Algebra Algebraway II (3 cr.)</li> <li>• MATH 1400 . . . . . College Algebra (3 cr.)</li> <li>• MATH 1401 . . . . . Pre-Calculus Algebra (3 cr.)</li> <li>• MATH 1405 . . . . . Pre-Calculus Trigonometry (3 cr.)</li> <li>• MATH 1450 . . . . . Pre-Calculus Algebra/Trigonometry (5 cr.)</li> <li>• MATH 1510 . . . . . Technical Mathematics I (3 cr.) <i>(for AAS and Certificate Programs only)</i></li> <li>• MATH 2200 . . . . . Calculus I (4 cr.)</li> <li>• MATH 2205 . . . . . Calculus II (4 cr.)</li> <li>• MATH 2210 . . . . . Calculus III (4 cr.)</li> <li>• MATH 2350 . . . . . Business Calculus I (4 cr.)</li> <li>• MATH 2355 . . . . . Mathematical Applications for Business (4 cr.)</li> <li>• STAT 2070 . . . . . Introductory Statistics for the Social Sciences (4 cr.)</li> </ul>
<b>U.S. / Wyoming Constitution Statutory Requirement</b> (Required for AA, AS, AAS and ADN)		
3	At least three credits from a course that satisfies the <b>U.S./ Wyoming Constitution statutory requirement (WY)</b>	<p><b>U.S./Wyoming Constitution statutory requirement (WY) Approved Courses:</b></p> <ul style="list-style-type: none"> <li>• ECON 1200 . . . . . Economics, Law, and Government (3 cr.)</li> <li>• HIST 1211 . . . . . U.S. to 1865 (3 cr.)</li> <li>• HIST 1221 . . . . . U.S. from 1865 (3 cr.)</li> <li>• HIST 1251 . . . . . Wyoming History (3 cr.)</li> <li>• POLS 1000 . . . . . American and Wyoming Government (3 cr.)</li> <li>• POLS 1100 . . . . . <i>Wyoming Government (1 cr.) (Students who have earned credit for American Government or U.S. History from a regionally accredited institution outside of Wyoming or by Advanced Placement must complete POLS 1100 to satisfy the Wyoming Constitutional requirement.)</i></li> </ul>
<b>Scientific Reasoning: Laboratory (LAB) Science</b> (Required for AA and AS)		
3-4	At least three credits from a course that includes a <b>laboratory (LAB)</b> component and satisfies the Scientific Reasoning competencies	<p><b>Laboratory (LAB) Science Approved Courses:</b></p> <ul style="list-style-type: none"> <li>• AECL 1000 . . . . . Agroecology (4 cr.)</li> <li>• ANTH 1100 . . . . . Introduction to Biological Anthropology (4 cr.)</li> <li>• ASTR 1050 . . . . . Survey of Astronomy (4 cr.)</li> <li>• BIOL 1002 . . . . . Discovering Science (4 cr.)</li> <li>• BIOL 1003 . . . . . Current Issues in Biology (4 cr.)</li> <li>• BIOL 1010 . . . . . General Biology (4 cr.)</li> <li>• CHEM 1000 . . . . . Introductory Chemistry (4 cr.)</li> <li>• CHEM 1020 . . . . . General Chemistry I (4 cr.)</li> <li>• GEOG 1010 . . . . . Introduction to Physical Geography (4 cr.)</li> <li>• GEOL 1100 . . . . . Physical Geology (4 cr.)</li> <li>• GEOL 1200 . . . . . Historical Geology (4 cr.)</li> <li>• PHYS 1050 . . . . . Concepts of Physics (4 cr.)</li> <li>• PHYS 1090 . . . . . Fundamentals of the Physical Universe (4 cr.)</li> <li>• PHYS 1110 . . . . . General Physics I (4 cr.)</li> <li>• PHYS 1310 . . . . . College Physics I (4 cr.)</li> <li>• PHYS 1320 . . . . . College Physics II (4 cr.)</li> </ul>

## LCCC Competency-Based General Education Requirements

Credits	LCCC General Education Core Requirements	Approved Courses
<b>Scientific Reasoning: Science, Technology, Engineering, &amp; Mathematics (STEM)</b> (Required for AA and AS)		
3	<p><b>STEM:</b> At least three credits from a course that satisfies two of the three competencies listed; Quantitative Reasoning, Scientific Reasoning, Problem Solving (<b>STEM</b>)</p>	<p><b>STEM Approved Courses:</b></p> <ul style="list-style-type: none"> <li>• ASTR 1050 ..... Survey of Astronomy (4 cr.)</li> <li>• BIOL 1010 ..... General Biology (4 cr.)</li> <li>• BIOL 2022 ..... Animal Biology (4 cr.)</li> <li>• CHEM 1000 ..... Introductory Chemistry (4 cr.)</li> <li>• CHEM 1020 ..... General Chemistry I (4 cr.)</li> <li>• CHEM 1030 ..... General Chemistry II (4 cr.)</li> <li>• CHEM 2300 ..... Introduction to Organic Chemistry (4 cr.)</li> <li>• COSC 1200 ..... Computer Information Systems (3 cr.)</li> <li>• GEOG 1040 ..... Mobile Mapping with GPS (3 cr.)</li> <li>• GEOG 1050 ..... Introduction to Environment and Natural Resources (3 cr.)</li> <li>• GEOG 1100 ..... Introduction to Geographic Information Systems (3 cr.)</li> <li>• GEOG 1220 ..... Introduction to Geospatial Technology (3 cr.)</li> <li>• GEOL 1035 ..... Geology of Yellowstone National Park (3 cr.)</li> <li>• MATH 1000 ..... Problem Solving (3 cr.)</li> <li>• MATH 1070 ..... Quantitative Reasoning II (3 cr.)</li> <li>• MATH 1380 ..... Integrated College Algebra Algebraway II (3 cr.)</li> <li>• MATH 1400 ..... College Algebra (3 cr.)</li> <li>• MATH 1401 ..... Pre-Calculus Algebra (3 cr.)</li> <li>• MATH 1450 ..... Pre-Calculus Algebra/Trigonometry (5 cr.)</li> <li>• MATH 2120 ..... Geometry and Measurement for Elementary School Teachers (3 cr.)</li> <li>• MATH 2200 ..... Calculus I (4 cr.)</li> <li>• MATH 2350 ..... Business Calculus I (4 cr.)</li> <li>• MATH 2355 ..... Mathematical Applications for Business (4 cr.)</li> <li>• MICR 2240 ..... Medical Microbiology (4 cr.)</li> <li>• MUSC 1023 ..... Music and Sound Technology (3 cr.)</li> <li>• PHYS 1050 ..... Concepts of Physics (4 cr.)</li> <li>• PHYS 1090 ..... Fundamentals of the Physical Universe (4 cr.)</li> <li>• PHYS 1110 ..... General Physics I (4 cr.)</li> <li>• PHYS 1120 ..... General Physics II (4 cr.)</li> <li>• PHYS 1310 ..... College Physics I (4 cr.)</li> <li>• PHYS 1320 ..... College Physics II (4 cr.)</li> <li>• PSYC 2000 ..... Research Psychological Methods (4 cr.)</li> <li>• STAT 2010 ..... Statistical Concepts-Business (4 cr.)</li> <li>• STAT 2050 ..... Fundamentals of Statistics (4 cr.)</li> <li>• STAT 2070 ..... Introductory Statistics for the Social Sciences (4 cr.)</li> <li>• ZOO 2010 ..... Anatomy and Physiology I (4 cr.)</li> <li>• ZOO 2015 ..... Human Anatomy (4 cr.)</li> <li>• ZOO 2020 ..... Anatomy and Physiology II (4 cr.)</li> <li>• ZOO 2025 ..... Human Physiology (4 cr.)</li> </ul>

## LCCC Competency-Based General Education Requirements

Credits	LCCC General Education Core Requirements	Approved Courses
<b>Human Culture: Cultural Awareness (CA)</b> (Required for AA and AS)		
3	<p>At least three credits from a course that satisfies the <b>Cultural Awareness (CA)</b> competencies.</p>	<p><b>Cultural Awareness (CA) Approved Courses:</b></p> <ul style="list-style-type: none"> <li>• AGEC 1010 . . . . . Agriculture Economics I (3 cr.)</li> <li>• AMST 2010 . . . . . Introduction to American Studies (3 cr.)</li> <li>• AMST 2110 . . . . . Cultural Diversity in America (3 cr.)</li> <li>• ANTH 1200 . . . . . Introduction to Cultural Anthropology (3 cr.)</li> <li>• ART 2010 . . . . . Art History I (3 cr.)</li> <li>• ART 2020 . . . . . Art History II (3 cr.)</li> <li>• CO/M 1030 . . . . . Interpersonal Communication (3 cr.)</li> <li>• CO/M 2500 . . . . . Intercultural Communication (3 cr.)</li> <li>• ECON 1000 . . . . . Global Economic Issues (3 cr.)</li> <li>• ECON 1010 . . . . . Principles of Macroeconomics (3 cr.)</li> <li>• EDST 2450 . . . . . Human Life Span Development (3 cr.)</li> <li>• *FREN 1010 . . . . . First Year French I (4cr.)</li> <li>• *FREN 1020 . . . . . First Year French II (4 cr.)</li> <li>• GEOG 1000 . . . . . World Regional Geography (3 cr.)</li> <li>• GEOG 1020 . . . . . Human Geography (3 cr.)</li> <li>• HIST 1110 . . . . . Western Civilization I (3 cr.)</li> <li>• HIST 1120 . . . . . Western Civilization II (3 cr.)</li> <li>• HIST 1211 . . . . . U.S. to 1865 (3 cr.)</li> <li>• HIST 1221 . . . . . U.S. from 1865 (3 cr.)</li> <li>• HIST 1251 . . . . . Wyoming History (3 cr.)</li> <li>• HIST 1290 . . . . . History of the U.S. West (3 cr.)</li> <li>• HIST 2000 . . . . . American Revolution (3 cr.)</li> <li>• HIST 2020 . . . . . U.S. Military History (3 cr.)</li> <li>• HIST 2080/RELI 2080 . . . . . Holocaust (3 cr.)</li> <li>• HIST 2130 . . . . . Ancient Rome (3 cr.)</li> <li>• HIST 2225/RELI 2225 . . . . . History of Christianity (3 cr.)</li> <li>• HIST 2290 . . . . . History of North American Indians (3 cr.)</li> <li>• HIST 2320/RELI 2320 . . . . . History of Islam (3 cr.)</li> <li>• HIST/WMST 2389 . . . . . History of Women and the American West (3 cr.)</li> <li>• HSEC 1000 . . . . . Homeland Security: A Global Impact (3 cr.)</li> <li>• HSEC 2025 . . . . . Terrorism (3 cr.)</li> <li>• HUMN 1010 . . . . . Introductory Humanities I (3 cr.)</li> <li>• HUMN 1020 . . . . . Introductory Humanities II (3 cr.)</li> <li>• HUMN 1080/SOC 1080 . . . . . Introduction to Women's Studies (3 cr.)</li> <li>• MMMM 1000 . . . . . Introduction to Mass Media (3 cr.)</li> <li>• MUSC 1000 . . . . . Introduction to Music (3 cr.)</li> <li>• MUSC 2024 . . . . . World Music (3 cr.)</li> <li>• MUSC 2050 . . . . . Music History Survey I (3 cr.)</li> <li>• MUSC 2055 . . . . . Music History Survey II (3 cr.)</li> <li>• PHIL 1000 . . . . . Introduction to Philosophy (3 cr.)</li> <li>• PHIL 2221 . . . . . Logic (3 cr.)</li> <li>• PHIL 2301 . . . . . Ethics (3 cr.)</li> <li>• PHIL 2311 . . . . . Introduction to Religion (3 cr.)</li> <li>• POLS 1200 . . . . . Non-Western Political Cultures (3 cr.)</li> <li>• PSYC 1000 . . . . . General Psychology (3 cr.)</li> <li>• RELI 2225/HIST 2225 . . . . . History of Christianity (3 cr.)</li> <li>• RELI 2080/HIST 2080 . . . . . Holocaust (3 cr.)</li> <li>• RELI 2320/HIST 2320 . . . . . History of Islam (3 cr.)</li> <li>• SOC 1000 . . . . . Sociological Principles (3 cr.)</li> <li>• SOC 1080/HUMN 1080 . . . . . Introduction to Women's Studies (3 cr.)</li> <li>• *SPAN 1010 . . . . . First Year Spanish I (4 cr.)</li> <li>• *SPAN 1020 . . . . . First Year Spanish II (4 cr.)</li> <li>• WMST/HIST 2389 . . . . . History of Women and the American West (3 cr.)</li> </ul>

\* World-language courses not listed may meet the Cultural Awareness General Education requirement per course substitution policy. Please see your Advisor for additional information.

## LCCC Competency-Based General Education Requirements

Credits	LCCC General Education Core Requirements	Approved Courses
<b>Human Culture: Aesthetic Analysis (AA)</b> (Required for AA and AS)		
3	At least three credits from a course that satisfies the <b>Aesthetic Analysis (AA)</b> competencies.	<p><b>Aesthetic Analysis (AA) Approved Courses:</b></p> <ul style="list-style-type: none"> <li>• ART 1000. . . . . General Art (3 cr.)</li> <li>• ART 1010. . . . . General Art: History (3 cr.)</li> <li>• ART 1050. . . . . Beginning Drawing (3 cr.)</li> <li>• ART 1110. . . . . Foundation: Two Dimensional (3 cr.)</li> <li>• ART 2010. . . . . Art History I (3 cr.)</li> <li>• ART 2020. . . . . Art History II (3 cr.)</li> <li>• ART 2410. . . . . Ceramics I (3 cr.)</li> <li>• ENGL 2020 . . . . . Introduction to Literature (3 cr.)</li> <li>• ENGL 2040 . . . . . Creative Writing (3 cr.)</li> <li>• ENGL 2330 . . . . . Contemporary and Multicultural Literature (3 cr.)</li> <li>• ENGL 2420 . . . . . Literary Genres (3 cr.)</li> <li>• HUMN 1010 . . . . . Introductory Humanities I (3 cr.)</li> <li>• HUMN 1020 . . . . . Introductory Humanities II (3 cr.)</li> <li>• MMMM 2400 . . . . . Introduction to Photography (3 cr.)</li> <li>• MUSC 1000. . . . . Introduction to Music (3 cr.)</li> <li>• MUSC 2024. . . . . World Music (3 cr.)</li> <li>• MUSC 2050. . . . . Music History Survey I (3 cr.)</li> <li>• MUSC 2055. . . . . Music History Survey II (3 cr.)</li> <li>• THEA 1000 . . . . . Introduction to Theatre (3 cr.)</li> <li>• THEA 1100 . . . . . Beginning Acting (3 cr.)</li> <li>• THEA 2000 . . . . . Theatre Production (3 cr.)</li> <li>• THEA 2010 . . . . . Backgrounds of Drama I (3 cr.)</li> <li>• THEA 2020 . . . . . Backgrounds of Drama II (3 cr.)</li> <li>• THEA 2100 . . . . . Acting II (3 cr.)</li> <li>• THEA 2160 . . . . . Introduction to Stage Makeup (3 cr.)</li> </ul>
<b>28-29 TOTAL CREDITS</b>		

**\*COLS 1000 – Introduction to College 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 COLS 1000 course. LCCC recognizes that students may have already achieved the learning outcomes and competencies of COLS 1000 through prior learning. Students may request an exemption from COLS 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 COLS 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.

## **Pathways to Success**

This program is designed for high school students who might not be planning to attend college. This may include low-income students and/or first-generation college students. Through this program, high school students participate in social activities, seminars, and summer workshops designed to help them prepare for college.

## **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).

# Programs of Study by Degree

## Associate of Arts (AA)

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Criminal Justice – Corrections/Pre-Law	66
Criminal Justice – Law Enforcement	67
Education	76
Education – Early Childhood Education	77
Education – Elementary Education Concentration	78
English	83
History	99
History – Digital History Concentration	101
Interdisciplinary Liberal Arts	103
Mass Media	104
Mass Media – Multimedia Concentration	105
Music	107
Music – Instrumental Education Concentration	108
Music – Instrumental Performance Concentration	109
Music – Vocal Education Concentration	111
Music – Vocal Performance Concentration	112
Psychology	132
Psychology – Social Work Concentration	134
Social Sciences	137
Spanish – Education Concentration	138
Spanish – Liberal Arts Concentration	139
Theatre	145

## Associate of Science (AS)

Accounting	42
Agriculture – Agriculture Business Concentration	44
Agriculture – Agroecology Concentration	45
Agriculture – Animal Science Concentration	46
Agriculture – Rangeland Ecology and Management Concentration	47
Business and Finance	59
Computer Science	64
Computer Science – Business Concentration	65
Engineering	82
Equine Science	84
Equine Science – Business Management Concentration	85
Exercise Science	88
Exercise Science – Physical Education Teacher Education Concentration	90
Exercise Science – Sport Management Concentration	91
Health Sciences	96
Mathematics	106
Natural Science – Biology Concentration	113
Natural Science – Chemistry (BA Track) Concentration	114
Natural Science – Chemistry (BS Track) Concentration	115
Natural Science – Human Biology Concentration	116
Natural Science – Molecular Biology Concentration	117
Natural Science – Physics Concentration	118
Natural Science – Physiology Concentration	119
Natural Science – Pre-Professional Concentration	120
Natural Science – Wildlife Biology Concentration	122
Natural Science – Zoology Concentration	123
Psychology	133

## Associate of Applied Science

Agribusiness Technology	43
Agriculture Production Technology	48
Automotive Body Repair	50
Automotive Technology	52
Business – Accounting Services	54
Business – Financial Services	55
Business – Small Business Management	57
Business – Supply Chain Management	58
Computer Information Systems	60
Cybersecurity	68
Dental Hygiene	70
Diagnostic Medical Sonography	72
Diesel Technology	74
Emergency Medical Services – Paramedic	80
Equine Science – Training Management Concentration	86
Fire Science Technology	92
Health Information Technology and Management	93
Heating, Ventilation, and Air Conditioning/Refrigeration	97
Paralegal	126
Physical Therapist Assistant	129
Radiography (X-ray)	135
Speech-Language Pathology Assistant	140
Surgical Technology	141
Technical Agriculture Operations	143
Technical Studies	144
Welding Technology	146
Wind Energy	148

## Associate Degree in Nursing (ADN)

Nursing	124
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## Certificate of Completion

HIT – Medical Claims Coding Associate	95
Paralegal	128

## Credit Diploma

Automotive Body Repair	51
Automotive Technology – Engine Management/Drivability	53
Automotive Technology – Under Car/HVAC	53
Business – Entrepreneurship	56
Business Management – Entrepreneurship Business Plan	56
CIS – Cisco Certified Networking Associate (CCNA)	61
CIS – Computer Support Specialist	61
CIS – Datacenter Technician	62
CIS – Office Application Specialist	62
CIS – Systems Administrator	63
CIS – Web Design	63
Cybersecurity Fundamentals	69
Cybersecurity Professional	69
Diesel Technology	75
Electrical Technology	79
Emergency Medical Services – Paramedic	81
Equine Training	87
Exercise Science – Coaching	89

Exercise Science – Personal Trainer . . . . .	89	Industrial Systems Technology . . . . .	102
HIT – Medical Office Essentials . . . . .	94	Plumbing Technology . . . . .	131
Heating, Ventilation, and Air Conditioning/Refrigeration . . . . .	98	Welding Technology (Combination Welding) . . . . .	147
Industrial Maintenance . . . . .	102	Welding Technology (Advanced Pipe Welding) . . . . .	147



## 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:

<p>Business – Accounting Services (AAS) . . . . . 54</p> <p>Business – Financial Services (AAS) . . . . . 55</p> <p>Business – Small Business Management (AAS) . . . . . 57</p> <p>Business – Supply Chain Management (AAS) . . . . . 58</p> <p>Computer Information Systems (AAS) . . . . . 60</p> <p style="padding-left: 20px;">CIS – Cisco Certified Networking Associate (CCNA) (CD) . . . . . 61</p> <p style="padding-left: 20px;">CIS – Computer Support Specialist (CD) . . . . . 61</p> <p style="padding-left: 20px;">CIS – Datacenter Technician (CD) . . . . . 62</p> <p>Criminal Justice – Corrections/Pre-Law (AA) . . . . . 66</p> <p>Cybersecurity (AAS) . . . . . 68</p> <p style="padding-left: 20px;">Cybersecurity Fundamentals (CD) . . . . . 69</p> <p style="padding-left: 20px;">Cybersecurity Professional (CD) . . . . . 69</p>	<p>Education (AA) . . . . . 76</p> <p style="padding-left: 20px;">Education – Early Childhood Education (AA) . . . . . 77</p> <p style="padding-left: 20px;">Education – Elementary Education Concentration (AA) . . 78</p> <p>Health Information Technology and Management (AAS) . . . . 93</p> <p style="padding-left: 20px;">HIT – Medical Office Essentials (CD) . . . . . 94</p> <p style="padding-left: 20px;">HIT – Medical Claims Coding Associate (CC) . . . . . 95</p> <p>Psychology (AA) . . . . . 132</p> <p>Spanish – Liberal Arts Concentration (AA) . . . . . 139</p> <p>Speech-Language Pathology Assistant (AAS) . . . . . 140</p>
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**\*\*Campus resources are available for all students on all LCCC campuses\*\***

## LCCC-ACC Degrees, Credit Diplomas, and Certifications

The following programs may be completed at the Albany County Campus. Programs marked with an asterisk\* require no more than 25% of the coursework to be taken as online classes.

<p>Business – Accounting Services (AAS) . . . . . 54</p> <p>Business – Financial Services (AAS) . . . . . 55</p> <p>Engineering (AS) . . . . . 82</p> <p>History (AA) . . . . . 99</p>	<p>Interdisciplinary Liberal Arts (AA) . . . . . 103</p> <p>Mathematics (AS) . . . . . 106</p> <p>Psychology (AA) . . . . . 132</p> <p>Psychology (AS) . . . . . 133</p>
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# Accounting

## Associate of Science

The Associate of Science degree in Accounting curriculum is designed for transfer to a bachelor of science program. Students should have aptitude for computational work and be willing to undertake the intensive study necessary for success. In addition to general study requirements, the curriculum provides training in mathematics, business, and statistics, thus providing the student with a solid background in the basics. Courses taken for satisfactory/unsatisfactory (S/U) grade shall not be applied toward degree requirements.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	ACCT 2010*+	Principles of Accounting I . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: WY	ECON 1200	Economics, Law and Government . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
	<b>OR HIGHER</b>		
			<b>Semester Credits</b>
			<b>15</b>
<b>2ND SEMESTER</b>			
	ACCT 2020*	Principles of Accounting II . . . . .	3
GenEd: CA	ECON 1010*	Principles of Macroeconomics . . . . .	3
	MATH 2350	Business Calculus I . . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
			<b>Semester Credits</b>
			<b>16</b>

### Second Year

1ST SEMESTER			
	ACCT 2450*	Cost Accounting . . . . .	3
	BADM 2010*	Business Law I . . . . .	3
	ECON 1020*	Principles of Microeconomics . . . . .	3
	MATH 2355	Mathematical Applications for Business. . . . .	4
GenEd: LAB		Choose from approved Lab Science courses. . . . .	4
			<b>Semester Credits</b>
			<b>17</b>
<b>2ND SEMESTER</b>			
	ACCT 2230*	Intermediate Accounting I . . . . .	3
	FIN 2100*	Corporate Finance ( <i>Spring Only</i> ). . . . .	3
	IMGT 2400*	Introduction to Information Management . . . . .	3
GenEd: STEM	STAT 2010*	Statistical Concepts – Business. . . . .	4
	<b>OR</b>		
GenEd: STEM	STAT 2050*	Fundamentals of Statistics. . . . .	4
	<b>OR</b>		
GenEd: STEM	STAT 2070*	Introductory Statistics for the Social Sciences . . . . .	4
			<b>Semester Credits</b>
			<b>13</b>
			<b>Total Credits</b>
			<b>61</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Agribusiness Technology

## Associate of Applied Science

Students completing the Agribusiness Technology Associate of Applied Science degree will find demand for their skills and services in the agriculture sales, service, and supply career fields. This program of study features classroom instruction, laboratory exercises, and requires two 8-week supervised internships in the spring of first and second years to prepare the student for gainful employment.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
ACCT 2010*	Principles of Accounting I . . . . .	3
ANSC 1010	Livestock Production . . . . .	4
AGEC 1010*	Agriculture Economics I . . . . .	3
GenEd: CS COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: QR MATH 1000*	Problem Solving . . . . .	3
	<b>OR HIGHER</b>	

**Semester Credits 16**

### SPRING SEMESTER

AECL 1005	Field Crops and Integrated Pest Management . . . . .	2
ANSC 2025*	Livestock Nutrition . . . . .	2
AGRI 2470	Agriculture Internship I . . . . .	8
GenEd: CW ENGL 1010*+	English I: Composition . . . . .	3

**Semester Credits 15**

### Second Year

#### FALL SEMESTER

ACCT 2020*	Principles of Accounting II . . . . .	3
AGEC 2020	Farm-Ranch Business Management . . . . .	4
BADM 2010*	Business Law I . . . . .	3
CMAP 1200*	Computer Information Systems . . . . .	3
GenEd: WY	Choose from approved U.S./Wyoming Constitution courses . . . . .	3

**Semester Credits 16**

#### SPRING SEMESTER

AGEC 2010*	Farm-Ranch Business Records . . . . .	2
AGRI 2471*	Agriculture Internship II . . . . .	8
ANSC 1260	Livestock Merchandising . . . . .	2
GenEd: CV CO/M 2010*	Public Speaking . . . . .	3

**Semester Credits 15**

**Total Credits 62**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Agriculture – Agriculture Business Concentration

## Associate of Science

The Associate of Science, Agriculture – Agriculture Business Concentration is designed to allow students the transfer opportunity to pursue a bachelor's degree in Agriculture Business at a university. An Agriculture Business degree is a versatile degree allowing a student to enter any sector of the food and fiber industry. The degree is taught in an applied sense allowing students to take concepts learned and apply them in their chosen career.

Program Articulation: This degree program is a 2+2 articulation with the University of Wyoming. If a student completes the Agriculture Business Concentration at Laramie County Community College, and completes the courses outlined at the University of Wyoming, they can graduate in four total years with a Bachelor of Agriculture Business or Farm and Ranch Management degree.

### First Year

FALL SEMESTER COURSE		TITLE	CREDITS
	ANSC 1010	Livestock Production . . . . .	4
GenEd: CA	AGEC 1010*	Agriculture Economics I . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1400+ OR HIGHER	College Algebra . . . . .	3
			<b>Semester Credits</b>
			<b>16</b>
SPRING SEMESTER			
	AGEC 1020*	Agriculture Economics II . . . . .	3
	CMAP 1200*	Computer Information Systems . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: LAB	AECL 1000	Agroecology . . . . .	4
GenEd: STEM	BIOL 1010*	General Biology . . . . .	4
			<b>Semester Credits</b>
			<b>17</b>

### Second Year

FALL SEMESTER			
	ACCT 2010*	Principles of Accounting I . . . . .	3
	AGEC 2020	Farm-Ranch Business Management . . . . .	4
	MATH 2350*	Business Calculus I . . . . .	4
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses . . . . .	3
			<b>Semester Credits</b>
			<b>14</b>
SPRING SEMESTER			
	ACCT 2020*	Principles of Accounting II . . . . .	3
	AGEC 2400*	Farm Credit and Finance . . . . .	4
	STAT 2070*	Introductory Statistics for the Social Sciences . . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses . . . . .	3
			<b>Semester Credits</b>
			<b>14</b>
			<b>Total Credits</b>
			<b>61</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Agriculture – Agroecology Concentration

## Associate of Science

The Associate of Science Agriculture – Agroecology Concentration equips students with integrated systems management and ecological fundamentals and features a hands-on, integrated sciences, research-based curriculum. This concentration is designed to allow students the option to pursue a bachelor's degree in Agroecology, Horticulture Sciences, or Agronomy at a university.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	ANSC 1010	Livestock Production ( <i>Fall Only</i> ) . . . . .	4
GenEd: CA	AGEC 1010*	Agriculture Economics I ( <i>Fall Only</i> ) . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
	<b>OR HIGHER</b>		
			<b>Semester Credits 16</b>
<b>2ND SEMESTER</b>			
	AGEC 1020*	Agriculture Economics II ( <i>Spring Only</i> ) . . . . .	3
	BIOL 1010*	General Biology . . . . .	4
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: LAB	AECL 1000*	Agroecology ( <i>Spring Only</i> ) . . . . .	4
GenEd: STEM	CHEM 1000*	Introductory Chemistry . . . . .	4
			<b>Semester Credits 18</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	AECL 2010*	The Ecological Web: Soils ( <i>Fall Only</i> ) . . . . .	4
	BIOL 2023*	Biology of Plants and Fungi ( <i>Fall Only</i> ) . . . . .	4
	CHEM 2300*	Introductory Organic Chemistry . . . . .	4
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses . . . . .	3
			<b>Semester Credits 15</b>
<b>2ND SEMESTER</b>			
	AECL 2395*	Agricultural Science Research Methods Capstone ( <i>Spring Only</i> ) . . . . .	3
	RGMG 2400*	Range Ecosystems and Plants ( <i>Spring Only</i> ) . . . . .	4
	STAT 2050*	Fundamentals of Statistics . . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses . . . . .	3
			<b>Semester Credits 14</b>
			<b>Total Credits 63</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Agriculture – Animal Science Concentration

## Associate of Science

The Associate of Science, Agriculture – Animal Science Concentration is designed to allow students the transfer opportunity to pursue a bachelor's degree in Animal Science at a university. An Animal Science degree allows students to pursue a career in many facets of the livestock production industry.

Program Articulation: This program is a 2+2 articulation with the University of Wyoming. If a student completes the Agriculture: Animal Science Concentration at Laramie County Community College, and completes the courses outlined at the University of Wyoming, the student can graduate in four total years with a Bachelor of Animal Science Livestock Production Options degree.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	ANSC 1010	Livestock Production ( <i>Fall Only</i> ) . . . . .	4
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CA	AGEC 1010*	Agricultural Economics I ( <i>Fall Only</i> ) . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1400+	College Algebra . . . . .	3

**OR HIGHER**

**Semester Credits 16**

### 2ND SEMESTER

	AGEC 1020*	Agricultural Economics II ( <i>Spring Only</i> ) . . . . .	3
GenEd: LAB	AECL 1000	Agroecology ( <i>Spring Only</i> ) . . . . .	4
	BIOL 1010*	General Biology . . . . .	4
GenEd: STEM	CHEM 1000*	Introductory Chemistry . . . . .	4

**Semester Credits 15**

### Second Year

#### 1ST SEMESTER

	AGEC 2020*	Farm and Ranch Business Management ( <i>Fall Only</i> ) . . . . .	4
	CHEM 2300*	Introductory Organic Chemistry . . . . .	4
	<b>OR</b>		
	AECL 1010*	The Ecological Web: Soils ( <i>Fall Only</i> ) . . . . .	4
	RGMG 2000*	Principles of Rangeland Management ( <i>Fall Only</i> ) . . . . .	3
	STAT 2010*	Statistical Concepts – Business . . . . .	4
	<b>OR</b>		
	STAT 2050*	Fundamentals of Statistics . . . . .	4
	<b>OR</b>		
	STAT 2070*	Introductory Statistics for the Social Sciences . . . . .	4

**Semester Credits 15**

#### 2ND SEMESTER

	ANSC 2020*	Feeds and Feeding ( <i>Spring Only</i> ) . . . . .	4
	BIOL 2022*	Animal Biology ( <i>Spring Only</i> ) . . . . .	4
GenEd: CV	COM 2010*	Public Speaking . . . . .	3
GenEd: WY		Choose from approved Wyoming Constitution courses . . . . .	3
GenEd: AA		Choose from approved Aesthetic Analysis courses . . . . .	3

**Semester Credits 17**

**Total Credits 63**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Agriculture – Rangeland Ecology and Management Concentration

## Associate of Science

The Associate of Science in Agriculture – Rangeland Ecology and Management Concentration equips students with skills in applied management and ecological fundamentals and features a hands-on, outdoor-focused, research-based curriculum. This concentration is designed to allow students the option to pursue a bachelor's degree in Rangeland Science at a university. A Rangeland Ecology and Management degree allows students to pursue a career in both the public and private sectors.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	ANSC 1010	Livestock Production ( <i>Fall Only</i> ) . . . . .	4
GenEd: CA	AGEC 1010*	Agriculture Economics I ( <i>Fall Only</i> ) . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
	<b>OR HIGHER</b>		
			<b>Semester Credits 16</b>
<b>2ND SEMESTER</b>			
	AGEC 1020*	Agriculture Economics II ( <i>Spring Only</i> ) . . . . .	3
	BIOL 1010*	General Biology . . . . .	4
GenEd: LAB	AECL 1000*	Agroecology ( <i>Spring Only</i> ) . . . . .	4
GenEd: STEM	CHEM 1000*	Introductory Chemistry . . . . .	4
			<b>Semester Credits 15</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	AECL 2010*	The Ecological Web: Soils ( <i>Fall Only</i> ) . . . . .	4
	BIOL 2023*	Biology of Plants and Fungi ( <i>Fall Only</i> ) . . . . .	4
	RGMG 2000*	Principles of Range Management ( <i>Fall Only</i> ) . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
			<b>Semester Credits 17</b>
<b>2ND SEMESTER</b>			
	AECL 2395*	Agricultural Science Research Methods Capstone ( <i>Spring Only</i> ) . . . . .	3
	RGMG 2400*	Range Ecosystems and Plants ( <i>Spring Only</i> ) . . . . .	4
	STAT 2050*	Fundamentals of Statistics . . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
			<b>Semester Credits 14</b>
			<b>Total Credits 62</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Agriculture Production Technology

## Associate of Applied Science

Students completing the Agriculture Production Technology Associate of Applied Science degree will obtain skills for employment in the following areas: farm or ranch operator or assistant manager, herdsman, swine specialist, feedlot operator, or a job with an agriculture-related industry. This program of study features classroom instruction, laboratory exercises, and requires two 8-week supervised internships in the spring of first and second years to prepare the student for gainful employment.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
AGEC 1010*	Agriculture Economics I . . . . .	3
AGRI 1500	Introduction to Rodeo . . . . .	2
<b>OR</b>		
ANSC 1210	Livestock Judging I . . . . .	2
ANSC 1010	Livestock Production . . . . .	4
GenEd: CS COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW ENGL 1010*+	English I: Composition . . . . .	3
	<b>Semester Credits</b>	<b>15</b>

### SPRING SEMESTER

AECL 1005	Field Crops and Integrated Pest Management . . . . .	2
ANSC 2025*	Livestock Nutrition . . . . .	2
AGRI 2470	Agriculture Internship I . . . . .	8
GenEd: CV CO/M 2010*	Public Speaking . . . . .	3
	<b>Semester Credits</b>	<b>15</b>

### Second Year

#### FALL SEMESTER

AECL 2010*	The Ecological Web: Soils . . . . .	4
<b>OR</b>		
RGMG 2000	Principles of Range Management . . . . .	3
AGEC 2020*	Farm-Ranch Business Management . . . . .	4
AGRI 1510	Rodeo Livestock . . . . .	2
<b>OR</b>		
ANSC 1200	Livestock Fitting and Showing . . . . .	2
GenEd: QR MATH 1000*	Problem Solving . . . . .	3
<b>OR HIGHER</b>		
GenEd: WY	Choose from approved U.S./Wyoming Constitution courses . . . . .	3
	<b>Semester Credits</b>	<b>15-16</b>

#### SPRING SEMESTER

AGEC 2010*	Farm-Ranch Business Records . . . . .	2
AGRI 2471 *	Agriculture Internship II . . . . .	8
ANSC 1100	Artificial Insemination . . . . .	2
ANSC 1260	Livestock Merchandising . . . . .	2
ANSC 2320	Livestock Health and Management . . . . .	2
	<b>Semester Credits</b>	<b>16</b>

**Total Credits 61-62**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.



# Art

## Associate of Arts

The major in art is intended to educate and assist students in a fundamental understanding of concepts, techniques and methods of form and content within works of art. The art major leads to an Associate of Arts degree and is designed for transfer to a four-year institution and/or for acceptance into art institutes devoted to the advancement of specific art skills.

Non-art majors may wish to study in this area for personal reasons or for application to other program such as web page design, multimedia, and computer graphics.

Program Articulation: This program is articulated with the University of Wyoming and Rocky Mountain College of Art and Design. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	ART 1110*	Foundation: Two Dimensional ( <i>Fall Only</i> ) . . . . .	3
	ART 1050	Beginning Drawing . . . . .	3
GenEd: AA/CA	ART 2010*	Art History I ( <i>Fall Only</i> ) . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
			<b>Semester Credits 15</b>
<b>2ND SEMESTER</b>			
	ART 1120*	Foundation: Three Dimensional ( <i>Spring Only</i> ) . . . . .	3
	ART 1130	Foundation: Color . . . . .	3
	ART 2410	Ceramics I . . . . .	3
GenEd: AA/CA	ART 2020*	Art History II ( <i>Spring Only</i> ) . . . . .	3
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
<b>OR HIGHER</b>			
			<b>Semester Credits 15</b>

### Second Year

<b>1ST SEMESTER</b>			
	ART 2210	Beginning Painting . . . . .	3
	ART 2310	Sculpture I . . . . .	3
		Choose from approved elective courses.	
		First-year world-language recommended.^ . . . .	3-4
GenEd: STEM		Choose from approved STEM courses. . . . .	4
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
			<b>Semester Credits 16-17</b>
<b>2ND SEMESTER</b>			
		Choose from approved elective courses.	
		Second-year world-language recommended.^ . . . .	3-4
		Choose from approved elective courses.^ . . . .	3
		Choose from approved elective courses.^ . . . .	3
GenEd: LAB		Choose from approved Lab Science courses. . . . .	4
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
			<b>Semester Credits 16-17</b>
			<b>Total Credits 62-64</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Students interested in transferring to another institution should take two semesters of a world-language (SPAN 1010 and SPAN 1020, or FREN 1010 and FREN 1020).

Program Electives – Consult with your faculty advisor for recommendations.

ART 2005	3 credits	Drawing II
ART 2050	3 credits	Life Drawing I
ART 2075	3 credits	Illustration
ART 2080	3 credits	Drawing III
ART 2320	3 credits	Sculpture II
ART 2350	3 credits	Metals I
ART 2420	3 credits	Ceramics II
ART 2430	3 credits	Ceramics III

# Automotive Body Repair

## Associate of Applied Science

The Automotive Body Repair program is designed to prepare students for employment in the automotive repair business, as well as to meet personal objectives in auto body repair. Students may enroll in the Automotive Body Repair program to receive a credit diploma or an associate of applied science.

The nine-month program is designed for full-time students and courses are offered in a sequence of blocks; each block is three weeks in length. The automotive body repair courses are designed to prepare students for the ASE certification exam.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
AUBR 1500	Auto Body Hand/Hydraulic Tools . . . . .	3
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
GenEd: CS COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
<b>Semester Credits</b>		<b>19</b>

### SPRING SEMESTER

AUBR 1560	Auto Body Repair II . . . . .	3
AUBR 1710	Frame and Chassis I . . . . .	3
AUBR 1720*	Frame and Chassis II . . . . .	3
AUBR 1810	Collision Damage Repair I . . . . .	3
AUBR 1930*	Auto Paint III . . . . .	4
GenEd: QR MATH 1510*+	Technical Mathematics I . . . . .	3
<b>OR</b>		
GenEd: QR MATH 1000*	Problem Solving . . . . .	3
<b>OR HIGHER</b>		
<b>Semester Credits</b>		<b>19</b>

### Second Year

#### FALL SEMESTER

AUBR 1570	Auto Body Repair III . . . . .	3
AUTO 1500	Basic Auto Mechanics . . . . .	3
GenEd: CW ENGL 1010*+	English I: Composition . . . . .	3
GenEd: CV CO/M 2010*	Public Speaking . . . . .	3
<b>OR</b>		
GenEd: CV CO/M 1015*	Foundations of Communication . . . . .	3
<b>Semester Credits</b>		<b>12</b>

#### SPRING SEMESTER

AUBR 1580*	Auto Body Repair IV . . . . .	3
AUBR 1820*	Collision Damage Repair II . . . . .	3
<b>OR</b>		
AUBR 1945	Introduction to Automotive Custom Paint . . . . .	3
ENTK 1580*	Principles of Technology . . . . .	4
<b>OR</b>		
MGT 1000*	Introduction to Supervision . . . . .	3
GenEd: WY	Choose from approved U.S./Wyoming Constitution courses . . . . .	3
<b>Semester Credits</b>		<b>12-13</b>

**Total Credits 62-63**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Automotive Body Repair

## **Credit Diploma**

The Automotive Body Repair program is designed to prepare students for employment in the automotive repair business, as well as meet the needs of those who want to upgrade their skills or meet personal objectives in auto body repair. The program leads to a certificate or an associate of applied science degree.

The certificate program is designed for full-time students, and courses are offered in a sequence of blocks; each block is three weeks in length. The automotive body repair courses are designed to prepare students for the ASE certification exam.

### **First Year**

<b>FALL SEMESTER COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
AUBR 1500	Auto Body Hand/Hydraulic Tools . . . . .	3
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
<b>Semester Credits</b>		<b>16</b>
<b>SPRING SEMESTER</b>		
AUBR 1560	Auto Body Repair II . . . . .	3
AUBR 1710	Frame and Chassis I . . . . .	3
AUBR 1720*	Frame and Chassis II . . . . .	3
AUBR 1810	Collision Damage I . . . . .	3
AUBR 1930*	Auto Paint III . . . . .	4
<b>Semester Credits</b>		<b>16</b>
<b>Total Credits</b>		<b>32</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

# Automotive Technology

## Associate of Applied Science

To earn an Associate of Applied Science degree in Automotive Technology, students need to complete the following program of study. The Automotive Technology program is designed to prepare students for employment in the automotive industry. The program also offers courses for those who want to upgrade their skills or meet personal objectives of learning about automotive technology. The automotive technology courses are designed to prepare students for the ASE certification exam.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
AUTO 1510	Engine System Fundamentals . . . . .	4
AUTO 1600*	Fuel Systems I . . . . .	4
AUTO 1765	Auto Electrical . . . . .	5
AUTO 2560	Automotive Ignition Systems . . . . .	3
GenEd: CS COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
<b>Semester Credits</b>		<b>19</b>

### SPRING SEMESTER

AUTO 1690	Manual Power Train Fundamentals . . . . .	3
AUTO 1730	Automatic Transmissions . . . . .	4
AUTO 1740*	Brake Systems . . . . .	3
AUTO 1760	Heating and Air Conditioning . . . . .	3
AUTO 2550	Auto Alignment and Suspension . . . . .	4
<b>Semester Credits</b>		<b>17</b>

### Second Year

#### FALL SEMESTER

GenEd: CV	Choose from approved Verbal Communication courses . . . . .	3
GenEd: WY	Choose from approved U.S./Wyoming Constitution courses. . . . .	3
GenEd: CW ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR MATH 1000*	Problem Solving . . . . .	3
<b>OR</b>		
GenEd: QR MATH 1510*+	Technical Mathematics I . . . . .	3
<b>Semester Credits</b>		<b>12</b>

#### SPRING SEMESTER

	Choose from faculty-approved elective courses. . . . .	3-5
	Choose from faculty-approved elective courses. . . . .	3
	Choose from faculty-approved elective courses. . . . .	3
ENTK 1580*	Principles of Technology . . . . .	4
<b>Semester Credits</b>		<b>13-15</b>
<b>Total Credits</b>		<b>61-63</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

## Automotive Technology – Engine Management/Drivability

### **Credit Diploma**

The Automotive Technology Engine Management/Drivability program is designed as the first in a series of two LCCC 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.

#### **First Year**

##### **FALL SEMESTER**

<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
AUTO 1510	Engine System Fundamentals . . . . .	4
AUTO 1600*	Fuel Systems I . . . . .	4
AUTO 1765	Automotive Electrical . . . . .	5
AUTO 2560	Automotive Ignitions Systems . . . . .	3
<b>Semester Credits</b>		<b>16</b>
<b>Total Credits</b>		<b>16</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

## Automotive Technology – Under Car/HVAC

### **Credit Diploma**

The Automotive Technology – Under Car/HVAC program is designed to be the second of two LCCC credit diplomas to prepare students 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 while also laying the foundation for entry into the Automotive Technology AAS program.

#### **First Year**

##### **SPRING SEMESTER**

<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
AUTO 1690	Manual Power Train Fundamentals . . . . .	3
AUTO 1730	Automatic Transmissions . . . . .	4
AUTO 1740*	Brake Systems . . . . .	3
AUTO 1760	Heating and Air Conditioning . . . . .	3
AUTO 2550	Auto Alignment and Suspension . . . . .	4
<b>Semester Credits</b>		<b>17</b>
<b>Total Credits</b>		<b>17</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

## Business – Accounting Services

### Associate of Applied Science

The Accounting Services program prepares students for a lucrative 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.

#### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	ACCT 2010*+	Principles of Accounting I . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: WY	ECON 1200	Economics, Law and Government . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
<b>Semester Credits</b>			<b>15</b>
<b>2ND SEMESTER</b>			
	ACCT 2020*	Principles of Accounting II . . . . .	3
	BADM 1020	Business Communication . . . . .	3
	CMAP 1200	Computer Information Systems . . . . .	3
GenEd: CA	ECON 1000*	Global Economic Issues . . . . .	3
<b>OR</b>			
GenEd: CA	ECON 1010*	Principles of Macroeconomics . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
<b>Semester Credits</b>			<b>15</b>

#### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	ACCT 2430*	Income Tax Accounting . . . . .	3
	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 . . . . .	3
<b>OR</b>			
	Elective . . . . .		3
	Elective . . . . .		3
<b>Semester Credits</b>			<b>18</b>
<b>2ND SEMESTER</b>			
	ACCT 2110*	Quickbooks Accounting . . . . .	3
	ACCT 2230*	Intermediate Accounting . . . . .	3
	BADM 2010*	Business Law I . . . . .	3
	BADM 2030	Business Ethics . . . . .	3
	ACCT 2471*	Accounting Internship II . . . . .	3
<b>OR</b>			
	Elective . . . . .		3
	Choose from faculty-approved elective courses from ACCT prefix . . . . .		3
<b>Semester Credits</b>			<b>18</b>
<b>Total Credits</b>			<b>66</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### Competencies:

Students apply basic accounting principles to record financial transactions within a double entry bookkeeping system of a small business or company, including accounts receivable, accounts payable, payroll, and the utilization of microcomputer accounting software.

# Business – Financial Services

## Associate of Applied Science

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.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	ACCT 2010*+	Principles of Accounting I . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: WY	ECON 1200	Economics, Law and Government . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
			<b>Semester Credits</b>
			<b>15</b>
<b>2ND SEMESTER</b>			
	ACCT 2020*	Principles of Accounting II . . . . .	3
	BADM 1020	Business Communication . . . . .	3
	CMAF 1200	Computer Information Systems. . . . .	3
GenEd: CA	ECON 1000*	Global Economic Issues . . . . .	3
<b>OR</b>			
GenEd: CA	ECON 1010*	Principles of Macroeconomics . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
			<b>Semester Credits</b>
			<b>15</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	ACCT 2430*	Income Tax Accounting . . . . .	3
	FIN 1100*	Financial Planning and Consulting (Fall Only) . . . . .	3
	FIN 1110	Financial Statement and Credit Analysis (Fall Only) . . . . .	3
	FIN 1120*	Investments (Fall Only). . . . .	3
	MKT 1000	Personal selling . . . . .	3
	FIN 2470*	Finance Internship I . . . . .	3
<b>OR</b>			
		Choose from faculty-approved elective courses.^ . . . .	3
			<b>Semester Credits</b>
			<b>18</b>
<b>2ND SEMESTER</b>			
	ACCT 2110*	Quickbooks Accounting . . . . .	3
	BADM 2010*	Business Law I. . . . .	3
	BADM 2030	Business Ethics . . . . .	3
	FIN 2000	Principles of Banking (Spring Only) . . . . .	3
	FIN 2200*	Real Estate Principles and Practice (Spring Only) . . . . .	3
	FIN 2471*	Accounting Internship II . . . . .	3
<b>OR</b>			
		Choose from faculty-approved elective courses.^ . . . .	3
			<b>Semester Credits</b>
			<b>18</b>
			<b>Total Credits</b>
			<b>66</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^Program Comments

Choose 3 credits from ACCT, BADM, BUSN, ECON, FIN, IMGT, MGT, or MKT prefixes.

## Business – Entrepreneurship

### ***Credit Diploma***

The Entrepreneurship program is designed to be added to other career or occupational degrees or as a stand alone certificate. 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.

#### **First Year**

<b>1ST SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	ENTR 1500*	Introduction to Entrepreneurship . . . . .	3
	ENTR 1520*	Creating a Business Plan . . . . .	3
	ENTR 2550*	Social and Internet Technologies. . . . .	3
	MKT 1000*	Personal Selling. . . . .	3
		Electives. . . . .	6
			<b>Total Credits</b>
			<b>18</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### **Competencies:**

Students create a viable business plan and digital strategy, based on market research and feasibility studies.

## Business Management – Entrepreneurship Business Plan

### ***Credit Diploma***

The Entrepreneurship Business Plan program is designed to be added to other career or occupational degrees or as a stand alone certificate. 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.

#### **First Year**

<b>FALL SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	ENTR 1500*	Introduction to Entrepreneurship . . . . .	3
	MKT 1000*	Personal Selling. . . . .	3
			<b>Semester Credits</b>
			<b>6</b>
<b>SPRING SEMESTER</b>			
	ENTR 1520*	Creating a Business Plan . . . . .	3
	ENTR 2550*	Social and Internet Technologies. . . . .	3
			<b>Semester Credits</b>
			<b>6</b>
			<b>Total Credits</b>
			<b>12</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.



# Business – Small Business Management

## Associate of Applied Science

The Small Business 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

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	ACCT 2010*+	Principles of Accounting I . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: WY	ECON 1200	Economics, Law and Government . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
<b>Semester Credits</b>			<b>15</b>

2ND SEMESTER	COURSE	TITLE	CREDITS
	ACCT 2020*	Principles of Accounting II . . . . .	3
	BADM 1020	Business Communication . . . . .	3
	CMAF 1200	Computer Information Systems . . . . .	3
GenEd: CA	ECON 1000*	Global Economic Issues . . . . .	3
<b>OR</b>			
GenEd: CA	ECON 1010*	Principles of Macroeconomics . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
<b>Semester Credits</b>			<b>15</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	ENTR 1500*	Introduction to Entrepreneurship . . . . .	3
	FIN 1001*	Personal Financial Planning . . . . .	1
	FIN 1002*	Risk and Credit Management . . . . .	1
	FIN 1003*	Investment and Retirement Planning . . . . .	1
	MGT 1000*	Supervision . . . . .	3
	MGT 1200*	Human Resources Management . . . . .	3
	MKT 1000*	Personal Selling . . . . .	3
	MGT 2475*	Management Internship I . . . . .	3
<b>OR</b>			
	ENTR 1520	Creating a Business Plan . . . . .	3
<b>Semester Credits</b>			<b>18</b>

2ND SEMESTER	COURSE	TITLE	CREDITS
	ACCT 2110*	Quickbooks Accounting . . . . .	3
	BADM 2010*	Business Law I . . . . .	3
	BADM 2030	Business Ethics . . . . .	3
	MGT 1500*	Leadership . . . . .	3
	MGT 2100*	Principles of Management . . . . .	3
	MGT 2476*	Management Internship II . . . . .	3
<b>OR</b>			
	ENTR 2550*	Social and Internet Technologies . . . . .	3
<b>Semester Credits</b>			<b>18</b>
<b>Total Credits</b>			<b>66</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### Competencies:

Students demonstrate the ability to understand strengths within a team in order to capitalize and build on those strengths, as they interact within a collaborative role managing a project.

# Business – Supply Chain Management

## Associate of Applied Science

The Supply Chain 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.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	ACCT 2010*+	Principles of Accounting I . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: WY	ECON 1200	Economics, Law and Government . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
<b>Semester Credits</b>			<b>15</b>
2ND SEMESTER			
	ACCT 2020*	Principles of Accounting II . . . . .	3
	BADM 1020	Business Communication . . . . .	3
	CMAP 1200	Computer Information Systems . . . . .	3
GenEd: CA	ECON 1000*	Global Economic Issues . . . . .	3
<b>OR</b>			
GenEd: CA	ECON 1010*	Principles of Macroeconomics . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
<b>Semester Credits</b>			<b>15</b>

### Second Year

1ST SEMESTER			
	BUSN 2000*	International Business . . . . .	3
	DSCI 1000*	Introduction to Decision Science . . . . .	3
	PSYC 1100*	Organizational Human Relations . . . . .	3
	MGT 1000*	Supervision . . . . .	3
	MKT 1000*	Personal Selling . . . . .	3
	MGT 2475*	Management Internship I . . . . .	3
<b>OR</b>			
		Choose from faculty-approved elective courses.^ . . . .	3
<b>Semester Credits</b>			<b>18</b>
2ND SEMESTER			
	BADM 2030*	Business Ethics . . . . .	3
	DSCI 1100*	Supply Chain Management . . . . .	3
	DSCI 1200*	Logistics and Transportation . . . . .	3
	DSCI 1300*	Project Management . . . . .	3
	MGT 1500*	Leadership . . . . .	3
	MGT 2476*	Management Internship II . . . . .	3
<b>OR</b>			
		Choose from faculty-approved elective courses.^ . . . .	3
<b>Semester Credits</b>			<b>18</b>
<b>Total Credits</b>			<b>66</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Choose 3 credits from ACCT, BADM, BUSN, DSCI, ECON, ENTR, FIN, MGT, or MKT prefixes.

# Business and Finance

## Associate of Science

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

Program Articulation: This program is articulated with the University of Wyoming and Park University. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	ACCT 2010*+	Principles of Accounting I . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: WY	ECON 1200	Economics, Law and Government . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1400+^	College Algebra . . . . .	3
	<b>OR HIGHER</b>		
			<b>Semester Credits</b>
			<b>15</b>
2ND SEMESTER			
	ACCT 2020*	Principles of Accounting II . . . . .	3
GenEd: CA	ECON 1010*	Principles of Macroeconomics . . . . .	3
	MATH 2350*^	Business Calculus I . . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
			<b>Semester Credits</b>
			<b>16</b>

### Second Year

1ST SEMESTER			
	BADM 2010*	Business Law I . . . . .	3
	ECON 1020	Principles of Microeconomics . . . . .	3
	MATH 2355*^	Mathematical Applications for Business. . . . .	4
	MGT 2100	Principles of Management . . . . .	3
GenEd: LAB		Choose from approved Lab Science courses. . . . .	4
			<b>Semester Credits</b>
			<b>17</b>
2ND SEMESTER			
	FIN 2100*	Corporate Finance ( <i>Spring Only</i> ). . . . .	3
	IMGT 2400*	Introduction to Information Management . . . . .	3
	MKT 2100*	Principles of Marketing . . . . .	3
GenEd: STEM	STAT 2010*	Statistical Concepts – Business. . . . .	4
	<b>OR</b>		
GenEd: STEM	STAT 2050*	Fundamentals of Statistics. . . . .	4
	<b>OR</b>		
GenEd: STEM	STAT 2070*	Introductory Statistics for the Social Sciences. . . . .	4
			<b>Semester Credits</b>
			<b>13</b>
			<b>Total Credits</b>
			<b>61</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Students wishing to pursue a graduate degree in Economics or Finance should take MATH 1450 in lieu of MATH 1400, MATH 2200 in lieu of MATH 2350, and MATH 2205 in lieu of MATH 2355. The total program credit hours for this option is 63 credits.

# Computer Information Systems

## Associate of Applied Science

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 secure various credit diplomas while concurrently earning their AAS.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	CMAP 1200*	Computer Information Systems . . . . .	3
GenEd: CS	COLS 1000	Choose from approved College Seminar courses. . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1400+ <b>OR HIGHER</b>	College Algebra . . . . .	3
		Choose from faculty approved elective courses.^ . . . .	3
		<b>Semester Credits</b>	<b>15</b>
<b>2ND SEMESTER</b>			
	COSC 1010* <b>OR</b>	Introduction to Computer Science. . . . .	4
	COSC 2409	Programming. . . . .	3
		Choose from faculty-approved elective courses.^ . . . .	7
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
GenEd: CV	CO/M 2010*^ <b>OR</b>	Public Speaking. . . . .	3
GenEd: CV	CO/M 1015*^	Foundations of Communication . . . . .	3
		<b>Semester Credits</b>	<b>16-17</b>

### Second Year

<b>1ST SEMESTER</b>			
		Choose from faculty-approved elective courses.^ . . . .	14
		<b>Semester Credits</b>	<b>14</b>
<b>2ND SEMESTER</b>			
	BADM 1020*+	Business Communication . . . . .	3
		Choose from faculty-approved elective courses.^ . . . .	12
		<b>Semester Credits</b>	<b>15</b>
		<b>Total Credits</b>	<b>60-61</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^Program Comments

Program Electives – Students must take courses from at least two of the following disciplines for a minimum total of 35 credit hours. All courses must be approved by a program faculty advisor.

- Business – ACCT, BADM, ECON, ENTR, FIN, IMGT, MGT, and MKT (maximum of 9 credit hours)
- Cisco Networking
- Computer Security
- Computer Applications
- Microsoft
- Linux
- Computer Programming
- Internet Technology
- Computer Technician
- Multimedia/Massmedia

## CIS – Cisco Certified Networking Associate (CCNA)

### **Credit Diploma**

The Cisco Certified Networking Associate credit diploma is designed to provide students with the necessary skills in Cisco Networking Technology and to prepare the student to take the Cisco certification for CCNA.

#### **First Year**

<b>1ST SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	CSCO 2000	Cisco: Internetworking I . . . . .	3
	CMAP 2005*	Virtualization . . . . .	3
	CMAP 1200*	Computer Information Systems. . . . .	3
	CSCO 2010*	Cisco: Advanced Internetworking I. . . . .	3
			<b>Semester Credits</b>
			<b>12</b>
<b>2ND SEMESTER</b>			
	CSCO 2020*	Cisco: Advanced Internetworking II . . . . .	3
	CSCO 2025*	Cisco: Advanced Internetworking III . . . . .	3
	CSEC 1500*	Network Security Fundamentals . . . . .	3
	CSEC 1510*	Network Defense Principles . . . . .	3
			<b>Semester Credits</b>
			<b>12</b>
			<b>Total Credits</b>
			<b>24</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

## CIS – Computer Support Specialist

### **Credit Diploma**

The Computer Support Specialist credit diploma prepares students for entry-level positions at computer help desk and call centers, as well as careers as computer service technicians. Students prepare for industry certifications for Microsoft Office Specialist and CompTIA A+ certifications.

#### **First Year**

<b>1ST SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	CMAP 1920	Computer Hardware Maintenance. . . . .	4
	CMAP 1610*	Windows I. . . . .	1
	CMAP 1650	Introduction to Networking . . . . .	1
	CMAP 1615	Operating Systems . . . . .	3
	CMAP 1765*	Spreadsheet Applications . . . . .	3
	INET 1550	Introduction to the Internet . . . . .	1
			<b>Semester Credits</b>
			<b>13</b>
<b>2ND SEMESTER</b>			
	CMAP 1715	Word Processing . . . . .	3
	CMAP 1815	Database Applications . . . . .	3
	CMAP 1886	Microsoft Outlook . . . . .	2
	CMAP 1200*	Computer Information Systems. . . . .	3
	CMAP 2630	Presentation Graphics: Microsoft PowerPoint . . . . .	2
		Choose from faculty advisor-approved elective from CMAP, COSC, MSFT, CSCO or CSEC courses. . . . .	3
			<b>Semester Credits</b>
			<b>16</b>
			<b>Total Credits</b>
			<b>29</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

## CIS – Datacenter Technician

### **Credit Diploma**

This 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+, Server+, and Network+, as well as acquire the soft skills needed to be successful in an IT career.

#### **First Year**

<b>1ST SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	CMAP 1920	Computer Hardware Maintenance. . . . .	4
	CMAP 1615	Operating Systems . . . . .	3
	CMAP 1960	Server Installation and Configuration . . . . .	3
	CSCO 2000	Cisco: Internetworking I . . . . .	3
	HMDV 1510	Success in the Workplace: Soft Skills. . . . .	3
<b>Semester Credits</b>			<b>16</b>
<b>Total Credits</b>			<b>16</b>

## CIS – Office Application Specialist

### **Credit Diploma**

The Office Application Specialist program prepares students for entry-level positions utilizing the latest office software. Students are prepared for industry Microsoft Office Specialist certification.

#### **First Year**

<b>1ST SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	CMAP 1200*	Computer Information Systems. . . . .	3
	CMAP 1610*	Windows I. . . . .	1
	CMAP 1715	Word Processing . . . . .	3
	CMAP 1765*	Spreadsheet Applications . . . . .	3
	ENGL 1010*	English I: Composition . . . . .	3
	INET 1550	Introduction to the Internet . . . . .	1
<b>Semester Credits</b>			<b>14</b>
<b>2ND SEMESTER</b>			
	ACCT 2010*	Principles of Accounting I. . . . .	3
	BADM 1020*	Business Communication . . . . .	3
	CMAP 1650	Introduction to Networking . . . . .	1
	CMAP 1815	Database Applications ( <i>Spring Only</i> ) . . . . .	3
	CMAP 1886	Microsoft Outlook . . . . .	2
	CMAP 2630	Presentation Graphics: Microsoft PowerPoint . . . . .	2
<b>Semester Credits</b>			<b>14</b>
<b>Total Credits</b>			<b>28</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

## CIS – Systems Administrator

### **Credit Diploma**

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 learn to 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, Comp TIA Linux+ (LPIC- 1), Microsoft MCP, and the Microsoft Certified Systems Associate (MCSA) certifications.

#### **First Year**

<b>1ST SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	CSCO 2000	Cisco: Internetworking I . . . . .	3
	CSCO 2010	Cisco: Advanced Internetworking I. . . . .	3
	LINX 2500	Linux Administration I . . . . .	4
	MSFT 2700	Microsoft Systems Associate I . . . . .	4
			<b>Semester Credits</b>
			<b>14</b>
<b>2ND SEMESTER</b>			
	MSFT 2710*	Microsoft Systems Associate II. . . . .	4
	MSFT 2715*	Microsoft Systems Associate III . . . . .	4
	LINX 2510*	Linux Administration II. . . . .	4
			<b>Semester Credits</b>
			<b>12</b>
			<b>Total Credits</b>
			<b>26</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

## CIS – Web Design

### **Credit Diploma**

The Web Design program is designed to provide students with the necessary skills for employment as an entry-level web designer.

#### **First Year**

<b>1ST SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	CMAP 1200*	Computer Information Systems. . . . .	3
	INET 1580*	Web Page Authoring . . . . .	3
	INET 1640*	Web Development Tools . . . . .	3
			<b>Semester Credits</b>
			<b>9</b>
<b>2ND SEMESTER</b>			
	INET 2020*	Designing E-Commerce Web Sites . . . . .	3
	<b>OR</b>		
	INET 2620*	Designing Effective Web Sites . . . . .	3
		Choose from faculty advisor-approved INET or MMMM courses. . . . .	6
			<b>Semester Credits</b>
			<b>9</b>
			<b>Total Credits</b>
			<b>18</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

# Computer Science

## Associate of Science

Since the 1950's the computer has developed from a novelty with a few technical numerical applications to a ubiquitous tool essential to science and technology, business and finance, government, communications, and entertainment. "Computer" can be defined as personal devices such as phones, tablets, glasses, and other wearable devices. As a result, computer science has grown from a specialization in mathematics, business, or electrical engineering, to an independent, broadly based area of study covering all aspects of the use and understanding of computers and the computation process.

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.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	COSC 1010*	Introduction to Computer Science. . . . .	4
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 2200*+	Calculus I . . . . .	4
			<b>Semester Credits 14</b>
2ND SEMESTER			
	COSC 1030*	Computer Science I . . . . .	4
	MATH 2205*+	Calculus II . . . . .	4
GenEd: LAB		Choose from approved Lab Science courses. . . . .	4
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
			<b>Semester Credits 15</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	COSC 2030*	Computer Science II . . . . .	4
		Choose from faculty approved MATH elective courses.^ . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: STEM	STAT 2010*	Statistical Concepts – Business. . . . .	4
	<b>OR</b>		
GenEd: STEM	STAT 2050*	Fundamentals of Statistics. . . . .	4
	<b>OR</b>		
	STAT 2070*+	Introductory Statistics for the Social Sciences. . . . .	4
			<b>Semester Credits 15</b>
2ND SEMESTER			
	COSC/MATH 2300*	Discrete Structures . . . . .	3
		Choose from upper-level Lab Science courses.^ . . . .	4
		Choose from COSC, CMAP, CSEC or CSCO faculty-approved elective courses. . . . .	3
GenEd: CA		Choose from approved Cultural Awareness courses, ECON 1010 recommended . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking. . . . .	3
			<b>Semester Credits 16</b>
			<b>Total Credits 60</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

MATH elective taken should be greater than MATH 2205, except MATH 2300.

See faculty advisor for assistance in choosing an upper-level Lab Science course.



# Computer Science – Business Concentration

## Associate of Science

This program is designed for computer science students who wish to include core business courses in their education. The Computer Science, Business Concentration provides a foundation for students to continue their education to complete a baccalaureate degree at a four-year college or university in the many specialized concentrations in the broad category of Computer Science/Business.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	ACCT 2010*	Principles of Accounting I . . . . .	3
	COSC 1010*	Introduction to Computer Science. . . . .	4
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
<b>Semester Credits</b>			<b>16</b>

### 2ND SEMESTER

	ACCT 2020*	Principles of Accounting II . . . . .	3
	COSC 1030*	Computer Science I. . . . .	4
GenEd: QR	MATH 2200*+	Calculus I . . . . .	4
GenEd: STEM	STAT 2010*	Statistical Concepts – Business. . . . .	4
<b>OR</b>			
GenEd: STEM	STAT 2050*	Fundamentals of Statistics. . . . .	4
<b>OR</b>			
GenEd: STEM	STAT 2070*+	Introductory Statistics for the Social Sciences . . . . .	4
<b>Semester Credits</b>			<b>15</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	COSC 2030*	Computer Science II . . . . .	4
	BADM 2010*	Business Law I. . . . .	3
	MATH 2205*+	Calculus II . . . . .	4
GenEd: LAB		Choose from first semester upper-level Lab Science courses.^ . . . .	4
<b>Semester Credits</b>			<b>15</b>

### 2ND SEMESTER

	COSC/MATH 2300*	Discrete Structures . . . . .	3
		Choose from second semester-upper level Lab Science courses^ . . . . .	4
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. ECON 1200 recommended. . . . .	3
GenEd: CA		Choose from approved Cultural Awareness courses, ECON 1010 recommended . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking. . . . .	3
<b>Semester Credits</b>			<b>16</b>
<b>Total Credits</b>			<b>62</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

See faculty advisor for assistance in choosing an upper-level Lab Science course.

# Criminal Justice – Corrections/Pre-Law

## Associate of Arts

The Associate of Arts degree majors – law enforcement and corrections/pre-law – assist students in preparing for careers in criminal justice. Specialization in a major begins in the second year of study. There is a broad range of courses allowing the second-year student wide latitude in career planning.

The goal of the criminal justice program is to graduate students who will be assertive, bold, ethical, and positive practitioners in the future, guided by balance, self-control, common sense, curiosity, sensitivity, education, and open, effective communication skills.

The foundation of these practitioners will be their integrity, desire to seek continued personal growth as a criminal justice employee and citizen, and ability to work cooperatively and loyally with cohorts, subordinates, superiors, and the public. Graduates should be prepared to offer leadership services to the community in return for the community's invested trust in them as criminal justice employees.

The corrections portion of this criminal justice major is designed to prepare the student for a bachelor's degree and for careers such as juvenile officer, parole agent, adult probation officer, state and federal corrections officer, institutional counselor, and halfway house counselor.

Criminal justice study at the bachelor's degree level is a popular base for prelaw students and provides a thorough understanding of the system they may be practicing in during their careers. Students in prelaw should select a broad base of courses at the undergraduate level. The practice of law normally requires a bachelor's degree, three years in graduate law school, and successful completion of the bar exam of the jurisdiction in which the law school graduate wishes to practice.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	CRMJ 2120*	Introduction to Criminal Justice. . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: WY	POLS 1000*	American and Wyoming Government . . . . .	3
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR</b>		
GenEd: QR	MATH 1400+ <b>OR HIGHER</b>	College Algebra . . . . .	3
			<b>Semester Credits 15</b>
2ND SEMESTER			
	CRMJ/SOC 2400*	Criminology . . . . .	3
	SOC 1000	Sociological Principles . . . . .	3
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: LAB		Choose from BIOL 1003, ANTH 1100, or GEOG 1010 approved Lab Science courses. . . . .	4
GenEd: CA	ANTH 1200	Introduction to Cultural Anthropology . . . . .	3
			<b>Semester Credits 16</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	CRMJ 2210	Criminal Law I ( <i>Fall Live or Spring Online</i> ). . . . .	3
	CRMJ 2350*	Introduction to Corrections ( <i>Fall Live or Spring Online</i> ). . . . .	3
	PSYC 1000*	General Psychology . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking. . . . .	3
	STAT 2070*	Introductory Statistics for the Social Sciences . . . . .	4
			<b>Semester Credits 16</b>
2ND SEMESTER			
	CRMJ 2220*	Criminal Law II ( <i>Fall Online or Spring Live</i> ) . . . . .	3
	CRMJ 2380*	Probation and Parole ( <i>Fall Online or Spring Live</i> ) . . . . .	3
	CRMJ 2420*	Juvenile Justice ( <i>Fall Online or Spring Live</i> ) . . . . .	3
	PSYC 2000*	Research Methods in Psychology. . . . .	4
GenEd: STEM		Choose from approved STEM courses. . . . .	3
			<b>Semester Credits 16</b>
			<b>Total Credits 63</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

### Other Information

This outline provides a sample guideline for coursework in the major. Actual enrollment varies per student.

# Criminal Justice – Law Enforcement

## Associate of Arts

The Associate of Arts degree majors – law enforcement and corrections/pre-law – assist students in preparing for careers in criminal justice. Specialization in a major begins in the second year of study. There is a broad range of courses allowing the second-year student wide latitude in career planning.

The goal of the criminal justice program is to graduate students who will be assertive, bold, ethical, and positive practitioners in the future, guided by balance, self-control, common sense, curiosity, sensitivity, education, and open, effective communication skills.

The foundation of these practitioners will be their integrity, desire to seek continued personal growth as a criminal justice employee and citizen, and ability to work cooperatively and loyally with cohorts, subordinates, superiors, and the public. Graduates should be prepared to offer leadership services to the community in return for the community's invested trust in them as criminal justice employees.

This program of study may lead to employment as a municipal police officer, deputy sheriff, federal enforcement officer, or private or public security officer.

Good character and physical condition as well as minimum-maximum age limits are required by most employing law enforcement agencies. Employment trends also suggest that agencies are giving preference to those with higher levels of college education. Attendance at a training academy is required to become a law enforcement officer.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	CRMJ 2120*	Introduction to Criminal Justice . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: WY	POLS 1000*	American and Wyoming Government . . . . .	3
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR</b>		
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
	<b>OR HIGHER</b>		
			<b>Semester Credits 15</b>

2ND SEMESTER	COURSE	TITLE	CREDITS
	CRMJ/SOC 2400*	Criminology ( <i>Fall or Spring</i> ) . . . . .	3
	SOC 1000	Sociological Principles . . . . .	3
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: LAB		Choose from BIOL 1003, ANTH 1100, or GEOG 1010	
		approved Lab Science courses. . . . .	4
GenEd: CA	ANTH 1200	Introduction to Cultural Anthropology . . . . .	3
			<b>Semester Credits 16</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	CRMJ 2210	Criminal Law I ( <i>Fall Live or Spring Online</i> ) . . . . .	3
	CRMJ 1510	Police Science I ( <i>Fall Only</i> ) . . . . .	3
	PSYC 1000*	General Psychology . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: STEM	STAT 2050*	Fundamentals of Statistics . . . . .	4
	<b>OR</b>		
GenEd: STEM	STAT 2070*	Introductory Statistics for the Social Sciences . . . . .	4
			<b>Semester Credits 16</b>

2ND SEMESTER	COURSE	TITLE	CREDITS
	CRMJ 1310*	Criminal Investigation I ( <i>Spring Only</i> ) . . . . .	3
	CRMJ 1320*	Criminal Investigation II ( <i>Spring Only</i> ) . . . . .	3
	CRMJ 2220*	Criminal Law II ( <i>Fall Online or Spring Live</i> ) . . . . .	3
	CRMJ 2420*	Juvenile Justice ( <i>Fall Online or Spring Live</i> ) . . . . .	3
	PSYC 2000*	Research Methods in Psychology . . . . .	4
			<b>Semester Credits 16</b>
			<b>Total Credits 63</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### Other Information

This outline provides a sample guideline for coursework in the major. Actual enrollment varies per student.

# Cybersecurity

## Associate of Applied Science

Businesses and government agencies face threats from the cyber world on a daily basis, creating a need for professionals to protect financial information, personal data, and trade secrets from online attackers. The Associate of Applied Science in Cybersecurity degree is designed to prepare students for a career as a cybersecurity professional by providing them the knowledge and tools needed to safeguard the internet.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	CMAP 1615	Operating Systems . . . . .	3
	CMAP 1960	Server Installation and Administration . . . . .	4
	CSCO 2000	Cisco: Internetworking I . . . . .	3
	CSCO 2010*	Cisco: Advanced Internetworking I. . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
			<b>Semester Credits</b>
			<b>16</b>

2ND SEMESTER	COURSE	TITLE	CREDITS
	COSC 2409	Programming . . . . .	3
	CSEC 1500*	Network Security Fundamentals . . . . .	3
	CSEC 1510*	Network Defense Principles . . . . .	3
	LINX 2500	Linux Administration I . . . . .	4
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
			<b>Semester Credits</b>
			<b>16</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	CSEC 1520*	Network Attack Principles. . . . .	3
	CSEC 1530*	Computer Forensics . . . . .	3
	CSEC 1540*	Incident Response. . . . .	3
	MSFT 2700	Microsoft Systems Associate I . . . . .	4
GenEd: QR	MATH 1400+ <b>OR HIGHER</b>	College Algebra . . . . .	3
			<b>Semester Credits</b>
			<b>16</b>

2ND SEMESTER	COURSE	TITLE	CREDITS
	CSEC 1550*	Malware Analysis. . . . .	3
	CSEC 1560*	Cybersecurity Analysis . . . . .	3
	HMDV 1510	Success in the Workplace: Soft Skills. . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking. . . . .	3
GenEd: WY	ECON 1200*	Economics, Law, and Government. . . . .	3
			<b>Semester Credits</b>
			<b>15</b>
			<b>Total Credits</b>
			<b>63</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

## Cybersecurity Fundamentals

### **Credit Diploma**

Businesses and government agencies face threats from the cyber world on a daily basis, creating a need for professionals to protect financial information, personal data, and trade secrets from online predators. The Cybersecurity Fundamentals credit diploma is designed for students new to the study of computers and the study of cybersecurity. This program will give students a basic understanding of computer concepts and cybersecurity theories.

#### **First Year**

<b>1ST SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	CMA1 1615	Operating Systems . . . . .	3
	CMA1 1960	Server Installation and Administration . . . . .	4
	CSCO 2000	Cisco: Internetworking I . . . . .	3
	CSCO 2010*	Cisco: Advanced Internetworking I. . . . .	3
			<b>Semester Credits</b>
			<b>13</b>
<b>2ND SEMESTER</b>			
	CSEC 1500*	Network Security Fundamentals . . . . .	3
	CSEC 1510*	Network Defense Principles . . . . .	3
	COSC 2409	Programming . . . . .	3
	LINX 2500	Linux Administration I . . . . .	4
			<b>Semester Credits</b>
			<b>13</b>
			<b>Total Credits</b>
			<b>26</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

## Cybersecurity Professional

### **Credit Diploma**

Businesses and government agencies face threats from the cyber world on a daily basis, creating a need for professionals to protect financial information, personal data, and trade secrets from online predators. The Cybersecurity Professional credit diploma is designed for the IT professional looking to continue their education in cybersecurity or as the next step after completing the Cybersecurity Fundamentals Credit Diploma.

#### **First Year**

<b>1ST SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	CSEC 1520*	Network Attack Principles . . . . .	3
	CSEC 1530*	Computer Forensics . . . . .	3
	CSEC 1540*	Incident Response. . . . .	3
	LINX 2510*	Linux Administration II. . . . .	4
			<b>Semester Credits</b>
			<b>13</b>
<b>2ND SEMESTER</b>			
	CSCO 2020*	Cisco: Advanced Internetworking II . . . . .	3
	CSCO 2025*	Cisco: Advanced Internetworking III . . . . .	3
	CSEC 1550*	Malware Analysis. . . . .	3
	CSEC 1560*	Cybersecurity Analysis . . . . .	3
	HMDV 1510	Success in the Workplace: Soft Skills. . . . .	3
			<b>Semester Credits</b>
			<b>15</b>
			<b>Total Credits</b>
			<b>28</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

# Dental Hygiene

## Associate of Applied Science

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 course work does not guarantee admission into the dental hygiene program. Additionally, LCCC's academic skills assessment and placement policy apply.

Program Accreditation: This 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.

Program Articulation: This program is articulated with Wichita State University. Any deviations from the prescribed course list will not articulate.

Students interested in starting the program in the Spring of 2020 should contact the Program Director or visit <http://www.lccc.wy.edu/programs/dentalHygiene/index.aspx> for changes to the program requirements and/or prerequisites.

### Prerequisite

1ST SEMESTER	COURSE	TITLE	CREDITS
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
	SOC 1000	Sociological Principles . . . . .	3
	<b>OR</b>		
	ANTH 1200	Introduction to Cultural Anthropology . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
	<b>OR HIGHER</b>		
	ZOO 2015*^	Human Anatomy . . . . .	4
	<b>OR</b>		
	ZOO 2010*^	Anatomy and Physiology I . . . . .	4
Optional	POLS 1000*^	American and Wyoming Government . . . . .	3
	<b>OR EQUIVALENT</b>		
			<b>Prerequisite Credits 16-19</b>

### Prerequisite

2ND SEMESTER	COURSE	TITLE	CREDITS
	PSYC 1000	General Psychology . . . . .	3
	MICR 2240^	Medical Microbiology . . . . .	4
	ZOO 2025*^	Human Physiology . . . . .	4
	<b>OR</b>		
	ZOO 2020	Anatomy and Physiology II . . . . .	4
GenEd: CV	CO/M 2010*+^	Public Speaking . . . . .	3
	CHEM 1000	Introductory Chemistry . . . . .	4
			<b>Prerequisite Credits 18</b>

### Program

1ST SEMESTER SPRING I	COURSE	TITLE	CREDITS
	DHYG 1110	Dental Biology . . . . .	3
	DHYG 1150	Preventive Dentistry . . . . .	2
	DHYG 1410	Dental Hygiene Principles . . . . .	6
	DHYG 2450	Dental Radiology . . . . .	3
			<b>Semester Credits 14</b>
2ND SEMESTER SPRING II	COURSE	TITLE	CREDITS
	DHYG 1200*	Pharmacology . . . . .	2
	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
			<b>Semester Credits 15</b>

**3RD SEMESTER FALL**

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
	<b>Semester Credits</b>	<b>15.5</b>

**4TH SEMESTER SPRING I**

	DHYG 2260	Dental Public Health . . . . .	3
	DHYG 2410*	Ethics, Law and Practice Management . . . . .	3
	DHYG 2440*	Dental Hygiene Seminar III . . . . .	1
	DHYG 2445*	Dental Hygiene Clinic III . . . . .	5
Optional	POLS 1000*^	American and Wyoming Government . . . . .	3
	<b>OR EQUIVALENT</b>		
		<b>Semester Credits</b>	<b>12-15</b>

**Total Credits 93.5**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

**^ Program Comments**

MICR 2240, ZOO 2015, ZOO 2025, ZOO 2010 and ZOO 2020 must be 5 years current.

Students who have not completed POLS 1000 or its equivalent within the state of Wyoming, POLS 1100 must be completed in addition to an acceptable American government course. Although POLS 1000 is an optional prerequisite, if this is not completed prior to starting the program, it will be an additional course that is required during the program in the final semester. It is highly recommended that the student complete this course prior to beginning the dental hygiene program.

Some students may qualify for an exemption for COLS 1000 due to prior learning. Information is available on Page 37 of the catalog. See your Academic Advisor for assistance.

MICR 2210 may be substituted for MICR 2240 if transferring from another institution.

**Important Information**

**Drug Screening and Criminal Background Checks**

Acceptance into the program is conditional based upon satisfactory completion of a criminal background check and drug screen. Instructions for completion will be provided once a student is accepted into the program. Students will also be subject to random and for-cause drug screening throughout the program. Testing positive on the drug screening or evidence of tampering with a specimen will disqualify a student from participation in a clinical assignment and will result in dismissal from the program.

Certain criminal activity, as evidenced by a criminal background check, may also disqualify a student from clinical participation. See school policy at [lccc.wy.edu/academics/divisions/HSW](http://lccc.wy.edu/academics/divisions/HSW). Students are advised that the inability to gain clinical education experiences can result in the inability to meet program objectives and outcomes. These circumstances may prevent acceptance into and/or continuance in the program.

**Application to the Dental Hygiene Program**

A student interested in applying to the dental hygiene program may contact the Dental Hygiene Program Director or the Admissions Office for specific procedures, which must be completed prior to application in August and admission in January. Because the dental hygiene program receives more applications than available student spaces, it is necessary to employ strict selection procedures so that those applicants who are deemed best qualified to succeed may be selected. Applicants must obtain an information packet that outlines the dental hygiene academic calendar, program costs, Health Care Provider CPR requirement, blood borne pathogens, immunizations, and estimated student expenses that are specific to the Dental Hygiene program. Applications may be obtained from the Dental Hygiene Director, or the website [lccc.wy.edu/programs/dentalhygiene](http://lccc.wy.edu/programs/dentalhygiene).

Dental health professionals may be exposed to contagious diseases, therefore, strict compliance with Centers for Disease Control (CDC) and OSHA standards are maintained. Although diseases may be encountered, research indicates that risks are negligible when optimal infection control is practiced. Policies on blood borne and infectious disease are available upon request from the Dental Hygiene program.

LCCC does not discriminate on the basis of race, color, national origin, sex, age, or disability in admission or access to, or treatment or employment in, its educational programs or activities.

# Diagnostic Medical Sonography

## Associate of Applied Science

Diagnostic Medical Sonography (DMS) is a diagnostic medical procedure that uses high-frequency sound waves to produce detailed, dynamic visual images of organs, tissues, or blood flow inside the human body. Sonographers use high-tech systems to scan patients and obtain images of the abdomen, female pelvis, fetus, and the vascular system to aid in the diagnosis of a disease. Sonography is a profession that requires a high degree of independence, critical thinking, and knowledge of the human body, communication, and eye-hand coordination.

A sonographer is a skilled person qualified academically and clinically to perform ultrasound exams while working closely with a qualified physician. 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 and OB/GYN. 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 last three semesters of the program is primarily clinical experience, and students may be placed in various hospitals or clinics in Wyoming, Colorado, Nebraska, or Montana. The program has limited enrollment and admits one class each summer. Prerequisites listed below must be completed or in progress before application for the program admission. Prospective students interested in the program may contact the program director, clinical coordinator, or advising office for details about the program admission process and timeline.

Additional information is available on the program website [www.lccc.wy.edu/programs/sonography](http://www.lccc.wy.edu/programs/sonography). For more information contact the program director or visit [www.lccc.wy.edu/programs/sonography](http://www.lccc.wy.edu/programs/sonography). Program Accreditation: The Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDSM) accredits this program.

The following prerequisite courses must be in progress or completed with a grade of "C" or better by the application deadline for the Diagnostic Medical Sonography program. Students are encouraged to contact the Diagnostic Medical Sonography program faculty directly for program-specific questions.

### Prerequisite

FALL SEMESTER COURSE	TITLE	CREDITS
ZOO 2015*^	Human Anatomy . . . . .	4
<b>OR</b>		
ZOO 2010*^	Anatomy and Physiology I . . . . .	4
GenEd: QR MATH 1400+	College Algebra . . . . .	3
<b>OR HIGHER</b>		
GenEd: CW ENGL 1010*+	English I: Composition . . . . .	3
	<b>Prerequisite Credits</b>	<b>10</b>
<b>SPRING SEMESTER</b>		
ZOO 2025*^	Human Physiology . . . . .	4
<b>OR</b>		
ZOO 2020*^	Anatomy and Physiology II . . . . .	4
PHYS 1050*	Concepts of Physics . . . . .	4
HLTK 1200	Medical Terminology . . . . .	2
GenEd: CV CO/M 2010*^	Public Speaking . . . . .	3
	<b>Prerequisite Credits</b>	<b>13</b>
<b>First Year</b>		
<b>SUMMER I</b>		
IMAG 1505	Introduction to Diagnostic Medical Sonography . . . . .	3
IMAG 1500	Cross-Sectional Anatomy . . . . .	3
GenEd: CS COLS 1000^	Introduction to College Success: First-Year Seminar . . . . .	3
	<b>Semester Credits</b>	<b>9</b>
<b>FALL I</b>		
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
GenEd: WY	Choose from approved U.S./Wyoming Constitution courses . . . . .	3
	<b>Semester Credits</b>	<b>12.5</b>



**SPRING I**

IMAG 1515*	Ultrasound Physics II . . . . .	3
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
<b>Semester Credits</b>		<b>12</b>

**Second Year****SUMMER II**

IMAG 2500*	DMS Beginning Clinical Experience . . . . .	6
<b>Semester Credits</b>		<b>6</b>

**FALL II**

IMAG 2515*	Sonography Clinical Experience II . . . . .	11
IMAG 2530*	Registry Review I . . . . .	1
<b>Semester Credits</b>		<b>12</b>

**SPRING II**

IMAG 2520*	Sonography Clinical Experience III . . . . .	13
IMAG 2535*	Registry Review II . . . . .	1
IMAG 2540*	Vascular Sonography Registry Review . . . . .	1
<b>Semester Credits</b>		<b>15</b>
<b>Total Credits</b>		<b>89.5</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

**^ Program Comments**

If transferring to a four year college, CO/M 2010 is recommended.

Anatomy and physiology courses must have been taken within five years from the program entry date to be considered. Students currently working in one of the following professions are exempt from the five-year anatomy and physiology requirement: graduate of a two-year health occupation degree program directly patient-care related (e.g. Registered Nurse (RN), Radiologic Technologist ARRT(R), Physical Therapist Assistant, Respiratory Therapist, or Surgical Technologist. Proof of employment is required.

Some students may qualify for an exemption for COLS 1000 due to prior learning. Information is available on Page 37 of the catalog. See your Academic Advisor for assistance.

**Other Information**

Supplemental courses that may be taken to improve a students application score include any completion of Certified Nurse Assistant, Medical Assistant, Licensed Practical Nurse, Emergency Medical Technician or a minimum of one year of health training. Students may also improve their application score by successfully completing CMAP 1610, ECON 1200, HIST 1211, HIST 1221, HIST 1251, HLTK 2300, POLS 1000, or PSYC 1000.

**Drug Screening and Criminal Background Checks**

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.

At their discretion, clinical sites may also require a drug screening and/or a criminal background check prior to allowing students into the clinical setting. (If required, any associated fees will be the responsibility of the student.) In addition, LCCC and the clinical sites may require random drug testing and/or drug testing for reasonable cause. Generally, the urine drug test screens for alcoholic beverages, illegal drugs, or drugs that impair judgment while in the clinical agency. Testing positive on the screening or evidence of tampering with a specimen will disqualify a student from participation from clinical assignment.

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. 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. For more information, please see the complete Health Sciences and Wellness Division Policy (pdf) for allied health students. Certain criminal activities, as evidenced by a criminal background check, may also disqualify a student from clinical participation.

Students are advised that the inability to gain clinical education experiences can result in the inability to meet program objectives and outcomes. These circumstances may prevent acceptance into and/or progression through the program and ultimately result in dismissal from the program.

NOTE: Applicants who have been convicted of a crime should contact [www.ardms.org](http://www.ardms.org) to determine if their conviction will prevent them from taking the certification boards and or the ability to obtain employment in a healthcare setting. Any student who cannot pass the background check and is not be eligible to attend clinicals will be dismissed from the program.

# Diesel Technology

## Associate of Applied Science

To earn an Associate of Applied Science degree in Diesel Technology, a student will need to complete the following program of study. The Diesel Technology program is designed to prepare students for employment in the diesel industry. The program also offers courses for those who want to upgrade their skills to meet personal objectives of learning about diesel technology. The diesel technology courses are designed to prepare students for the ASE certification exam.

### First Year

IST SEMESTER	COURSE	TITLE	CREDITS
	DESL 1501	Automotive and Diesel Industrial Safety . . . . .	1
	DESL 1540*	Diesel Electrical. . . . .	5
	DESL 1610*	Engine Rebuilding I. . . . .	5
	DESL 1650*	Diesel Fuel Systems and Tuning I. . . . .	5
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
			<b>Semester Credits 19</b>

### 2ND SEMESTER

	DESL 1700*	Diesel Drivetrain . . . . .	5
	DESL 1755*	Heating, Air Conditioning, and Refrigeration . . . . .	5
	DESL 2950*	Air Brakes, Suspension and Steering. . . . .	5
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
			<b>Semester Credits 18</b>

### Second Year

#### IST SEMESTER

	WELD 1555	Welding Technology Safety ( <i>Fall Only</i> ) . . . . .	2
	WELD 1755	Shielded Metal Arc Welding I ( <i>Fall Only</i> ) . . . . .	4
	WELD 1771*	Gas Metal Arc Welding/Flux Cored Arc Welding ( <i>Fall Only</i> ) . . . . .	4
GenEd: QR	MATH 1510*	Technical Mathematics I. . . . .	3
	<b>OR</b>		
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR HIGHER</b>		
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
			<b>Semester Credits 16</b>

#### 2ND SEMESTER

	DESL 2515	Capstone Course for Diesel Technology ( <i>Spring Only</i> ) . . . . .	4
	ENTK 1580*	Principles of Technology ( <i>Spring Only</i> ) . . . . .	4
	<b>OR</b>	Choose from faculty-approved elective courses. . . . .	2-4
GenEd: CV	CO/M 2010*	Public Speaking. . . . .	3
	<b>OR</b>		
GenEd: CV	CO/M 1015*	Foundations of Communication . . . . .	3
			<b>Semester Credits 9-11</b>
			<b>Total Credits 62-64</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Diesel Technology

## **Credit Diploma**

The Diesel Technology program is designed to prepare students for employment in the diesel industry. The program also offers courses for those who want to upgrade their skills or meet personal objectives of learning about diesel technology.

The nine-month program is designed for full-time students and courses are offered in a sequence of blocks. The block varies from three-to-four weeks in length depending on the number of credits for each course. The diesel technology courses are designed to prepare students for the ASE certification exam.

### **First Year**

<b>1ST SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	DESL 1501	Automotive and Diesel Industrial Standards . . . . .	1
	DESL 1540*	Diesel Electrical. . . . .	5
	DESL 1610*	Engine Rebuilding I. . . . .	5
	DESL 1650*	Diesel Fuel Systems Tuning . . . . .	5
			<b>Semester Credits</b>
			<b>16</b>
<b>2ND SEMESTER</b>			
	DESL 1700*	Diesel Drive Train . . . . .	5
	DESL 1755*	Heating and Air Conditioning . . . . .	5
	DESL 2950*	Airbrake System, Suspension & Steering . . . . .	5
			<b>Semester Credits</b>
			<b>15</b>
			<b>Total Credits</b>
			<b>31</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

## Education

### Associate of Arts

The Education program is for students interested in a teaching career in elementary or secondary education. Pre-service teachers gain knowledge and skills by participating in student-centered activities, inquiry projects, and practical classroom experiences in public schools.

#### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	EDFD 1010*	Introduction to Teaching	1
	EDFD 2020*	Foundations of Education	3
GenEd: LAB		Choose from approved Lab Science courses.	
		BIOL 1003 recommended.	4
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar	3
GenEd: CW	ENGL 1010*+	English I: Composition	3
			<b>Semester Credits 14</b>

#### 2ND SEMESTER

	EDST 2450*	Human Life Span Development	3
GenEd: AA		Choose from approved Aesthetic Analysis courses.	
		MUSC 1000 recommended.	3
GenEd: QR		Choose from approved Quantitative Reasoning courses.	3
		MATH 1000 or MATH 1400 recommended.	
GenEd: CA	GEOG 1000	World Geography	3
	<b>OR</b>		
GenEd: CA	GEOG 1020	Human Geography	3
GenEd: CV	CO/M 2010*	Public Speaking	3
			<b>Semester Credits 15</b>

#### Second Year

##### 1ST SEMESTER

	EDEX 2484*	Introduction to Special Education	3
	ITEC 2360	Teaching with Technology	3
		Choose from faculty-approved elective courses. <sup>^</sup>	3
		Choose from faculty-approved elective courses. <sup>^</sup>	3
GenEd: WY	HIST 1211*	U.S. to 1865	3
	<b>OR</b>		
GenEd: WY	HIST 1221*	U.S. from 1865	3
			<b>Semester Credits 15</b>

##### 2ND SEMESTER

	EDFD 2100*	Educational Psychology	3
	EDUC 2100* <sup>^</sup>	Public School Practicum	2
		Choose from faculty-approved elective courses. <sup>^</sup>	8
GenEd: STEM		Choose from approved STEM courses.	3-4
			<b>Semester Credits 16-17</b>
			<b>Total Credits 60-61</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

##### <sup>^</sup>Program Comments

Secondary majors are encouraged to take coursework relevant to their content area. Speak with a faculty advisor for elective recommendations.

Students must pass a background check and have at least a 2.5 GPA to enroll in EDUC 2100.

## Education – Early Childhood Education

### Associate of Arts

The Early Childhood Education program is designed to provide students an understanding of the cognitive, physical, social and emotional development of young children from infancy to middle childhood in diverse learning environments. The program of study is designed to combine theoretical and lab experiences for students to acquire skills and techniques required of early childhood care providers, as well as to develop career opportunity skills.

#### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	EDEC 1020	Introduction to Early Childhood . . . . .	3
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: LAB		Choose from approved Lab Science courses. . . . .	4
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
<b>Semester Credits</b>			<b>16</b>

<b>2ND SEMESTER</b>			
	EDEC 1100	Observation and Guidance of Young Children ( <i>Spring Only</i> ) . . . . .	3
	EDEC 1200	Administration in Early Childhood Programs . . . . .	3
	EDEX 2484*	Introduction to Special Education . . . . .	3
GenEd: CA	PSYC 1000*	General Psychology . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
<b>Semester Credits</b>			<b>15</b>

#### Second Year

1ST SEMESTER			
	EDEC 1300	Curriculum Planning and Review for Young Children ( <i>Fall Only</i> ) . . . . .	3
	FCSC 2122*	Child Growth and Development. . . . .	1
	HOEC 1140	Nutrition . . . . .	2
	PSYC 2300*	Developmental Psychology . . . . .	3
GenEd: WY	HIST 1211*	U.S. to 1865 . . . . .	3
	<b>OR</b>		
GenEd: WY	HIST 1221*	U.S. from 1865 . . . . .	3
GenEd: QR	MATH 1100*	Numbers and Operations for Elementary School Teachers . . . . .	3
	<b>OR</b>		
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR</b>		
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
	<b>OR HIGHER</b>		
<b>Semester Credits</b>			<b>15</b>

<b>2ND SEMESTER</b>			
	EDEC 2200*	Early Childhood Practicum. . . . .	4
		Choose from faculty-approved elective courses. . . . .	4
		Choose from faculty-approved elective courses. . . . .	3
GenEd: STEM		Choose from approved STEM courses. . . . .	3-4
<b>Semester Credits</b>			<b>14-15</b>

**Total Credits 60-61**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Education – Elementary Education Concentration

## Associate of Arts

The Elementary Education Concentration is designed for students interested in pursuing a teaching career in an elementary (K-6) setting.

Program Articulation: This program is articulated with Valley City State University and the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	EDEL 1430	Life Science in Elementary School	1
	EDFD 1010*	Introduction to Teaching	1
	EDFD 2020*	Foundations of Education	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar	3
GenEd: CW	ENGL 1010*+	English I: Composition	3
GenEd: LAB	BIOL 1003	Current Issues in Biology	4
<b>Semester Credits</b>			<b>15</b>

### 2ND SEMESTER

	EDEL 1450	Earth Science in the Elementary School	1
	EDST 2450	Human Life Span Development	3
	EDEL 2280*	Literature for Children	3
	ITEC 2360	Teaching with Technology	3
GenEd: CA	GEOG 1000	World Geography	3
<b>OR</b>			
GenEd: CA	GEOG 1020	Human Geography	3
GenEd: CV	CO/M 2010*	Public Speaking	3
<b>Semester Credits</b>			<b>16</b>

### Second Year

#### 1ST SEMESTER

	EDEX 2484*	Introduction to Special Education	3
	EDEL 1410*	Elementary School Mathematics Seminar I	1
	GEOG 1010*	Introduction to Physical Geography	4
<b>OR</b>			
	GEOL 1100*	Physical Geology	4
GenEd: QR	MATH 1100*	Numbers and Operations for Elementary School Teachers	3
GenEd: WY	HIST 1211*	U.S. to 1865	3
<b>OR</b>			
GenEd: WY	HIST 1221*	U.S. from 1865	3
<b>Semester Credits</b>			<b>14</b>

#### 2ND SEMESTER

	EDFD 2100*	Educational Psychology	3
	EDUC 2100*^	Public School Practicum	2
	HLED 2006*	Health for Elementary Educators	1
	MATH 1105*	Data, Probability, and Algebra for Elementary School Teachers	3
GenEd: AA	MUSC 1000	Introduction to Music	3
GenEd: STEM		Choose from approved STEM courses	3-4
<b>Semester Credits</b>			<b>15-16</b>

**Total Credits 60-61**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Students must pass a background check and have at least a 2.5 GPA to enroll in EDUC 2100.

# Electrical Technology

## **Credit Diploma**

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.

## **First Year**

<b>1ST SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	ELTR 1516*	Electrical Skills and Practices . . . . .	3
	ELTR 1600*	National Electrical Code I . . . . .	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
		<b>Semester Credits</b>	<b>18</b>
		<b>Total Credits</b>	<b>18</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

# Emergency Medical Services – Paramedic

## Associate of Applied Science

The Associate of Applied Science degree in Emergency Medical Services – Paramedic program prepares competent entry-level paramedics for work in various emergency services fields. The program is limited to 15 students. Prospective students must pass a written exam, practical exam, and interview prior to being accepted into the program. All other LCCC application processes must also be met. Prerequisites for entry to the program are EMT-B State Certification and employment in the EMS field for at least one year or National Registry of Emergency Medical Technicians (NREMT) certification and employment in the EMS field for at least one year.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	HLTK 1200	Medical Terminology . . . . .	2
	EMT 1500	Emergency Medical Technician Basic (EMT-B) . . . . .	9
GenEd: CS	COLS 1000 <sup>^</sup>	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
<b>Semester Credits</b>			<b>17</b>
<b>2ND SEMESTER</b>			
	HLTK 2300	Health Care Ethics . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
	<b>OR</b>		
GenEd: CV	CO/M 1015*	Foundations of Communication . . . . .	3
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
<b>Semester Credits</b>			<b>12</b>
<b>3RD SEMESTER</b>			
		First year, 3rd semester requires students to gain a year of experience as an EMT. . . . .	0
<b>Semester Credits</b>			<b>0</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
		Second year, 1st semester requires students to gain a year of experience as an EMT. . . . .	0
<b>Semester Credits</b>			<b>0</b>

**Courses in the remaining semesters are part of the closed Paramedic program and require acceptance after passing the entrance examination. These courses are taken over three semesters and must be taken sequentially.**

SPRING SEMESTER	COURSE	TITLE	CREDITS
	<b>EMGT 2500*</b>	<b>PARAMEDIC PREPARATORY</b>	<b>2</b>
	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 . . . . .	1
<b>Semester Credits</b>			<b>17</b>
<b>SUMMER SEMESTER</b>			
	EMGT 2565*	Paramedic Pre-hospital Trauma Life Support . . . . .	2
	EMGT 2575*	Paramedic Special Populations and Operations . . . . .	3
	EMGT 2605*	Paramedic Clinical II . . . . .	4
	EMGT 2620*	Paramedic Vehicular I . . . . .	3
<b>Semester Credits</b>			<b>12</b>
<b>FALL SEMESTER</b>			
	EMGT 2630*	Paramedic Vehicular II . . . . .	10
	EMGT 2700*	Paramedic Capstone . . . . .	3
<b>Semester Credits</b>			<b>13</b>
<b>Total Credits</b>			<b>71</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### <sup>^</sup> Program Comments

Some students may qualify for an exemption for COLS 1000 due to prior learning. Information is available on Page 37 of the catalog. See your Academic Advisor for assistance.



## Emergency Medical Services – Paramedic

### **Credit Diploma**

The Emergency Medical Services – Paramedic credit diploma program is designed to prepare students for the National Registry for EMTs certification. The quality of the program helps establish the standard for Wyoming paramedic education. This 42 credit-hour credit diploma program is designed for full-time students. The program will be offered over three semesters and the courses are in a sequence that builds on each other. Prerequisite for entry into this program include EMT Basic or Intermediate status and instructor consent.

#### **SPRING SEMESTER**

<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
EMGT 2500*	Paramedic Preparatory . . . . .	2
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 . . . . .	1
<b>Semester Credits</b>		<b>17</b>

#### **SUMMER SEMESTER**

EMGT 2565*	Paramedic Pre-hospital Trauma Life Support . . . . .	2
EMGT 2575*	Paramedic Special Populations and Operations . . . . .	3
EMGT 2605*	Paramedic Clinical II . . . . .	4
EMGT 2620*	Paramedic Vehicular I . . . . .	3
<b>Semester Credits</b>		<b>12</b>

#### **FALL SEMESTER**

EMGT 2630*	Paramedic Vehicular II . . . . .	10
EMGT 2700*	Paramedic Capstone . . . . .	3
<b>Semester Credits</b>		<b>13</b>
<b>Total Credits</b>		<b>42</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

# Engineering

## Associate of Science

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 gives students a general, transferable background in mathematics and engineering science necessary for later specialization. The program provides the equivalent of two years of a four-year engineering program in small classes with more individual attention than at most four-year institutions. With an Associate of Science in Engineering, students have a strong foundation in mathematics and engineering science needed to transfer and successfully complete a bachelor of science in a field of engineering at a four-year institution.

### First Year

FALL SEMESTER COURSE		TITLE	CREDITS
	ES 1060*	Introduction to Engineering Computing . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: LAB	CHEM 1020*	General Chemistry I. . . . .	4
GenEd: QR	MATH 2200*+•	Calculus I . . . . .	4
			<b>Semester Credits 17</b>

SPRING SEMESTER			CREDITS
	ES 2110*	Statics . . . . .	3
	MATH 2205*+	Calculus II . . . . .	4
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: CA		Choose from approved Cultural Awareness courses. . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
			<b>Semester Credits 16</b>

### Second Year

FALL SEMESTER			CREDITS
	ES 2120*	Dynamics . . . . .	3
	ES 2410*	Mechanics of Materials . . . . .	3
	MATH 2210*+	Calculus III . . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: STEM	PHYS 1320*	College Physics II. . . . .	4
			<b>Semester Credits 17</b>

SPRING SEMESTER			CREDITS
	ES 2210*	Electric Circuit Analysis . . . . .	4
	ES 2310*	Thermodynamics I. . . . .	4
	ES 2330*	Fluid Dynamics . . . . .	3
	MATH 2310*	Applied Differential Equations . . . . .	3
			<b>Semester Credits 14</b>
			<b>Total Credits 64</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

• If the student places into a higher level math or has completed a higher level math than required by the program, the student may request program applicable course substitutions in consultation with their advisor and faculty to fulfill the remaining credits needed to complete the degree.

# English

## Associate of Arts

The major in English enables students to develop and enrich reading, writing, and critical thinking skills by completing a variety of liberal arts courses. The major leads to an Associate of Arts degree and prepares students for various bachelor degree programs including administration, communication, English, journalism, pre-law, and pre-medicine. Students who wish to be certified for public school teaching should consult the requirements for a secondary education major.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

<b>FALL SEMESTER COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
GenEd: CS COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CA	Choose from approved Cultural Awareness courses . . . . .	3
GenEd: CV CO/M 2010*	Public Speaking . . . . .	3
GenEd: CW ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR MATH 1000*	Problem Solving . . . . .	3
<b>OR</b>		
GenEd: QR MATH 1400+	College Algebra . . . . .	3
		<b>Semester Credits 15</b>

<b>SPRING SEMESTER</b>	<b>TITLE</b>	<b>CREDITS</b>
ENGL 1020*	Composition II . . . . .	3
ENGL 2020*^	Introduction to Literature . . . . .	3
ENGL 2040*	Creative Writing . . . . .	3
<b>OR</b>		
ENGL 2041*	Creative Writing: Nonfiction and Poetry . . . . .	3
<b>OR</b>		
ENGL 2042*	Creative Writing: Fiction and Drama . . . . .	3
<b>OR</b>		
ENGL 2100	Literary Magazine . . . . .	3
<b>OR</b>		
ENGL 2095	Writing Your Life . . . . .	3
GenEd: LAB	Choose from first semester world-language courses . . . . .	4
	Choose from approved Lab Science courses . . . . .	4
		<b>Semester Credits 17</b>

### Second Year

<b>FALL SEMESTER</b>	<b>TITLE</b>	<b>CREDITS</b>
ENGL 2210*	English Literature: Middle Ages to the Restoration . . . . .	3
	Choose from second semester world-language courses . . . . .	4
	Choose from 2000-level English courses.^ . . . .	3
GenEd: STEM	Choose from approved STEM courses . . . . .	3-4
GenEd: AA	Choose from approved Aesthetic Analysis courses . . . . .	3
		<b>Semester Credits 16-17</b>

<b>SPRING SEMESTER</b>	<b>TITLE</b>	<b>CREDITS</b>
	Choose from 2000-level English courses.^ . . . .	3
	Choose from ART, CO/M, HUMN, MMMM, MUSC, PHIL, POLS, PSYC, SOC, THEA, or third semester world-language courses . . . . .	3
GenEd: WY HIST 1211*	U.S. to 1865 . . . . .	3
<b>OR</b>		
GenEd: WY HIST 1221*	U.S. from 1865 . . . . .	3
ENGL 2220*	English Literature: The Romantic Period to the Present . . . . .	3
<b>OR</b>		
ENGL 2310*	American Literature: Pre-Colonial to Civil War . . . . .	3
<b>OR</b>		
ENGL 2320*	American Literature: Civil War to Present . . . . .	3
		<b>Semester Credits 12</b>
		<b>Total Credits 60-61</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Students may take any 2000-level ENGL course; however, students interested in transferring to another institution should consult a faculty advisor before selecting this course.

# Equine Science

## Associate of Science

The equine studies program offers three options leading to an associate's degree designed for students interested in equine science, business or training. Two of these options are designed for transfer to a university or four-year college. The equine studies program provides students with hands-on experience in training and horse 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 incorporating the latest techniques and scientific advances to best prepare students for success.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

FALL SEMESTER COURSE		TITLE	CREDITS
	ANSC 1010	Livestock Production . . . . .	4
	EQST 1515	Equine Science I . . . . .	4
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: LAB	BIOL 1010*	General Biology . . . . .	4
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
			<b>Semester Credits</b>
			<b>18</b>
<b>SPRING SEMESTER</b>			
	EQST 1505	Basic Horsemanship . . . . .	4
	EQST 2516*	Equine Science II . . . . .	3
	EQST 2985	Equine Business Law . . . . .	3
GenEd: STEM	BIOL 2022*	Animal Biology . . . . .	4
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
<b>OR HIGHER</b>			
			<b>Semester Credits</b>
			<b>17</b>

### Second Year

FALL SEMESTER		TITLE	CREDITS
	CHEM 1000*	Introductory Chemistry . . . . .	4
	EQST 2500*	Equine Health Management . . . . .	3
	RGMG 2000	Principles of Range Management . . . . .	3
GenEd: AA		Choose from approved Aesthetic Analysis courses . . . . .	3
GenEd: CA	AGEC 1010*	Agriculture Economics I . . . . .	3
			<b>Semester Credits</b>
			<b>16</b>
<b>SPRING SEMESTER</b>			
	EQST 2520	Equine Reproduction ( <i>Spring Only</i> ) . . . . .	3
	STAT 2050*	Fundamentals of Statistics . . . . .	4
<b>OR</b>			
	STAT 2070*	Introductory Statistics for the Social Sciences . . . . .	4
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses . . . . .	3
			<b>Semester Credits</b>
			<b>13</b>
			<b>Total Credits</b>
			<b>64</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Equine Science – Business Management Concentration

## Associate of Science

The equine business management program gives students a background in equine management with an emphasis on business management and professional skills. Students will have a working knowledge of the aspects of the horse, equine industry, and management of various aspects of the industry. This associate of science degree is designed to prepare students for transfer to a university for a bachelor's degree or careers in farm, barn, and program management; feed and pharmaceutical sales; breed association management; equine publications; and other related industry fields.

### First Year

FALL SEMESTER COURSE		TITLE	CREDITS
	BADM 1000*	Introduction to Business . . . . .	3
	EQST 1515	Equine Science I ( <i>Fall Only</i> ) . . . . .	4
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: LAB	BIOL 1010*	General Biology . . . . .	4
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
			<b>Semester Credits</b>
			<b>17</b>

SPRING SEMESTER			
	ACCT 2010*	Principles of Accounting I . . . . .	3
	EQST 2516*	Equine Science II ( <i>Spring Only</i> ) . . . . .	3
	EQST 2985	Equine Business Law ( <i>Spring Only</i> ) . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
<b>OR HIGHER</b>			
			<b>Semester Credits</b>
			<b>15</b>

### Second Year

FALL SEMESTER			
	ACCT 2020*	Principles of Accounting II . . . . .	3
	EQST 2500*	Equine Health Management ( <i>Fall Only</i> ) . . . . .	3
	MGT 2100	Principles of Management . . . . .	3
GenEd: CA	AGEC 1010*^	Agriculture Economics I ( <i>Fall Only</i> ) . . . . .	3
<b>OR</b>			
GenEd: CA	ECON 1010*^	Principles of Macroeconomics . . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
			<b>Semester Credits</b>
			<b>15</b>

SPRING SEMESTER			
	AGEC 1020*^	Agriculture Economics II . . . . .	3
<b>OR</b>			
	ECON 1020*^	Principles of Microeconomics . . . . .	3
	EQST 2520	Equine Reproduction ( <i>Spring Only</i> ) . . . . .	3
	MKT 2100	Principles of Marketing . . . . .	3
GenEd: STEM	STAT 2050*	Fundamentals of Statistics. . . . .	4
<b>OR</b>			
GenEd: STEM	STAT 2070*	Introductory Statistics for the Social Sciences . . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
			<b>Semester Credits</b>
			<b>16</b>
			<b>Total Credits</b>
			<b>63</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Students should take AGEC 1010 and AGEC 1020, or ECON 1010 and ECON 1020.

## Equine Science – Training Management Concentration

### Associate of Applied Science

The AAS Training Management Concentration builds upon the one-year credit diploma in Equine Training and further prepares students for work in the equine industry with an option to transfer to a bachelor's of applied science program. Students learn equine anatomy and physiology; nutrition 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 is required.

#### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
EQST 1515	Equine Science I (Fall Only) . . . . .	4
EQST 2500	Equine Health Management . . . . .	3
EQST 2985	Equine Business Law . . . . .	3
EQST 1685	Equine Behavior and Horsemanship . . . . .	4
GenEd: CS COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
		<b>Semester Credits 17</b>

#### SPRING SEMESTER

EQST 2516	Equine Science II . . . . .	3
EQST 2560	Advanced Training Techniques and Equine Evaluation . . . . .	4
EQST 2800	Fundamentals of Teaching Riding . . . . .	2
EQST 2970*	Equine Internship . . . . .	3
		<b>Semester Credits 12</b>

#### Second Year

##### FALL SEMESTER

GenEd: CW ENGL 1010	English I: Composition . . . . .	3
GenEd: QR MATH 1000	Problem Solving . . . . .	3
ANSC 1010	Livestock Production . . . . .	4
ENTR 1500	Introduction to Entrepreneurship . . . . .	3
EQST 2975	Individualized Training (Fall Only) . . . . .	4
		<b>Semester Credits 17</b>

##### SPRING SEMESTER

GenEd: WY	Choose from approved U.S./Wyoming Constitution courses . . . . .	3
GenEd: CV CO/M 2010	Public Speaking . . . . .	3
EQST 2520*	Equine Reproduction (Spring Only) . . . . .	3
AGEC 2010	Farm-Ranch Business Records . . . . .	2
MKT 1000	Personal Selling . . . . .	3
EQST 2805	Western Equitation . . . . .	2
<b>OR</b>		
EQST 1550	Equine Evaluation I . . . . .	2
<b>OR</b>		
EQST 2570	Basic Ranch Horse Versatility . . . . .	2
		<b>Semester Credits 16</b>
		<b>Total Credits 62</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Equine Training

## Credit Diploma

The Equine Training credit diploma prepares students for work in the field of equine training and management. In addition to gaining an overall understanding of the anatomy and physiology, nutrition needs, how to properly evaluate a horse, and develop a business plan, students will also gain invaluable horsemanship skills in a variety of disciplines, as well as, starting a colt under saddle. 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.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
EQST 1515	Equine Science I ( <i>Fall Only</i> ) . . . . .	4
EQST 2500*	Equine Health Management . . . . .	3
EQST 2985	Equine Business Law . . . . .	3
EQST 1685	Equine Behavior and Horsemanship ( <i>Fall Only</i> ) . . . . .	4
GenEd: CS      COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
	<b>Semester Credits</b>	<b>17</b>
<b>SPRING SEMESTER</b>		
EQST 2516*	Equine Science II ( <i>Spring Only</i> ) . . . . .	3
EQST 2800	Fundamentals of Teaching Riding . . . . .	2
EQST 2560*	Advanced Training Techniques and Equine Evaluation ( <i>Spring Only</i> ) . . . . .	4
EQST 2970*	Equine Internship ( <i>Spring or Summer</i> ) . . . . .	3
	<b>Semester Credits</b>	<b>12</b>
	<b>Total Credits</b>	<b>29</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

# Exercise Science

## Associate of Science

The Laramie County Community College 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, physical therapy, athletic training, physical education teacher education (PETE), occupational therapy or related fields. Students complete coursework that provides a solid knowledge base of human anatomy, physiology, chemistry, and health. Two program tracks are available depending on the student's interest and career goals. All students must complete the general education core and complete either the Exercise Science track or the Physical Education Teaching (PETE) track. Students are urged to study carefully 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 see an Exercise Science advisor for a suggested program schedule.

The Exercise Science track leads to an associate of science degree and is designed to provide students quality academic and professional preparation in the scientific study of human movement. The program offers a sound theoretical foundation and practical applications. While students must receive a bachelor's degree, many of these fields also require a master's degree or beyond.

Program Articulation: This program is articulated with the University of Wyoming and Colorado Mesa University. Any deviations from the prescribed course list will not articulate.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
PEAC 1295	Individual Exercise Programs . . . . .	1
HLED 1221	Standard First Aid and Safety . . . . .	2
KIN 1100	Kinesiology: The Science of Human Movement . . . . .	3
GenEd: CS COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR MATH 1400+	College Algebra . . . . .	3
<b>OR HIGHER</b>		
		<b>Semester Credits 15</b>
<b>SPRING SEMESTER</b>		
HOEC 1140	Nutrition . . . . .	2
HLTK 1210	Human Body Systems. . . . .	3
KIN 2135*	Personal Trainer Education . . . . .	3
GenEd: LAB BIOL 1010	General Biology. . . . .	4
GenEd: STEM CHEM 1000*	Introductory Chemistry. . . . .	4
<b>OR</b>		
GenEd: STEM CHEM 1020*	General Chemistry I. . . . .	4
		<b>Semester Credits 16</b>

### Second Year

<b>FALL SEMESTER</b>		
KIN 2470*	Exercise Science Practicum I . . . . .	1
EDST 2450*	Human Life Span Development. . . . .	3
ZOO 2010*	Anatomy and Physiology I . . . . .	4
GenEd: CV CO/M 2010*	Public Speaking. . . . .	3
GenEd: CA PSYC 1000*	General Psychology. . . . .	3
GenEd: WY	Choose from approved U.S./Wyoming Constitution courses. . . . .	3
		<b>Semester Credits 17</b>
<b>SPRING SEMESTER</b>		
PEPR 2050*	Prevention and Care of Athletic Injuries . . . . .	2
KIN 2471*	Exercise Science Practicum II. . . . .	2
HLED 1006*	Personal Health. . . . .	3
ZOO 2020*	Anatomy and Physiology II. . . . .	4
GenEd: AA	Choose from approved Aesthetic Analysis courses. . . . .	3
		<b>Semester Credits 14</b>
		<b>Total Credits 62</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.



## Exercise Science – Coaching

### Credit Diploma

Sport coaching is an emerging field with diverse content areas and athletic populations. Students examine philosophies, strategies, and approaches to coaching at various levels. Students 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 as a head or assistant coach. If a student currently holds a Wyoming Educator License, the student must apply to add a Coaching Endorsement to his/her Educator License. A Coaching Permit is for non-licensed individuals. The Wyoming Professional Teaching Standards Board (PTSB) sets these standards.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	EDST 2450*	Human Life Span Development . . . . .	3
	HLED 1221	Standard First Aid and Safety . . . . .	2
	PEPR 2050	Prevention and Care of Athletic Injuries . . . . .	2
	PEPR 2100	Theory of Coaching . . . . .	3
	PEPR 2110	Scientific Foundations of Coaching . . . . .	3
			<hr/>
			<b>Semester Credits</b> 13
			<hr/>
			<b>Total Credits</b> 13

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

## Exercise Science – Personal Trainer

### Credit Diploma

The Personal Trainer program is designed to assist students in gaining the knowledge and skills required to become a certified personal trainer. Students who complete the certificate will be 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 that have been certified 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.

By completion of the certificate students will learn how to design, implement, and evaluate individual exercise programs; perform fitness assessments; and explain physiological changes that occur during exercise. Students who complete this certificate and pass the certifying agencies exam, which can be taken on the LCCC campus, can begin training clients while working on their AS or BS in Exercise Science. At the completion of the Personal Trainer program students may take the national certification exam which is an additional cost of approximately \$280.00.

### First Year

FALL SEMESTER	COURSE	TITLE	CREDITS
	HLED 1221	Standards First Aid and Safety . . . . .	2
	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*	Care and Prevention of Athletic Injuries . . . . .	2
			<hr/>
			<b>Semester Credits</b> 12
<b>SPRING SEMESTER</b>			
	HLTK 1210	Human Body Systems . . . . .	3
	HOEC 1140	Nutrition . . . . .	2
	KIN 1007*	Fitness Component: Cardiovascular Endurance . . . . .	2
	KIN 2135*	Personal Trainer Education . . . . .	3
	KIN 2470*	Exercise Science Practicum I . . . . .	1
			<hr/>
			<b>Semester Credits</b> 11
			<hr/>
			<b>Total Credits</b> 23

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

# Exercise Science – Physical Education Teacher Education Concentration

## Associate of Science

The Laramie County Community College 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, physical therapy, athletic training, physical education teacher education (PETE), occupational therapy or related fields. Students complete coursework that provides a solid knowledge base of human anatomy, physiology, and health. Two program tracks are available depending on the student's interest and career goals. All students must complete the general education core and complete either the Exercise Science track or the Physical Education Teacher Education (PETE) track.

The PETE track leads to an Associate of Science degree and is designed to prepare students to meet academic standards leading to a bachelor degree at a four year institution. Students are exposed to behavioral, humanistic, and pedagogical studies that foster an understanding of schools as an institution and the value of physically active lifestyles in Pre K-12 students. Students interested in coaching or recreation-oriented careers may also find this program of interest.

Program Articulation: This program is articulated with the University of Wyoming and Colorado Mesa University. Any deviations from the prescribed course list will not articulate.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
	PEAC 1295 Individual Exercise Programs . . . . .	1
	KIN 1006* Fitness Component: Flexibility . . . . .	2
	KIN 1100 Kinesiology: The Science of Human Movement . . . . .	3
GenEd: CS	COLS 1000 Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+ English I: Composition . . . . .	3
GenEd: QR	MATH 1400+ College Algebra . . . . .	3
	<b>OR HIGHER</b>	
		<b>Semester Credits 15</b>

SPRING SEMESTER	TITLE	CREDITS
	PEPR 1470 PETE Practicum I . . . . .	1
	KIN 1007* Fitness Component: Cardiovascular Endurance. . . . .	2
	HLED 1006* Personal Health. . . . .	3
	HLTK 1210 Human Body Systems. . . . .	3
GenEd: CV	CO/M 2010* Public Speaking. . . . .	3
GenEd: LAB	BIOL 1010* General Biology. . . . .	4
		<b>Semester Credits 16</b>

### Second Year

FALL SEMESTER	TITLE	CREDITS
	PEPR 2470* PETE Practicum II . . . . .	1
	HOEC 1140 Nutrition . . . . .	2
	HLED 1221 Standard First Aid and Safety . . . . .	2
	KIN 1008* Fitness Component: Muscular Strength/Muscular Endurance . . . . .	2
	PEPR 2050* Prevention and Care of Athletic Injuries . . . . .	2
	ZOO 2010* Anatomy and Physiology I . . . . .	4
GenEd: CA	PSYC 1000* General Psychology. . . . .	3
		<b>Semester Credits 16</b>

SPRING SEMESTER	TITLE	CREDITS
	PEPR 2475* PETE Practicum III. . . . .	1
	ZOO 2020* Anatomy and Physiology II. . . . .	4
GenEd: AA	Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: WY	Choose from approved U.S./Wyoming Constitution courses. . . . .	3
GenEd: STEM	STAT 2050* Fundamentals of Statistics. . . . .	4
		<b>Semester Credits 15</b>
		<b>Total Credits 62</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Exercise Science – Sport Management Concentration

## Associate of Science

The Laramie County Community College 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, physical therapy, athletic training, physical education teacher education (PETE), occupational therapy or related fields. Students complete coursework that provides a solid knowledge base of human anatomy, physiology, chemistry, and health. Three program concentrations are available depending on the student's interest and career goals. All students must complete the general education core and complete either the Exercise Science, Physical Education Teacher Education (PETE), or Sport Management concentration. Students are encouraged to carefully study the 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 see an Exercise Science advisor and/or meet with the Exercise Science Program Director for a program schedule.

The Sport Management concentration leads to an Associate of Science degree and is designed to provide students quality academic and professional preparation in the business of sport in all of its many facets. The program offers a sound theoretical foundation and practical applications. Students plan, organize, lead and evaluate within the context of a sport organization and/or environment. This degree provides the theoretical and practical framework for a number of professions that focus on leadership roles including those in youth, amateur, and professional sports; recreational, college and university sport programs; and the marketing and management of all sport and fitness related goods.

Program articulation: This program is articulated with Colorado Mesa University and Valley City State University. Any deviations from the prescribed course list will not articulate.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
	KIN 1010	Introduction to Sport Management . . . . . 3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . . 3
GenEd: CV	CO/M 2010*	Public Speaking . . . . . 3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . . 3
GenEd: QR	MATH 1400+ OR HIGHER	College Algebra . . . . . 3
		<b>Semester Credits 15</b>
SPRING SEMESTER		
	BADM 1000	Introduction to Business . . . . . 3
	SOC 1150	Sociology of Sport . . . . . 3
	HLED 1006	Personal Health . . . . . 3
GenEd: LAB		Choose from approved Lab Science courses. . . . . 4
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . . 3
		<b>Semester Credits 16</b>

### Second Year

FALL SEMESTER		
	CMAP 1200	Computer Information Systems. . . . . 3
	ECON 1010	Principles of Macroeconomics . . . . . 3
	KIN 2200	Recreation and Leisure in Modern Society . . . . . 2
	HLED 1221	Standard First Aid and Safety . . . . . 2
GenEd: STEM		Choose from approved STEM courses. . . . . 3-4
		Choose from a faculty approved PEAC course^ . . . . . 1
		<b>Semester Credits 14-15</b>
SPRING SEMESTER		
	MGT 2100	Principles of Management . . . . . 3
	MKT 2100	Principles of Marketing . . . . . 3
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . . 3
GenEd: CA	MMMM 1000	Introduction to Mass Media . . . . . 3
	KIN 2490	History and Philosophy of Sport . . . . . 3
		<b>Semester Credits 15</b>
		<b>Total Credits 60-61</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Students may choose from one of the faculty approved PEAC courses:

- |   |  |
|---|--|
| PEAC 1012 – 1 credit – Beginning Swimming       | PEAC 1245 – 1 credit – Beginning Fencing |
| PEAC 1046 – 1 credit – Introduction to Pilates  | PEAC 1294 – 1 credit – Hatha Yoga        |
| PEAC 1047 – 1 credit – Introduction to Spinning |  |

# Fire Science Technology

## Associate of Applied Science

The Fire Science Technology program is designed to meet the demands of fire service personnel. The program prepares students for a career in fire service (career or volunteer). Courses are offered through traditional classroom instruction, independent study, lab, and an academy setting. The program prepares students to take the Wyoming State Firefighter II nationally accredited certification exam. This certification is transferable from state-to-state within a one-year period from program completion. Experienced firefighters may earn credits transferable to the program from on-the-job training and current certifications.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	FIRE 1501	Principles of Emergency Services . . . . .	3
	FIRE 1760	Building Construction . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
	<b>OR</b>		
GenEd: CV	CO/M 1015*	Foundations of Communication . . . . .	3
			<b>Semester Credits 15</b>
<b>2ND SEMESTER</b>			
	FIRE 2800*	Fire Academy . . . . .	8
			<b>Semester Credits 8</b>

### Second Year

1ST SEMESTER			
	HLTK 1200	Medical Terminology . . . . .	2
	FIRE 1810	Introduction to Wildland Firefighting . . . . .	4
	FIRE 1825	Fire Behavior and Combustion . . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses . . . . .	3
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR HIGHER</b>		
			<b>Semester Credits 15</b>
<b>2ND SEMESTER</b>			
	FIRE 1700	Introduction to Fire Prevention . . . . .	3
	FIRE 2500	Fire Investigator I . . . . .	3
	EMT 1500	Emergency Medical Technician Basic (EMT-B) . . . . .	6
			<b>Semester Credits 12</b>
<b>3RD SEMESTER</b>			
	HLTK 2300*	Healthcare Ethics . . . . .	3
	FIRE 1510*	Firefighting Strategies and Tactics I . . . . .	3
	FIRE 1725	Fire Protection Systems . . . . .	3
	FIRE 2550*	Fire Investigator II . . . . .	3
	FIRE 1625*	Fire Protection Hydraulics and Water Supply . . . . .	3
	<b>OR</b>		
	FIRE 2610	Chemistry of Hazardous Materials . . . . .	3
	<b>OR</b>		
	FIRE 2970*^	Firefighter Field Experience . . . . .	4
			<b>Semester Credits 15-16</b>
			<b>Total Credits 65-66</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

FIRE 2970 must be taken for a minimum of 4 credit hours to meet program elective credit hour requirements.

# Health Information Technology and Management

## Associate of Applied Science

The Health Information Technology and Management Associate of Applied Science degree 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 AAS degree 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 within the administrative side of the medical field.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
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
GenEd: CS	Introduction to College Success: First-Year Seminar . . . . .	3
	<b>Semester Credits</b>	<b>16</b>
SPRING SEMESTER		
HLTK 1210	Human Body Systems . . . . .	3
HIT 1600*	Introduction to Health Information . . . . .	2
MEDC 1500*	Basic ICD-10-CM/PCS Coding . . . . .	3
MEDC 1600*	Basic CPT Coding . . . . .	3
MEDC 1750*	Disease Processes in Coding . . . . .	3
GenEd: CW	ENGL 1010*+ English I: Composition . . . . .	3
	<b>Semester Credits</b>	<b>17</b>

### Second Year

FALL SEMESTER		
MEDC 1675*	Advanced Coding . . . . .	4
MEDC 1700*	Reimbursement Methodologies . . . . .	3
MEDC 1970*	Professional Practice Experience (Coding) . . . . .	2
GenEd: QR	MATH 1000* Problem Solving . . . . .	3
	<b>OR HIGHER</b>	
GenEd: CV	CO/M 2010* Public Speaking . . . . .	3
	<b>OR</b>	
GenEd: CV	CO/M 1015* Foundations of Communication . . . . .	3
	<b>Semester Credits</b>	<b>15</b>
SPRING SEMESTER		
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
GenEd: WY	Choose from approved U.S./Wyoming Constitution courses . . . . .	3
	<b>Semester Credits</b>	<b>15</b>
	<b>Total Credits</b>	<b>63</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### Other Information

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. Prospective students interested in the program may contact the program director for details about the program admission process and timeline. Additional information is also available on the program website at [lccc.wy.edu/programs/healthinformationtechnology](http://lccc.wy.edu/programs/healthinformationtechnology).

#### Drug Screening and Criminal Background Checks

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.

# HIT – Medical Office Essentials

## Credit Diploma

The Medical Office Essentials credit diploma provides the necessary skills to perform successfully in entry-level administrative positions in the healthcare field. These support skills cover managing day-to-day medical office operations, understanding legal and ethical issues in healthcare 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.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
ENGL 1010*+	English I: Composition . . . . .	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
	<b>Semester Credits</b>	<b>16</b>
	<b>Total Credits</b>	<b>16</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

### Other Information

Acceptance into the program is required prior to course registration. Prospective students interested in the program may contact the program director for details about the program admission process and timeline. Additional information is also available on the program website at [lccc.wy.edu/programs/healthinformationtechnology](http://lccc.wy.edu/programs/healthinformationtechnology).

# HIT – Medical Claims Coding Associate

## Certificate of Completion

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 of Completion

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
	HLTK 1200	Medical Terminology . . . . . 2
	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
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . . 3
		<b>Semester Credits 16</b>
SPRING SEMESTER		
	HLTK 1210	Human Body Systems . . . . . 3
	HIT 1600*	Introduction to Health Information . . . . . 2
	MEDC 1500*	Basic ICD-10-CM/PCS Coding . . . . . 3
	MEDC 1600*	Basic CPT Coding . . . . . 3
	MEDC 1750*	Disease Processes in Coding . . . . . 3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . . 3
		<b>Semester Credits 17</b>

### Second Year

FALL SEMESTER		
	MEDC 1675*	Advanced Coding . . . . . 4
	MEDC 1700*	Reimbursement Methodologies . . . . . 3
	MEDC 1970	Professional Practice Experience (Coding) . . . . . 2
GenEd: QR	MATH 1000*	Problem Solving . . . . . 3
<b>OR HIGHER</b>		
GenEd: CV	CO/M 2010*	Public Speaking . . . . . 3
<b>OR</b>		
GenEd: CV	CO/M 1015*	Foundations of Communication . . . . . 3
		<b>Semester Credits 15</b>
		<b>Total Credits 48</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

### Other Information

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. Prospective students interested in the program may contact the program director for details about the program admission process and timeline. Additional information is also available on the program website at [lccc.wy.edu/programs/healthinformationtechnology](http://lccc.wy.edu/programs/healthinformationtechnology).

# Health Sciences

## Associate of Science

The Health Sciences degree is recommended for those students who desire a health science generalist curriculum. It provides the general education core curriculum enhanced with health science related courses, that allows a student the flexibility to move into various healthcare career pathways. Because of the varied pathways possible, students are urged to work closely with their advisor in outlining the pathway most appropriate to meet their goal.

### First Year

IST SEMESTER	COURSE	TITLE	CREDITS
	HLTK 1200	Medical Terminology . . . . .	2
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: LAB	BIOL 1010*	General Biology . . . . .	4
	<b>OR</b>		
GenEd: LAB	CHEM 1000*	Introduction to Chemistry . . . . .	4
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
	<b>OR HIGHER</b>		
			<b>Semester Credits</b>
			<b>15</b>

### 2ND SEMESTER

	HLTK 1210*	Human Body Systems . . . . .	3
	HLTK 2510*	Pathophysiology . . . . .	2
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: STEM	ZOO 2010*	Anatomy and Physiology I . . . . .	4
Choose from <b>one</b> of the following GenEd: CA courses:			
	AMST 2110*	Cultural Diversity in America . . . . .	3
	ANTH 1200	Introduction to Cultural Anthropology . . . . .	3
	CO/M 2500*	Intercultural Communication . . . . .	3
	EDST 2450*	Human Life Span Development . . . . .	3
	PSYC 1000*	General Psychology . . . . .	3
	SOC 1000	Sociological Principles . . . . .	3
			<b>Semester Credits</b>
			<b>15</b>

### Second Year

#### 1ST SEMESTER

	HLTK 2300*	Health Care Ethics . . . . .	3
	HOEC 1140	Nutrition . . . . .	2
	ZOO 2020*	Anatomy and Physiology II . . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses . . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses . . . . .	3
			<b>Semester Credits</b>
			<b>15</b>

#### 2ND SEMESTER

	MICR 2240*	Medical Microbiology . . . . .	4
		Choose from approved Lab Science courses . . . . .	4
		Choose from approved elective courses . . . . .	3
Choose from <b>two</b> of the following GenEd: CA courses:			
	AMST 2110*	Cultural Diversity in America . . . . .	3
	ANTH 1200	Introduction to Cultural Anthropology . . . . .	3
	CO/M 2500*	Intercultural Communication . . . . .	3
	EDST 2450*	Human Life Span Development . . . . .	3
	PSYC 1000*	General Psychology . . . . .	3
	SOC 1000	Sociological Principles . . . . .	3
			<b>Semester Credits</b>
			<b>17</b>
			<b>Total Credits</b>
			<b>62</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.



# Heating, Ventilation, and Air Conditioning/Refrigeration

## Associate of Applied Science

The energy efficient Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R) program is designed for students who want to gain valuable industry skills and also want to pursue a basic academic foundation. The Associate of Applied Science degree includes general education requirements; HVAC/R installation, repair, and maintenance knowledge and skills: thermodynamics, fluid dynamics, and electrical topics – all of which are combined to provide the groundwork for direct industry employment.

### First Year

FALL SEMESTER COURSE		TITLE	CREDITS
	HMDV 1510	Success in the Workplace: Soft Skills . . . . .	3
	IST 1520	Introduction to Industrial Safety . . . . .	3
	IST 1560	Trade Skills Fundamentals . . . . .	3
	IST 1660*	Mechanical Drives . . . . .	2
	IST 1661*	Mechanical Drive Assemblies . . . . .	1
	IST 1710*	DC Electricity . . . . .	2
	IST 1711*	DC Electrical Circuits . . . . .	1
	IST 1712*	AC Electricity . . . . .	2
	IST 1713*	AC Electrical Circuits . . . . .	1
			<b>Semester Credits</b>
			<b>18</b>
<b>SPRING SEMESTER</b>			
	HVAC 1600	Mechanical Piping Systems . . . . .	3
	HVAC 1610	Heating and Air Conditioning Principles . . . . .	3
	HVAC 1630*	Energy Efficient Residential Heating Systems . . . . .	4
	HVAC 1650*	Residential Air Conditioning Systems . . . . .	3
	IST 1770*	Motor Controls . . . . .	2
	IST 1771*	Motor Control Circuits . . . . .	1
	IST 1780*	Electric Motors . . . . .	2
	IST 1781*	Electric Motor Circuits . . . . .	1
			<b>Semester Credits</b>
			<b>19</b>

### Second Year

FALL SEMESTER			
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
	HVAC 1620	Refrigeration Circuit Components . . . . .	3
	HVAC 1670	Light Commercial Refrigeration Systems . . . . .	3
GenEd: QR	MATH 1510	Technical Mathematics I . . . . .	3
		<b>OR</b>	
GenEd: QR	MATH 1000	Problem Solving . . . . .	3
GenEd: CW	ENGL 1010	English I: Composition . . . . .	3
			<b>Semester Credits</b>
			<b>15</b>
<b>SPRING SEMESTER</b>			
	CMGT 1520	Introduction to Blueprint Reading and Building Codes . . . . .	3
	HVAC 1640	Automatic Building Controls . . . . .	3
	HVAC 1660	HVAC Distribution Systems . . . . .	3
GenEd: CV	CO/M 2010*^	Public Speaking . . . . .	3
		<b>OR</b>	
GenEd: CV	CO/M 1015*^	Foundations of Communication . . . . .	3
GenEd: WY		Choose from any approved U.S./Wyoming Constitution courses . . . . .	3
			<b>Semester Credits</b>
			<b>15</b>
			<b>Total Credits</b>
			<b>67</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Heating, Ventilation, and Air Conditioning/Refrigeration

## **Credit Diploma**

The HVAC/R credit diploma program is designed for the student who wishes to gain the basic skills required to enter the HVAC/R workforce. Students are introduced to basic concepts such as Electric Motors Circuits, Heating and Air-conditioning, Refrigeration System Components, Mechanical Piping skills and Residential Heating Systems.

### **First Year**

#### **SPRING**

<b>SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	HVAC 1600	Mechanical Piping Systems . . . . .	3
	HVAC 1610	Heating and Air Conditioning Principles. . . . .	3
	HVAC 1630*	Energy Efficient Residential Heating Systems . . . . .	4
	HVAC 1650*	Residential Air Conditioning Systems. . . . .	3
	IST 1770*	Motor Controls . . . . .	2
	IST 1771*	Motor Control Circuits . . . . .	1
	IST 1780*	Electric Motors . . . . .	2
	IST 1781*	Electric Motor Circuits . . . . .	1
<b>Semester Credits</b>			<b>19</b>
<b>Total Credits</b>			<b>19</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

# History

## Associate of Arts

The Associate of Arts degree in history is designed to prepare students for advancement toward a bachelor's degree at a four-year educational institution. By successfully completing the following curriculum, students are prepared to enter the University of Wyoming as juniors. A degree in history offers a solid liberal arts education, thereby preparing students for academic advancement in program areas other than history. Students should consult with an advisor in order to ensure that courses are appropriate and transferable. A major in history opens career possibilities in such areas as historical and archival research, museology, and historic site restoration and interpretation. A number of state and federal agencies employ historians in order to collect, preserve, record, interpret, and display elements of this country's heritage. Advanced degrees are usually prerequisites for these types of positions. An extensive background in history is also a must for many secondary social studies teachers.

All History students need to meet with their faculty advisor in order to discuss the opportunities that exist in History and choose a path that is appropriate to their goals. Students interested in pursuing a concentration or a degree in History are encouraged to consult with the History faculty concerning course sequencing.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	HIST 1211*	U.S. to 1865 . . . . .	3
GenEd: CA		Choose from approved first-year world-language courses. . . . .	4
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1070*	Quantitative Reasoning II . . . . .	3
	<b>OR</b>		
GenEd: QR	MATH 1400*+	College Algebra . . . . .	3
		<b>Semester Credits</b>	<b>16</b>
<b>2ND SEMESTER</b>			
	HIST 1110	Western Civilization I . . . . .	3
		Choose from approved second-year world-language courses. . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: STEM		Choose from faculty-approved STEM courses. . . . .	3-4
		<b>Semester Credits</b>	<b>16-17</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	HIST 1221*	U.S. from 1865 . . . . .	3
	HIST 1251*	Wyoming History. . . . .	3
	<b>OR</b>		
	HIST 2290*^	History of North American Indians ( <i>Fall Only</i> ) . . . . .	3
	<b>OR</b>		
	HIST/WMST 2389*	History of Women and the American West ( <i>Spring Only</i> ) . . . . .	3
		Choose from faculty-approved elective courses.^ . . . .	3
GenEd: LAB	GEOG 1010*	Introduction Physical Geography. . . . .	4
GenEd: WY	POLS 1000*	American Wyoming Government . . . . .	3
		<b>Semester Credits</b>	<b>16</b>
<b>2ND SEMESTER</b>			
	HIST 1120*	Western Civilization II ( <i>Spring Only</i> ) . . . . .	3
	HIST 1251*	Wyoming History. . . . .	3
	<b>OR</b>		
	HIST 2290*^	History of North American Indians ( <i>Fall Only</i> ) . . . . .	3
	<b>OR</b>		
	HIST/WMST 2389*	History of Women and the American West ( <i>Spring Only</i> ) . . . . .	3
		Choose from faculty-approved elective courses.^ . . . .	3
		Choose from faculty-approved elective courses.^ . . . .	3
		<b>Semester Credits</b>	<b>12</b>
		<b>Total Credits</b>	<b>60-61</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

### **^Program Comments**

Students transferring to a college outside of Wyoming are recommended to enroll in HIST 2290.

Program Electives – History students are required to complete 12-15 program approved elective courses. Electives should be a balance of different disciplines and can come from the following course prefixes:

AGRI, ACCT, AMST, ANTH, ART, ASTR, BADM, BUSN, BIOL, CO/M, CHEM, CMAP, INET, COSC, CRMJ, ECON, EDEX, EDST, EDFD, EDUC, ENGL, ES, GEOG, GEOL, HIST, HUMN, IST, ITEC, MATH, MGT, MKT, MMMM, MUSC, PHIL, PHYS, POLS, PSYC, RELI, THEA, SOC, SPAN, FREN, JAPN, ZOO

Teaching History Emphasis – If a student intends to teach history as a career goal, the student should meet with the faculty advisors in both History and Education. The electives below indicate suggested electives for a traditional History student who is pursuing only a History degree.

### **Teaching History Emphasis**

HIST – LCCC offers a variety of History courses that articulate to universities that students can take at the 1000 and 2000 level.

Choose from approved third-year world-language courses.

AMST 2010, Introduction to American Studies (*Fall Only*) OR AMST 2110, Cultural Diversity in America (*Spring Only*)

### **Other Information**

History students need 8 hours in a single world-language. Sign language does not meet this requirement. History students considering a bachelor's degree in History should consider a third semester of world-language.

# History – Digital History Concentration

## Associate of Arts

The Digital History Concentration provides students with a variety of new media tools to communicate historical information and interpretation. Students learn techniques of web design, data processing, and utilizing geographic information systems to build the skills necessary to work in the fields of Public History and Museum Studies.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	HIST 1211*	U.S. to 1865 . . . . .	3
GenEd: CA		Choose from approved first-year world-language courses. . . . .	4
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1070*	Quantitative Reasoning II. . . . .	3
	<b>OR</b>		
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
			<b>Semester Credits 16</b>
<b>2ND SEMESTER</b>			
	CMAJ 1815	Database Applications ( <i>Spring Only</i> ) . . . . .	3
	HIST 1110	Western Civilization I ( <i>Spring Only</i> ). . . . .	3
		Choose from approved second-year world-language courses. . . . .	4
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: STEM	CMAJ 1200*	Computer Information Systems. . . . .	3
			<b>Semester Credits 16</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	INET 1580*	Web Page Authoring . . . . .	3
	HIST 1251*	Wyoming History. . . . .	3
	<b>OR</b>		
	HIST 2290*^	History of North American Indians ( <i>Fall Only</i> ). . . . .	3
	<b>OR</b>		
	HIST/WMST 2389*	Women of the American West ( <i>Spring Only</i> ). . . . .	3
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: LAB		Choose from approved Lab Science courses. . . . .	4
		GEOG 1010 recommended. . . . .	3
GenEd: WY	POLS 1000*	American Wyoming Government . . . . .	3
			<b>Semester Credits 16</b>
<b>2ND SEMESTER</b>			
	INET 2620*	Designing Effective Web Sites . . . . .	3
	HIST 1120*	Western Civilization II ( <i>Spring Only</i> ) . . . . .	3
	HIST 1221*	U.S. from 1865 . . . . .	3
	MMMM 2326	Interactive Media Design ( <i>Spring Only</i> ) . . . . .	3
	GEOG 1220*	Introduction to Geospatial Technology . . . . .	3
			<b>Semester Credits 15</b>
			<b>Total Credits 63</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Students transferring to a college outside of Wyoming are recommended to enroll in HIST 2290.

#### Other Information

History students need 8 hours in a single world-language. Sign language does not meet this requirement. History students considering a bachelor's degree in History should consider a third semester of world-language.

## Industrial Systems Technology

### **Credit Diploma**

The Industrial Systems Technology (IST) program is intended to provide the opportunity for students to explore a career in industrial systems technology at the professional level. The credit diploma program teaches skills in Industrial Systems Technology providing background 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 Wind Energy technician, HVAC technician, industrial electrician, maintenance technician or electrical controls technician. Completion of the Industrial Systems Technology credit diploma is required for enrollment in Electrical Technology, HVAC/R, Industrial Maintenance, Plumbing Technology and Wind Energy program courses.

#### **First Year**

<b>IST SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	HMDV 1510	Success in the Workplace: Soft Skills . . . . .	3
	IST 1520	Introduction to Industrial Safety . . . . .	3
	IST 1560	Trade Skills Fundamentals . . . . .	3
	IST 1660*	Mechanical Drives . . . . .	2
	IST 1661*	Mechanical Drive Assemblies. . . . .	1
	IST 1710*	DC Electricity . . . . .	2
	IST 1711*	DC Electrical Circuits . . . . .	1
	IST 1712*	AC Electricity . . . . .	2
	IST 1713*	AC Electrical Circuits . . . . .	1
<b>Semester Credits</b>			<b>18</b>
<b>Total Credits</b>			<b>18</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

## Industrial Maintenance

### **Credit Diploma**

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.

#### **First Year**

<b>2ND SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	IST 1610*	Fluid Power . . . . .	2
	IST 1611*	Fluid Power Circuits . . . . .	1
	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
	CMGT 1520	Introduction to Blueprint Reading and Building Codes. . . . .	3
	HVAC 1600	Mechanical Piping Systems . . . . .	3
<b>Semester Credits</b>			<b>18</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

# Interdisciplinary Liberal Arts

## Associate of Arts

The Interdisciplinary Liberal Arts program introduces students to the many disciplines within arts and humanities. Students complete comprehensive foundation courses and then have the choice to narrow their focus within a specific area or retain breadth across the disciplines, depending upon career goals within the liberal and fine arts. Students intending to graduate and continue to the university level will work closely with an advisor to tailor their program for the transfer process.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	MMMM 1000*	Introduction to Mass Media . . . . .	3
	<b>OR</b>		
	MUSC 1000*	Introduction to Music . . . . .	3
	FREN 1010	First Year French I . . . . .	4
	<b>OR</b>		
	SPAN 1010	First Year Spanish I . . . . .	4
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
Choose from <b>one</b> of the following courses:			
	ART 1050	Beginning Drawing . . . . .	3
	ART 2410	Ceramics I . . . . .	3
	MMMM 2400	Introduction to Photography . . . . .	3
	MMMM 1370	Publications Production I . . . . .	3
	MMMM 1371	Multimedia Productions I . . . . .	3
	THEA 1100*	Beginning Acting ( <i>Fall Only</i> ) . . . . .	3
	THEA 2000	Theatre Production . . . . .	3
	THEA 2160	Introduction to Stage Make-Up ( <i>Spring Only</i> ) . . . . .	3
			<b>Semester Credits 16</b>

### 2ND SEMESTER

Choose from ART, ENGL, MMMM, MUSC or THEA Aesthetic Analysis approved courses. . . . .			
	FREN 1020*	First Year French II . . . . .	4
	<b>OR</b>		
	SPAN 1020*	First Year Spanish II . . . . .	4
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR</b>		
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
	<b>OR HIGHER</b>		
GenEd: WY	HIST 1211*	U.S. to 1865 . . . . .	3
	<b>OR</b>		
GenEd: WY	HIST 1221*	U.S. from 1865 . . . . .	3
			<b>Semester Credits 16</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	PHIL 1000*	Introduction to Philosophy . . . . .	3
	THEA 1000*	Introduction to Theatre. . . . .	3
GenEd: LAB		Choose from approved Lab Science courses. . . . .	4
GenEd: AA	ART 2010*	Art History I ( <i>Fall Only</i> ) . . . . .	3
	<b>OR</b>		
GenEd: AA	ART 2020*	Art History II ( <i>Spring Only</i> ) . . . . .	3
GenEd: CA	HUMN 1010*	Introductory Humanities I . . . . .	3
	<b>OR</b>		
GenEd: CA	HUMN 1020*	Introductory Humanities II . . . . .	3
			<b>Semester Credits 16</b>

### 2ND SEMESTER

Choose from 2000-level ART, CO/M, ENGL, FREN, HUMN, JAPN, MMMM, MUSC, PHIL, SPAN, or THEA courses. . . . .			
Choose from 2000-level ART, CO/M, ENGL, FREN, HUMN, JAPN, MMMM, MUSC, PHIL, SPAN, or THEA courses. . . . .			
Choose from 2000-level ART, CO/M, ENGL, FREN, HUMN, JAPN, MMMM, MUSC, PHIL, SPAN, or THEA courses. . . . .			
GenEd: STEM		Choose from approved STEM courses. . . . .	3-4
			<b>Semester Credits 12-13</b>
			<b>Total Credits 60-61</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Mass Media

## Associate of Arts

The terms “journalism” and “mass communications” are umbrellas that span many career fields and interests. Students taking mass media classes often combine majors or minors in other fields to expand their career possibilities. Students are encouraged to take a broad base of general liberal arts courses that blend with the fundamental technical courses of media writing, editing, photography, broadcasting, and desktop publishing.

Laramie County Community College’s mass media curriculum leads to an Associate of Arts degree and provides the basic requirements for a variety of specialized areas offered at four-year institutions. Students are encouraged to experiment in both print and broadcast journalism. Print journalism provides a strong background in reporting and newswriting, desktop publishing, and photography using the latest equipment. The campus newspaper, Wingspan, and literary-arts magazine, High Plains Register are produced entirely on campus by students, using their own fully equipped desktop publishing computer lab. For additional experience, college cooperative work experience credit is offered for internships with local media outlets, advertising/public relations firms, nonprofit organizations, and government agencies.

Nonmajors can benefit from journalism classes, especially Introduction to Mass Media, Photography, Desktop Publishing, and Publications Production.

Because of the numerous directions students can take in the field of mass communications, students are urged to work closely with their advisor in outlining a course of study that will meet their needs in obtaining a job or in transferring to a four-year institution.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	MMMM 1000	Introduction to Mass Media . . . . .	3
	MMMM 1111	Journalistic Writing ( <i>Fall Only</i> ) . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR</b>		
	MATH 1400+	College Algebra . . . . .	3
	<b>OR HIGHER</b>		
			<b>Semester Credits 15</b>
<b>2ND SEMESTER</b>			
	MMMM 1370	Publications Production I . . . . .	3
	MMMM 2100*	Reporting and Newswriting ( <i>Spring Only</i> ) . . . . .	3
	MMMM 2400	Introduction to Photography . . . . .	3
GenEd: CA		Choose from approved Cultural Awareness courses. . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
			<b>Semester Credits 15</b>

### Second Year

1ST SEMESTER			
	MMMM 1375*	Publications Production II . . . . .	3
	MMMM 2310	Desktop Publishing ( <i>Fall Only</i> ) . . . . .	3
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: LAB		Choose from approved Lab Science courses. . . . .	4
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
			<b>Semester Credits 16</b>
<b>2ND SEMESTER</b>			
	MMMM 2320*	Advanced Desktop Publishing ( <i>Spring Only</i> ) . . . . .	3
	MMMM 2408	Digital Photography . . . . .	3
		Choose from faculty-approved MMMM or INET elective courses. ^ . . . .	3
		Choose from faculty-approved elective courses. . . . .	1-3
GenEd: STEM	STAT 2070*	Introductory Statistics for the Social Sciences . . . . .	4
			<b>Semester Credits 14-16</b>
			<b>Total Credits 60-62</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Students must choose from a faculty-approved elective course in the areas of MMMM or INET. If choosing INET, the course must be INET 1580 or higher.



# Mass Media – Multimedia Concentration

## Associate of Arts

Students may select to concentrate on courses in the field of multimedia. Careers in media now demand that employees have a firm grasp of multiple technologies. The multimedia program leads to an Associate of Arts degree and prepares students for these demands.

The multimedia degree will also give students a foundation to prepare them for career opportunities in electronic and computer communications including television and film production; World Wide Web design, production, and advertising; entertainment software production; news media publishing; computer-based training; advertising; 3-D animation; interactive media; desktop publishing, graphic design, and commercial art.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	MMMM 1000	Introduction to Mass Media . . . . .	3
	MMMM 1111*	Journalistic Writing ( <i>Fall Only</i> ) . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR</b>		
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
	<b>OR HIGHER</b>		
			<b>Semester Credits</b>
			<b>15</b>
<b>2ND SEMESTER</b>			
	MMMM 1371	Multimedia Productions I. . . . .	3
	MMMM 2222	Desktop Audio/Video Production. . . . .	3
	MMMM 2400	Introduction to Photography . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking. . . . .	3
GenEd: LAB		Choose from approved Lab Science courses. . . . .	4
			<b>Semester Credits</b>
			<b>16</b>

### Second Year

1ST SEMESTER			
	MMMM 2310	Desktop Publishing ( <i>Fall Only</i> ) . . . . .	3
	MMMM 2325*	Computer Graphics ( <i>Fall Only</i> ) . . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
		ART 1110 recommended. . . . .	3
GenEd: STEM	STAT 2070*	Introductory Statistics for the Social Sciences. . . . .	4
			<b>Semester Credits</b>
			<b>16</b>
<b>2ND SEMESTER</b>			
	MMMM 2320*	Advanced Desktop Publishing ( <i>Spring Only</i> ) . . . . .	3
	MMMM 2326	Interactive Media Design ( <i>Spring Only</i> ) . . . . .	3
	MMMM 2408	Digital Photography . . . . .	3
		Choose from faculty-approved MMMM or INET elective courses.^ . . . .	3
GenEd: CA		Choose from approved Cultural Awareness courses. . . . .	3
			<b>Semester Credits</b>
			<b>15</b>
			<b>Total Credits</b>
			<b>62</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Students must choose from a faculty approved-elective course in the areas of MMMM or INET. If choosing INET, the course must be INET 1580 or higher.

# Mathematics

## Associate of Science

Knowledge of mathematics is essential for a successful career in nearly all fields of endeavor and for an appreciation of our surroundings. The mathematics courses offered meet the needs of students in every division of the college. Students who complete an Associate of Science degree in Mathematics will demonstrate knowledge and skills necessary for mathematics majors and will be prepared to transfer to a four-year institution.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
GenEd: CA		Choose from approved Cultural Awareness courses. . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 2200*+•	Calculus I . . . . .	4
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
<b>Semester Credits</b>			<b>16</b>

2ND SEMESTER	COURSE	TITLE	CREDITS
	COSC 1010*	Introduction to Computer Science. . . . .	4
	MATH 2205*	Calculus II . . . . .	4
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: LAB	PHYS 1310*	College Physics I . . . . .	4
<b>Semester Credits</b>			<b>15</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	MATH 2210*	Calculus III . . . . .	4
	MATH 2250*	Elementary Linear Algebra ( <i>Fall Only</i> ) . . . . .	3
		Choose from approved elective courses. . . . .	3
		Choose from BIOL 1010*, CHEM 1000*, CHEM 1020*, COSC 1030*, GEOL 1100*, or PHYS 1320* . . . . .	4
<b>Semester Credits</b>			<b>14</b>

2ND SEMESTER	COURSE	TITLE	CREDITS
	MATH 2310*	Applied Differential Equations . . . . .	3
	MATH 2800*	Mathematics Major Seminar . . . . .	2
		Choose from approved elective courses. . . . .	3
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: STEM	STAT 2010*	Statistical Concepts – Business . . . . .	4
	<b>OR</b>		
GenEd: STEM	STAT 2050*	Fundamentals of Statistics. . . . .	4
	<b>OR</b>		
GenEd: STEM	STAT 2070*	Introductory Statistics for the Social Sciences . . . . .	4
<b>Semester Credits</b>			<b>15</b>

**Total Credits 60**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

• If the student places into a higher level math or has completed a higher level math than required by the program, the student may request program applicable course substitutions in consultation with their advisor and faculty to fulfill the remaining credits needed to complete the degree.

# Music

## Associate of Arts

Upon completion of the major in music, students will be prepared for careers in performance, school or studio teaching, music business, music theory and composition, and/or successful transfer to four-year institutions. Courses lead to an Associate of Arts degree which may be applied to various bachelor's degree programs in music. Many courses and ensembles are also available to the non-music major. 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. 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 assigned college advisor.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
	Choose from faculty-approved Ensemble courses.^	1
MUSC 0200*	Convocation	0
MUSC 1030	Written Theory I	3
MUSC 1035	Aural Theory I	1
MUSC 1051*	Applied Music Instruction I	1
MUSC 1052*	Applied Music Instruction II	1
MUSC 1290*	Elementary Class Piano I	1
GenEd: CS	Introduction to College Success: First-Year Seminar	3
GenEd: CW	English I: Composition	3
		<b>Semester Credits 14</b>

### SPRING SEMESTER

	Choose from faculty-approved Ensemble courses.^	1
MUSC 0200*	Convocation	0
MUSC 1040*	Written Theory II	3
MUSC 1045*	Aural Theory II	1
MUSC 1051*	Applied Music Instruction I	1
MUSC 1052*	Applied Music Instruction II	1
MUSC 1295*	Elementary Class Piano II	1
GenEd: QR	Choose from approved Quantitative Reasoning courses.	3-4
GenEd: CV	Public Speaking	3
		<b>Semester Credits 14-15</b>

### Second Year

FALL SEMESTER	TITLE	CREDITS
	Choose from faculty-approved Ensemble courses.^	1
MUSC 0200*	Convocation	0
MUSC 2030*	Written Theory III	3
MUSC 2035*	Aural Theory III	1
MUSC 2071*	Applied Music Instruction III	1
MUSC 2072*	Applied Music Instruction IV	1
MUSC 2290*	Elementary Class Piano III	1
GenEd: AA	Music History Survey I	3
GenEd: STEM	Choose from approved STEM courses. MUSC 1023 recommended.	3-4
		<b>Semester Credits 14-15</b>

### SPRING SEMESTER

	Choose from faculty-approved Ensemble courses.^	1
MUSC 0200*	Convocation	0
MUSC 2040*	Written Theory IV	3
MUSC 2045*	Aural Theory IV	1
MUSC 2071*	Applied Music Instruction III	1
MUSC 2072*	Applied Music Instruction IV	1
MUSC 2295*	Elementary Class Piano IV	1
MUSC 2395	Piano Proficiency	0
GenEd: CA	Music History Survey II	3
GenEd: LAB	Choose from approved Lab Science courses.	4
GenEd: WY	Choose from approved U.S./Wyoming Constitution courses.	3
		<b>Semester Credits 18</b>

**Total Credits 60-62**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Faculty-Approved Ensemble Courses – MUSC 1380, MUSC 1390, MUSC 1400, MUSC 1445 or MUSC 1480.

#### Other Information

MUSC courses may be taken beyond the minimum program requirements and are generally accepted at transfer institutions. See a full list in the Course Descriptions section.

# Music – Instrumental Education Concentration

## Associate of Arts

Upon completion of the Instrumental Education Concentration in music, students will be prepared for careers in school or studio teaching and/or successful transfer to four-year institutions. Courses lead to an Associate of Arts degree which may be applied to a bachelor's degree program in Music Education. Many courses and ensembles are also available to the non-music major. 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. 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 assigned college advisor.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
	Choose from faculty-approved Ensemble courses.^	1
	Convocation	0
MUSC 0200*	Written Theory I	3
MUSC 1030	Aural Theory I	1
MUSC 1035	Applied Music Instruction I	1
MUSC 1051*	Introduction to College Success: First-Year Seminar	3
GenEd: CS	English I: Composition	3
GenEd: CW	Choose from approved U.S./Wyoming Constitution courses.	3
GenEd: WY		<b>Semester Credits 15</b>
<b>SPRING SEMESTER</b>		
	Choose from faculty-approved Ensemble courses.^	1
	Convocation	0
MUSC 0200*	Introduction to Music Education	3
MUSC 1025	Written Theory II	3
MUSC 1040*	Aural Theory II	1
MUSC 1045*	Applied Music Instruction II	1
MUSC 1052*	Public Speaking	3
GenEd: CV	Choose from approved MATH courses.+	3-4
GenEd: QR		<b>Semester Credits 15-16</b>

### Second Year

FALL SEMESTER	TITLE	CREDITS
	Choose from faculty-approved Ensemble courses.^	1
	Choose from faculty-approved Public School Methods courses.^	4
	Convocation	0
MUSC 0200*	Written Theory III	3
MUSC 2030*	Aural Theory III	1
MUSC 2035*	Applied Music Instruction III	1
MUSC 2071*	Music History Survey I	3
GenEd: AA	Choose from approved STEM courses. MUSC 1023 recommended.	3-4
GenEd: STEM		<b>Semester Credits 16-17</b>
<b>SPRING SEMESTER</b>		
	Choose from faculty-approved Ensemble courses.^	1
	Choose from faculty-approved Public School Methods courses.^	3
	Convocation	0
MUSC 0200*	Written Theory IV	3
MUSC 2040*	Aural Theory IV	1
MUSC 2045*	Applied Music Instruction IV	1
MUSC 2072*	Piano Proficiency	0
MUSC 2395	Music History Survey II	3
GenEd: CA	Choose from approved Lab Science courses.	4
GenEd: LAB		<b>Semester Credits 16</b>
		<b>Total Credits 62-64</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Faculty-Approved Ensemble Courses – MUSC 1380, MUSC 1390, MUSC 1445 or MUSC 1480.

Faculty-Approved Public School Methods Courses – MUSC 1310, MUSC 1315, MUSC 1320, MUSC 1325, MUSC 1330, MUSC 1335, MUSC 1340, MUSC 1350, MUSC, 1355, MUSC 1360, MUSC 1380, MUSC 1390, MUSC 1445, or MUSC 1480.

#### Other Information

MUSC courses may be taken beyond the minimum program requirements and are generally accepted at transfer institutions. See a full list in the Course Descriptions section.

# Music – Instrumental Performance Concentration

## Associate of Arts

Upon completion of the Instrumental Performance Concentration in music, students will be prepared for careers in performance, studio teaching, and/or successful transfer to four-year institutions. Courses lead to an Associate of Arts degree which may be applied to a bachelor's degree program in Instrumental Performance. Many courses and ensembles are also available to the non-music major. 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. 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 assigned college advisor.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS	
	Choose from faculty-approved Ensemble courses.^	1	
	Convocation	0	
MUSC 1030	Written Theory I	3	
MUSC 1035	Aural Theory I	1	
MUSC 1051*	Applied Music Instruction I	1	
MUSC 1052*	Applied Music Instruction II	1	
MUSC 1290*	Elementary Class Piano I	1	
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar	3
GenEd: CW	ENGL 1010*+	English I: Composition	3
		<b>Semester Credits</b>	<b>14</b>

### SPRING SEMESTER

	Choose from faculty-approved Ensemble courses.^	1	
	Convocation	0	
MUSC 1040*	Written Theory II	3	
MUSC 1045*	Aural Theory II	1	
MUSC 1051*	Applied Music Instruction I	1	
MUSC 1052*	Applied Music Instruction II	1	
MUSC 1295*	Elementary Class Piano II	1	
GenEd: CV	CO/M 2010*	Public Speaking	3
GenEd: QR		Choose from approved MATH courses.+	3-4
		<b>Semester Credits</b>	<b>14-15</b>

### Second Year

FALL SEMESTER	TITLE	CREDITS	
	Choose from faculty-approved Ensemble courses.^	1	
	Convocation	0	
MUSC 0200*	Written Theory III	3	
MUSC 2030*	Aural Theory III	1	
MUSC 2035*	Applied Music Instruction III	1	
MUSC 2071*	Applied Music Instruction IV	1	
MUSC 2072*	Elementary Class Piano III	1	
MUSC 2290*	Music History Survey I	3	
GenEd: AA	MUSC 2050	Choose from approved STEM courses. MUSC 1023 recommended.	3-4
GenEd: STEM			
		<b>Semester Credits</b>	<b>14-15</b>

### SPRING SEMESTER

	Choose from faculty-approved Ensemble courses.^	1	
	Convocation	0	
MUSC 0200*	Written Theory IV	3	
MUSC 2040*	Aural Theory IV	1	
MUSC 2045*	Applied Music Instruction III	1	
MUSC 2071*	Applied Music Instruction IV	1	
MUSC 2072*	Elementary Class Piano IV	1	
MUSC 2295*	Piano Proficiency	0	
MUSC 2395	Music History Survey II	3	
GenEd: CA	MUSC 2055	Choose from approved U.S./Wyoming Constitution courses.	3
GenEd: WY		Choose from approved Lab Science courses.	4
GenEd: LAB			
		<b>Semester Credits</b>	<b>18</b>

**Total Credits 60-62**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

**^Program Comments**

Faculty-Approved Ensemble Courses – MUSC 1380, MUSC 1390, MUSC 1445 or MUSC 1480.

Specific lessons and ensemble courses are required for articulation. See a faculty-advisor for more information.

**Other Information**

MUSC courses may be taken beyond the minimum program requirements and are generally accepted at transfer institutions. See a full list in the Course Descriptions section.

# Music – Vocal Education Concentration

## Associate of Arts

Upon completion of the Vocal Education Concentration in music, students will be prepared for careers in school or studio teaching and/or successful transfer to four-year institutions. Courses lead to an Associate of Arts degree which may be applied to a bachelor's degree program in Music Education. Many courses and ensembles are also available to the non-music major. 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. 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 assigned college advisor.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
MUSC 0200*	Convocation	0
MUSC 1030	Written Theory I	3
MUSC 1035	Aural Theory I	1
MUSC 1051*	Applied Music Instruction I	1
MUSC 1400	Collegiate Chorale	1
MUSC 2320	Diction for Singers I ( <i>Every Other Fall</i> )	2
GenEd: CS COLS 1000	Introduction to College Success: First-Year Seminar	3
GenEd: CW ENGL 1010*+	English I: Composition	3
GenEd: WY	Choose from approved U.S./Wyoming Constitution courses	3
<b>Semester Credits</b>		<b>17</b>

### SPRING SEMESTER

MUSC 0200*	Convocation	0
MUSC 1025	Introduction to Music Education	3
MUSC 1040*	Written Theory II	3
MUSC 1045*	Aural Theory II	1
MUSC 1052*	Applied Music Instruction II	1
MUSC 1400	Collegiate Chorale	1
GenEd: CV CO/M 2010*	Public Speaking	3
GenEd: QR	Choose from approved MATH courses. +	3
<b>Semester Credits</b>		<b>15</b>

### Second Year

#### FALL SEMESTER

	Choose from faculty-approved Public School Methods courses. ^	4
MUSC 0200*	Convocation	0
MUSC 1400	Collegiate Chorale	1
MUSC 2030*	Written Theory III	3
MUSC 2035*	Aural Theory III	1
MUSC 2071*	Applied Music Instruction III	1
GenEd: AA MUSC 2050	Music History Survey I	3
GenEd: STEM	Choose from approved STEM courses. MUSC 1023 recommended.	3
<b>Semester Credits</b>		<b>16</b>

#### SPRING SEMESTER

	Choose from faculty-approved Public School Methods courses. ^	3
MUSC 0200*	Convocation	0
MUSC 1400	Collegiate Chorale	1
MUSC 2040*	Written Theory IV	3
MUSC 2045*	Aural Theory IV	1
MUSC 2072*	Applied Music Instruction IV	1
MUSC 2395	Piano Proficiency	0
GenEd: CA MUSC 2055	Music History Survey II	3
GenEd: LAB	Choose from approved Lab Science courses.	4
<b>Semester Credits</b>		<b>16</b>

**Total Credits 64**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Faculty-Approved Public School Methods Courses – MUSC 1310, MUSC 1315, MUSC 1320, MUSC 1325, MUSC 1330, MUSC 1335, MUSC 1340, MUSC 1350, MUSC, 1355, MUSC 1360, MUSC 1380, MUSC 1390, MUSC 1445, or MUSC 1480.

#### Other Information

MUSC courses may be taken beyond the minimum program requirements and are generally accepted at transfer institutions. See a full list in the Course Descriptions section.

# Music – Vocal Performance Concentration

## Associate of Arts

Upon completion of the Vocal Performance Concentration in music, students will be prepared for careers in performance, studio teaching, and/or successful transfer to four-year institutions. Courses lead to an Associate of Arts degree which may be applied to a bachelor's degree program in Vocal Performance. Many courses and ensembles are also available to the non-music major. 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. 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 assigned college advisor.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
MUSC 0200*	Convocation . . . . .	0
MUSC 1030	Written Theory I . . . . .	3
MUSC 1035	Aural Theory I . . . . .	1
MUSC 1051*	Applied Music Instruction I . . . . .	1
MUSC 1052*	Applied Music Instruction II . . . . .	1
MUSC 1290*	Elementary Class Piano I . . . . .	1
MUSC 1400	Collegiate Chorale . . . . .	1
MUSC 2320	Diction for Singers I . . . . .	2
GenEd: CS COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW ENGL 1010*+	English I: Composition . . . . .	3
<b>Semester Credits</b>		<b>16</b>

SPRING SEMESTER	TITLE	CREDITS
MUSC 0200*	Convocation . . . . .	0
MUSC 1040*	Written Theory II . . . . .	3
MUSC 1045*	Aural Theory II . . . . .	1
MUSC 1051*	Applied Music Instruction I . . . . .	1
MUSC 1052*	Applied Music Instruction II . . . . .	1
MUSC 1295*	Elementary Class Piano II . . . . .	1
MUSC 1400	Collegiate Chorale . . . . .	1
MUSC 2325*	Diction for Singers II . . . . .	2
GenEd: CV CO/M 2010*	Public Speaking . . . . .	3
GenEd: QR	Choose from approved MATH courses.+ . . . .	3
<b>Semester Credits</b>		<b>16</b>

### Second Year

FALL SEMESTER	TITLE	CREDITS
MUSC 0200*	Convocation . . . . .	0
MUSC 1400	Collegiate Chorale . . . . .	1
MUSC 2030*	Written Theory III . . . . .	3
MUSC 2035*	Aural Theory III . . . . .	1
MUSC 2071*	Applied Music Instruction III . . . . .	1
MUSC 2072*	Applied Music Instruction IV . . . . .	1
MUSC 2290*	Elementary Class Piano III . . . . .	1
GenEd: AA MUSC 2050	Music History Survey I . . . . .	3
GenEd: STEM	Choose from approved STEM courses. MUSC 1023 recommended. . . . .	3
<b>Semester Credits</b>		<b>14</b>

SPRING SEMESTER	TITLE	CREDITS
MUSC 0200*	Convocation . . . . .	0
MUSC 1400	Collegiate Chorale . . . . .	1
MUSC 2040*	Written Theory IV . . . . .	3
MUSC 2045*	Aural Theory IV . . . . .	1
MUSC 2071*	Applied Music Instruction III . . . . .	1
MUSC 2072*	Applied Music Instruction IV . . . . .	1
MUSC 2295*	Elementary Class Piano IV . . . . .	1
MUSC 2395	Piano Proficiency . . . . .	0
GenEd: CA MUSC 2055	Music History Survey II . . . . .	3
GenEd: WY	Choose from approved U.S./Wyoming Constitution courses. . . . .	3
GenEd: LAB	Choose from approved Lab Science courses. . . . .	4
<b>Semester Credits</b>		<b>18</b>
<b>Total Credits</b>		<b>64</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.  
 + If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

### Other Information

MUSC courses may be taken beyond the minimum program requirements and are generally accepted at transfer institutions. See a full list in the Course Descriptions section.



# Natural Science – Biology Concentration

## Associate of Science

The Natural Sciences includes a dynamic spectrum of fields. Recent advancements have led to expanded employment opportunities for natural scientists. A student who successfully completes this program achieves an Associate of Science degree with anticipated transfer to a four-year program. The Natural Science students gain access to multiple pathways for flexible transfer including: biology, chemistry, human biology, molecular biology, physiology, wildlife biology, and zoology. Through these pathways, students can prepare for careers in a variety of fields including: biochemistry, chemistry, conservation, ecology, microbiology, molecular biology, medicine, pharmacology, physical therapy, veterinary medicine, wildlife, etc. Students interested in physical sciences, life sciences and post-baccalaureate work may choose to follow a natural science pathway as recommended by your advisor.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: LAB	BIOL 1010*	General Biology . . . . .	4
GenEd: STEM	CHEM 1020*	General Chemistry I . . . . .	4
GenEd: QR	MATH 1400+•	College Algebra . . . . .	3
	<b>OR HIGHER</b>		
			<b>Semester Credits 14</b>
2ND SEMESTER			
	BIOL 2022*	Animal Biology ( <i>Spring Only</i> ) . . . . .	4
	CHEM 1030*	General Chemistry II . . . . .	4
	MATH 1405*+	Pre-Calculus Trigonometry . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
<i>Optional</i>	BIOL 1390*^	Scientific Research I ( <i>Spring Only</i> ) . . . . .	4
			<b>Semester Credits 14-18</b>

### Second Year

1ST SEMESTER			
	BIOL 2023*	Biology of Plants and Fungi ( <i>Fall Only</i> ) . . . . .	4
	MATH 2200*	Calculus I . . . . .	4
	PHYS 1110*	General Physics I ( <i>Fall Only</i> ) . . . . .	4
GenEd: CA		Choose from approved Cultural Awareness courses.	
		ANTH 1200 recommended. . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
			<b>Semester Credits 18</b>
2ND SEMESTER			
	PHYS 1120	General Physics II ( <i>Spring Only</i> ) . . . . .	4
	STAT 2050*	Fundamentals of Statistics . . . . .	4
<i>Optional</i>	BIOL 1390*^	Scientific Research I ( <i>Spring Only</i> ) . . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
			<b>Semester Credits 14-18</b>
			<b>Total Credits 60-64</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

• If the student places into a higher level math or has completed a higher level math than required by the program, the student may request program applicable course substitutions in consultation with their advisor and faculty to fulfill the remaining credits needed to complete the degree.

#### ^ Program Comments

Students may take BIOL 1390 as an optional course; it need only be taken once. Research experience is recommended for any student planning on attending graduate school or professional school (medical, pharmacy, veterinary, etc.).

# Natural Science – Chemistry (BA Track) Concentration

## Associate of Science

The Natural Sciences includes a dynamic spectrum of fields. Recent advancements have led to expanded employment opportunities for natural scientists. A student who successfully completes this program achieves an Associate of Science degree with anticipated transfer to a four-year program. The Natural Science students gain access to multiple pathways for flexible transfer including: biology, chemistry, human biology, molecular biology, physiology, wildlife biology, and zoology. Through these pathways, students can prepare for careers in a variety of fields including: biochemistry, chemistry, conservation, ecology, microbiology, molecular biology, medicine, pharmacology, physical therapy, veterinary medicine, wildlife, etc. Students interested in physical sciences, life sciences and post-baccalaureate work may choose to follow a natural science pathway as recommended by your advisor.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
GenEd: LAB	CHEM 1020*	General Chemistry I. . . . .	4
GenEd: QR	MATH 2200*+•	Calculus I . . . . .	4
			<b>Semester Credits 14</b>

### 2ND SEMESTER

	MATH 2205*	Calculus II . . . . .	4
		Choose from faculty-approved elective courses.^ . . . .	4
GenEd: STEM	CHEM 1030*	General Chemistry II . . . . .	4
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
			<b>Semester Credits 18</b>

### Second Year

#### 1ST SEMESTER

	CHEM 2420*	Organic Chemistry I ( <i>Fall Only</i> ) . . . . .	4
	PHYS 1110*	General Physics I ( <i>Fall Only</i> ) . . . . .	4
		Choose from faculty-approved elective courses.^ . . . .	3-4
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
			<b>Semester Credits 14-15</b>

#### 2ND SEMESTER

	CHEM 2440*	Organic Chemistry II ( <i>Spring Only</i> ) . . . . .	4
	PHYS 1120*	General Physics II ( <i>Spring Only</i> ) . . . . .	4
		Choose from faculty-approved elective courses.^ . . . .	3-4
GenEd: CA		Choose from approved Cultural Awareness courses. ANTH 1200 recommended. . . . .	3
			<b>Semester Credits 14-15</b>

**Total Credits 60-62**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

• If the student places into a higher level math or has completed a higher level math than required by the program, the student may request program applicable course substitutions in consultation with their advisor and faculty to fulfill the remaining credits needed to complete the degree.

#### ^ Program Comments

Program Electives – Consult with your faculty advisor for recommendations.

Students must choose one course from the following elective courses; additional prerequisite courses may apply.

AECL 1000	4 cr	Agroecology	GEOG 1020	3 cr	Human Geography
ANTH 1200	3 cr	Introduction to Cultural Anthropology	HIST 2290	3 cr	History of North American Indians
ANTH 1300	3 cr	Introduction to Archaeology	HIST/WMST 2389	3 cr	History of Women and the American West
ANTH 2210	3 cr	North American Indians			
ECON 1000	3 cr	Global Economic Issues	POLS 1200	3 cr	Non-Western Political Cultures
ENGL 2340	3 cr	Native American Culture and Literature	POLS 2310	3 cr	Introduction to International Relations
			SPAN 2140	3 cr	Introduction to Spanish Literature
GEOG 1000	3 cr	World Regional Geography			

Students may also choose from the following elective courses.

BIOL 1010	4 cr	General Biology	MATH 2210	4 cr	Calculus III
BIOL 1390	4 cr	Scientific Research I	STAT 2050	4 cr	Fundamentals of Statistics
COSC 1010	4 cr	Introduction to Computer Science			

# Natural Science – Chemistry (BS Track) Concentration

## Associate of Science

The Natural Sciences includes a dynamic spectrum of fields. Recent advancements have led to expanded employment opportunities for natural scientists. A student who successfully completes this program achieves an Associate of Science degree with anticipated transfer to a four-year program. The Natural Science students gain access to multiple pathways for flexible transfer including: biology, chemistry, human biology, molecular biology, physiology, wildlife biology, and zoology. Through these pathways, students can prepare for careers in a variety of fields including: biochemistry, chemistry, conservation, ecology, microbiology, molecular biology, medicine, pharmacology, physical therapy, veterinary medicine, wildlife, etc. Students interested in physical sciences, life sciences and post-baccalaureate work may choose to follow a natural science pathway as recommended by your advisor.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
GenEd: CS COLS 1000	Introduction to College Success: First-Year Seminar	3
GenEd: LAB CHEM 1020*	General Chemistry I	4
GenEd: QR MATH 2200**+	Calculus I	4
GenEd: WY	Choose from approved U.S./Wyoming Constitution courses	3
		<b>Semester Credits 14</b>

### SPRING SEMESTER

MATH 2205*	Calculus II	4
PHYS 1310*	College Physics I	4
GenEd: CV CO/M 2010*	Public Speaking	3
GenEd: CW ENGL 1010**+	English I: Composition	3
GenEd: STEM CHEM 1030*	General Chemistry II	4
		<b>Semester Credits 18</b>

### Second Year

#### FALL SEMESTER

CHEM 2420*	Organic Chemistry I (Fall Only)	4
MATH 2210*	Calculus III	4
PHYS 1320*	College Physics II (Fall Only)	4
GenEd: AA	Choose from approved Aesthetic Analysis courses	3
		<b>Semester Credits 15</b>

#### SPRING SEMESTER

CHEM 2440*	Organic Chemistry II (Spring Only)	4
	Choose from faculty-approved elective courses. <sup>^</sup>	3-4
	Choose from faculty-approved elective courses. <sup>^^</sup>	3
GenEd: CA	Choose from approved Cultural Awareness courses.	
	ANTH 1200 recommended.	3
		<b>Semester Credits 13-14</b>

**Total Credits 60-61**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

• If the student places into a higher level math or has completed a higher level math than required by the program, the student may request program applicable course substitutions in consultation with their advisor and faculty to fulfill the remaining credits needed to complete the degree.

#### ^ Program Comments

Program Electives – Consult with your faculty advisor for recommendations.

Students must choose one course from the following elective courses; additional prerequisite courses may apply.

AECL 1000	4 cr	Agroecology	GEOG 1020	3 cr	Human Geography
ANTH 1200	3 cr	Introduction to Cultural Anthropology	POLS 1200	3 cr	Non-Western Political Cultures
ANTH 1300	3 cr	Introduction to Archaeology	POLS 2310	3 cr	Introduction to International Relations
ECON 1000	3 cr	Global Economic Issues	SPAN 2140	3 cr	Introduction to Spanish Literature
GEOG 1000	3 cr	World Regional Geography			

^^ Students must also choose one course from the following elective courses; additional prerequisite courses may apply.

ANTH 2210	3 cr	North American Indians	HIST 2290	3 cr	History of North American Indians
ENGL 2340	3 cr	Native American Culture and Literature	HIST/WMST 2389	3 cr	History of Women and the American West

Students may also choose from the following elective courses.

BIOL 1010	4 cr	General Biology	COSC 1010	4 cr	Introduction to Computer Science
BIOL 1390	4 cr	Scientific Research I	STAT 2050	4 cr	Fundamentals of Statistics

# Natural Science – Human Biology Concentration

## Associate of Science

The Natural Sciences includes a dynamic spectrum of fields. Recent advancements have led to expanded employment opportunities for natural scientists. A student who successfully completes this program achieves an Associate of Science degree with anticipated transfer to a four-year program. The Natural Science students gain access to multiple pathways for flexible transfer including: biology, chemistry, human biology, molecular biology, physiology, wildlife biology, and zoology. Through these pathways, students can prepare for careers in a variety of fields including: biochemistry, chemistry, conservation, ecology, microbiology, molecular biology, medicine, pharmacology, physical therapy, veterinary medicine, wildlife, etc. Students interested in physical sciences, life sciences and post-baccalaureate work may choose to follow a natural science pathway as recommended by your advisor.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

FALL SEMESTER COURSE		TITLE	CREDITS
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: LAB	BIOL 1010*	General Biology . . . . .	4
GenEd: STEM	CHEM 1020*	General Chemistry I . . . . .	4
GenEd: QR	MATH 1400+•	College Algebra . . . . .	3
	<b>OR HIGHER</b>		

**Semester Credits 14**

### SPRING SEMESTER

	BIOL 2022*	Animal Biology ( <i>Spring Only</i> ) . . . . .	4
	MATH 1405*	Pre-Calculus Trigonometry . . . . .	3
	CHEM 1030*	General Chemistry II . . . . .	4
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
<i>Optional</i>	BIOL 1390*^	Scientific Research I ( <i>Spring Only</i> ) . . . . .	4

**Semester Credits 14-18**

### Second Year

#### FALL SEMESTER

	PHYS 1110*	General Physics I ( <i>Fall Only</i> ) . . . . .	4
	MATH 2200*	Calculus I . . . . .	4
	ZOO 2010*	Anatomy and Physiology I . . . . .	4
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3

**Semester Credits 15**

#### SPRING SEMESTER

	ZOO 2020*	Anatomy and Physiology II . . . . .	4
	MICR 2240	Medical Microbiology . . . . .	4
	<b>OR</b>		
	STAT 2050*	Fundamentals of Statistics . . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses . . . . .	3
GenEd: CA		Choose from approved Cultural Awareness courses . . . . .	3
		ANTH 1200 recommended . . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses . . . . .	3

**Semester Credits 17**

**Total Credits 60-64**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

• If the student places into a higher level math or has completed a higher level math than required by the program, the student may request program applicable course substitutions in consultation with their advisor and faculty to fulfill the remaining credits needed to complete the degree.

#### ^ Program Comments

Students may take BIOL 1390 as an optional course; it need only be taken once. Research experience is recommended for any student planning on attending graduate school or professional school (medical, pharmacy, veterinary, etc.).

# Natural Science – Molecular Biology Concentration

## Associate of Science

The Natural Sciences includes a dynamic spectrum of fields. Recent advancements have led to expanded employment opportunities for natural scientists. A student who successfully completes this program achieves an Associate of Science degree with anticipated transfer to a four-year program. The Natural Science students gain access to multiple pathways for flexible transfer including: biology, chemistry, human biology, molecular biology, physiology, wildlife biology, and zoology. Through these pathways, students can prepare for careers in a variety of fields including: biochemistry, chemistry, conservation, ecology, microbiology, molecular biology, medicine, pharmacology, physical therapy, veterinary medicine, wildlife, etc. Students interested in physical sciences, life sciences and post-baccalaureate work may choose to follow a natural science pathway as recommended by your advisor.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: LAB	BIOL 1010*	General Biology . . . . .	4
GenEd: STEM	CHEM 1020*	General Chemistry I . . . . .	4
GenEd: QR	MATH 2200*+•	Calculus I . . . . .	4
<b>Semester Credits</b>			<b>15</b>

### 2ND SEMESTER

	MICR 2240	Medical Microbiology . . . . .	4
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: STEM	CHEM 1030*	General Chemistry II . . . . .	4
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
<b>Semester Credits</b>			<b>14</b>

### Second Year

#### 1ST SEMESTER

	CHEM 2420*	Organic Chemistry I ( <i>Fall Only</i> ) . . . . .	4
	PHYS 1110*	General Physics I ( <i>Fall Only</i> ) . . . . .	4
	STAT 2050*	Fundamentals of Statistics . . . . .	4
	<b>OR</b>		
	STAT 2070*	Introduction to Statistics for the Social Sciences . . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses . . . . .	3
<b>Semester Credits</b>			<b>15</b>

#### 2ND SEMESTER

	CHEM 2440*	Organic Chemistry II ( <i>Spring Only</i> ) . . . . .	4
	PHYS 1120*	General Physics II ( <i>Spring Only</i> ) . . . . .	4
		Choose from approved elective courses . . . . .	3-4
GenEd: CA		Choose from approved Cultural Awareness courses . . . . .	
		ANTH 1200 recommended . . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses . . . . .	3
<b>Semester Credits</b>			<b>17-18</b>
<b>Total Credits</b>			<b>61-62</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

• If the student places into a higher level math or has completed a higher level math than required by the program, the student may request program applicable course substitutions in consultation with their advisor and faculty to fulfill the remaining credits needed to complete the degree.

# Natural Science – Physics Concentration

## Associate of Science

The Natural Sciences includes a dynamic spectrum of fields. Recent advancements have led to expanded employment opportunities for natural scientists. A student who successfully completes this program achieves an Associate of Science degree with anticipated transfer to a four-year program. The Natural Science students gain access to multiple pathways for flexible transfer including: biology, chemistry, human biology, molecular biology, physiology, wildlife biology, and zoology. Through these pathways, students can prepare for careers in a variety of fields including: biochemistry, chemistry, conservation, ecology, microbiology, molecular biology, medicine, pharmacology, physical therapy, veterinary medicine, wildlife, etc. Students interested in physical sciences, life sciences and post-baccalaureate work may choose to follow a natural science pathway as recommended by your advisor.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: QR	MATH 2200*+•	Calculus I . . . . .	4
GenEd: STEM	CHEM 1020*	General Chemistry I . . . . .	4
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses . . . . .	3
<b>Semester Credits</b>			<b>14</b>

### 2ND SEMESTER

	CHEM 1030*	General Chemistry II . . . . .	4
	MATH 2205*+	Calculus II . . . . .	4
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: LAB	PHYS 1310*	College Physics I ( <i>Spring Only</i> ) . . . . .	4
<b>Semester Credits</b>			<b>15</b>

### Second Year

#### 1ST SEMESTER

	ES 1060*	Introduction to Engineering Computing . . . . .	3
	PHYS 1320*	College Physics II ( <i>Fall Only</i> ) . . . . .	4
	MATH 2210*+	Calculus III . . . . .	4
	MATH 2250*	Elementary Linear Algebra . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
<b>Semester Credits</b>			<b>17</b>

#### 2ND SEMESTER

	COSC 1010*	Introduction to Computer Science . . . . .	4
	MATH 2310*	Applied Differential Equations . . . . .	3
	STAT 2050*	Fundamentals of Statistics . . . . .	4
GenEd: AA	ENGL 2020*	Introduction to Literature . . . . .	3
GenEd: CA		Choose from ANTH 1200, GEOG 1000 or GEOG 1020 Cultural Awareness courses . . . . .	3
<b>Semester Credits</b>			<b>17</b>
<b>Total Credits</b>			<b>63</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

• If the student places into a higher level math or has completed a higher level math than required by the program, the student may request program applicable course substitutions in consultation with their advisor and faculty to fulfill the remaining credits needed to complete the degree.

# Natural Science – Physiology Concentration

## Associate of Science

The Natural Sciences includes a dynamic spectrum of fields. Recent advancements have led to expanded employment opportunities for natural scientists. A student who successfully completes this program achieves an Associate of Science degree with anticipated transfer to a four-year program. The Natural Science students gain access to multiple pathways for flexible transfer including: biology, chemistry, human biology, molecular biology, physiology, wildlife biology, and zoology. Through these pathways, students can prepare for careers in a variety of fields including: biochemistry, chemistry, conservation, ecology, microbiology, molecular biology, medicine, pharmacology, physical therapy, veterinary medicine, wildlife, etc. Students interested in physical sciences, life sciences and post-baccalaureate work may choose to follow a natural science pathway as recommended by your advisor.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: LAB	BIOL 1010*	General Biology . . . . .	4
GenEd: STEM	CHEM 1020*	General Chemistry I . . . . .	4
GenEd: QR	MATH 1400+•	College Algebra . . . . .	3
	<b>OR HIGHER</b>		

**Semester Credits 14**

### 2ND SEMESTER

	BIOL 2022*	Animal Biology ( <i>Spring Only</i> ) . . . . .	4
	MATH 1405*	Pre-Calculus Trigonometry . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
	CHEM 1030*	General Chemistry II . . . . .	4
<i>Optional</i>	BIOL 1390*^	Scientific Research I ( <i>Spring Only</i> ) . . . . .	4

**Semester Credits 14-18**

### Second Year

#### 1ST SEMESTER

	MATH 2200*	Calculus I . . . . .	4
	MICR 2240	Medical Microbiology . . . . .	4
		Choose from faculty-approved elective courses.^ . . . .	4
GenEd: CA		Choose from approved Cultural Awareness courses.	
		ANTH 1200 recommended. . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3

**Semester Credits 18**

#### 2ND SEMESTER

	STAT 2050*	Fundamentals of Statistics . . . . .	4
		Choose from faculty-approved elective courses.^ . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
<i>Optional</i>	BIOL 1390*^	Scientific Research I ( <i>Spring Only</i> ) . . . . .	4

**Semester Credits 14-18**

**Total Credits 60-64**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

• If the student places into a higher level math or has completed a higher level math than required by the program, the student may request program applicable course substitutions in consultation with their advisor and faculty to fulfill the remaining credits needed to complete the degree.

#### ^ Program Comments

Students may take BIOL 1390 as an optional course; it need only be taken once. Research experience is recommended for any student planning on attending graduate school or professional school (medical, pharmacy, veterinary, etc.).

Program Electives – Consult with your faculty advisor for recommendations.

CHEM 2420	4 credits	Organic Chemistry I
CHEM 2440	4 credits	Organic Chemistry II
PHYS 1110	4 credits	General Physics I
PHYS 1120	4 credits	General Physics II

# Natural Science – Pre-Professional Concentration

## Associate of Science

The Natural Sciences includes a dynamic spectrum of fields. Recent advancements have led to expanded employment opportunities for natural scientists. A student who successfully completes this program achieves an Associate of Science degree with anticipated transfer to a four-year program. The Natural Science students gain access to multiple pathways for flexible transfer including: biology, chemistry, human biology, molecular biology, physiology, wildlife biology, and zoology. Through these pathways, students can prepare for careers in a variety of fields including: biochemistry, chemistry, conservation, ecology, microbiology, molecular biology, medicine, pharmacology, physical therapy, veterinary medicine, wildlife, etc. Students interested in physical sciences, life sciences and post-baccalaureate work may choose to follow a natural science pathway as recommended by your advisor.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: QR	MATH 2200*	Calculus I . . . . .	4
GenEd: STEM	CHEM 1020*	General Chemistry I . . . . .	4
GenEd: LAB	BIOL 1010	General Biology . . . . .	4
<b>Semester Credits</b>			<b>15</b>

### 2ND SEMESTER

	BIOL 2022	Animal Biology . . . . .	4
	CHEM 1030	General Chemistry II . . . . .	4
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
	MICR 2240	Medical Microbiology . . . . .	
	<b>OR</b>		
	BIOL 1390	Scientific Research I . . . . .	4
<b>Semester Credits</b>			<b>15</b>

### Second Year

#### 1ST SEMESTER

GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: CA		Choose from ANTH 1200, PSYC 1000, or SOC 1000 Cultural Awareness courses . . . . .	3
GenEd: AA		Choose from an approved Aesthetic Analysis course . . . . .	3
		Choose two of the following three courses: CHEM 2420, PHYS 1110, or ZOO 2010^ . . . . .	8
<b>Semester Credits</b>			<b>17</b>

#### 2ND SEMESTER

	STAT 2050*	Fundamentals of Statistics . . . . .	
	<b>OR</b>		
	ECON 1010	Principles of Macroeconomics . . . . .	
	<b>OR</b>		
	ECON 1020	Principles of Microeconomics . . . . .	3-4
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses . . . . .	3
		Choose two of the following three courses: CHEM 2440, PHYS 1120, or ZOO 2020^ . . . . .	8
<b>Semester Credits</b>			<b>14-15</b>
<b>Total Credits</b>			<b>61-62</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

· If the student places into a higher level math or has completed a higher level math than required by the program, the student may request program applicable course substitutions in consultation with their advisor and faculty to fulfill the remaining credits needed to complete the degree.

#### ^ Program Comments

Students in Natural Science – Pre-Professional Concentration prepare to apply to professional schools, including but not limited to pharmacy, medical, veterinary, and dental schools. Students MUST work closely with their advisors to choose proper prerequisite courses for the school to which they intend to apply.

\*\* Various professional schools have different requirements for STAT/ECON and the Culture Awareness courses (ANTH/SOC/PSYC). Some professional schools require Medical Microbiology while others do not. Depending on the school to which they intend to apply, students may prefer to take a semester of scientific research instead. Students are recommended to check the specific requirements of the school(s) they intend to apply to when choosing these courses in their program of study.



^Students going to pharmacy schools should take Organic Chemistry I and II, and A&P I and II (or Human Anatomy and Human Physiology). Students going to medical, veterinary, and dental schools should take General Physics I and II and Organic Chemistry I and II. Please note that many dental schools are requiring students to take major prerequisites at four-year institutions; students should check with the advisors and the dental school they intend to apply to before registering for courses.

In addition to the courses listed above, most professional schools require additional prerequisites before application. For example, many pharmacy schools also require students to complete one or two semesters' Biochemistry before applying. Veterinary & medical schools also require students to complete several other upper-division science courses. Students should check the specific requirements of the professional schools they intend to apply to and complete any extra requirements after earning the A.S. in Pre-Professional at LCCC.

# Natural Science – Wildlife Biology Concentration

## Associate of Science

The Natural Sciences includes a dynamic spectrum of fields. Recent advancements have led to expanded employment opportunities for natural scientists. A student who successfully completes this program achieves an Associate of Science degree with anticipated transfer to a four-year program. The Natural Science students gain access to multiple pathways for flexible transfer including: biology, chemistry, human biology, molecular biology, physiology, wildlife biology, and zoology. Through these pathways, students can prepare for careers in a variety of fields including: biochemistry, chemistry, conservation, ecology, microbiology, molecular biology, medicine, pharmacology, physical therapy, veterinary medicine, wildlife, etc. Students interested in physical sciences, life sciences and post-baccalaureate work may choose to follow a natural science pathway as recommended by your advisor.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

FALL SEMESTER COURSE		TITLE	CREDITS
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: LAB	BIOL 1010*	General Biology . . . . .	4
GenEd: STEM	CHEM 1020*	General Chemistry I . . . . .	4
GenEd: QR	MATH 1400+•	College Algebra . . . . .	3
	<b>OR HIGHER</b>		
			<b>Semester Credits 14</b>
SPRING SEMESTER			
	BIOL 2022*	Animal Biology ( <i>Spring Only</i> ) . . . . .	4
	MATH 1405*	Pre-Calculus Trigonometry . . . . .	3
	CHEM 1030*	General Chemistry II . . . . .	4
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
			<b>Semester Credits 14</b>

### Second Year

FALL SEMESTER			
	BIOL 2023*	Biology of Plants and Fungi ( <i>Fall Only</i> ) . . . . .	4
	CMAP 1200*	Computer Information Systems . . . . .	3
	MATH 2200*	Calculus I . . . . .	4
	PHYS 1110*	General Physics I ( <i>Fall Only</i> ) . . . . .	4
	<b>OR</b>		
	GEOL 1100*	Physical Geology . . . . .	4
	<b>OR</b>		
	AECL 2010*	The Ecological Web: Soils . . . . .	4
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
			<b>Semester Credits 18</b>
SPRING SEMESTER			
	STAT 2050*	Fundamentals of Statistics . . . . .	4
	ZOO 2450*	Wildlife Management ( <i>Spring Only</i> ) . . . . .	3
GenEd: AA		Choose from approved Aesthetic Analysis courses . . . . .	3
GenEd: CA		Choose from approved Cultural Awareness courses . . . . .	3
		ANTH 1200 recommended . . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses . . . . .	3
			<b>Semester Credits 16</b>
			<b>Total Credits 62</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

• If the student places into a higher level math or has completed a higher level math than required by the program, the student may request program applicable course substitutions in consultation with their advisor and faculty to fulfill the remaining credits needed to complete the degree.

# Natural Science – Zoology Concentration

## Associate of Science

The Natural Sciences includes a dynamic spectrum of fields. Recent advancements have led to expanded employment opportunities for natural scientists. A student who successfully completes this program achieves an Associate of Science degree with anticipated transfer to a four-year program. The Natural Science students gain access to multiple pathways for flexible transfer including: biology, chemistry, human biology, molecular biology, physiology, wildlife biology, and zoology. Through these pathways, students can prepare for careers in a variety of fields including: biochemistry, chemistry, conservation, ecology, microbiology, molecular biology, medicine, pharmacology, physical therapy, veterinary medicine, wildlife, etc. Students interested in physical sciences, life sciences and post-baccalaureate work may choose to follow a natural science pathway as recommended by your advisor.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: LAB	BIOL 1010*	General Biology . . . . .	4
GenEd: STEM	CHEM 1020*	General Chemistry I . . . . .	4
GenEd: QR	MATH 1400+•	College Algebra . . . . .	3
	<b>OR HIGHER</b>		

**Semester Credits 14**

### 2ND SEMESTER

	BIOL 2022*	Animal Biology ( <i>Spring Only</i> ) . . . . .	4
	MATH 1405*	Pre-Calculus Trigonometry . . . . .	3
	CHEM 1030*	General Chemistry II . . . . .	4
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
<i>Optional</i>	BIOL 1390*^	Scientific Research I ( <i>Spring Only</i> ) . . . . .	4

**Semester Credits 14-18**

### Second Year

#### 1ST SEMESTER

	MATH 2200*	Calculus I . . . . .	4
	MICR 2240	Medical Microbiology . . . . .	4
		Choose from faculty-approved elective courses.^ . . . .	4
GenEd: CA		Choose from approved Cultural Awareness courses.	
		ANTH 1200 recommended. . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3

**Semester Credits 18**

#### 2ND SEMESTER

	STAT 2050*	Fundamentals of Statistics . . . . .	4
		Choose from faculty-approved elective courses.^ . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
<i>Optional</i>	BIOL 1390*^	Scientific Research I ( <i>Spring Only</i> ) . . . . .	4

**Semester Credits 14-18**

**Total Credits 60-64**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

• If the student places into a higher level math or has completed a higher level math than required by the program, the student may request program applicable course substitutions in consultation with their advisor and faculty to fulfill the remaining credits needed to complete the degree.

#### ^ Program Comments

Students may take BIOL 1390 as an optional course; it need only be taken once. Research experience is recommended for any student planning on attending graduate school or professional school (medical, pharmacy, veterinary, etc.).

Program Electives – Consult with your faculty advisor for recommendations.

CHEM 2420	4 credits	Organic Chemistry I
CHEM 2440	4 credits	Organic Chemistry II
PHYS 1110	4 credits	General Physics I
PHYS 1120	4 credits	General Physics II

# Nursing

## Associate Degree in Nursing (ADN)

This four-semester program (after a semester of prerequisites and acceptance into the program) is part of the statewide nursing curriculum Revolutionizing Nursing Education in Wyoming (ReNEW) which is designed as a baccalaureate curriculum with an ADN benchmark allowing students to sit for the NCLEX-RN (licensure exam) at the completion of the fourth semester. This curriculum allows for students to complete an Associate Degree in Nursing, gain RN licensure and employment, and then to transition seamlessly into the University of Wyoming for their senior year and complete a bachelor's degree.

The curriculum includes a balance of general education and nursing courses that assist students in acquiring the knowledge and skills to function as beginning practitioners of nursing. Students receive classroom instruction and coordinated 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. Applications to the program are available the semester prior to admission and are submitted according to the application, which may be obtained at the website [lccc.wy.edu/programs/nursing](http://lccc.wy.edu/programs/nursing).

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 and provide eligibility to take the National Council Licensure Exam (NCLEX-PN) and attain licensure as a Licensed Practical Nurse (LPN).

Upon completion of the program, the graduate earns an Associate Degree in Nursing (ADN) and is eligible to take the National Council Licensure Exam (NCLEX-RN) and attain licensure as a Registered Nurse.

Program Accreditation: This program is approved by the Wyoming State Board of Nursing and accredited by the Accreditation Commission for Education in Nursing (ACEN).

Program articulation: This program is articulated with the University of Wyoming and other universities. See the website for a current list of articulation agreements at [lccc.wy.edu/academics/policies/articulation-agreements.aspx](http://lccc.wy.edu/academics/policies/articulation-agreements.aspx). Any deviations from the prescribed course list will not articulate. Graduates from this program who successfully pass the NCLEX-RN are eligible to apply for any RN-BSN program. Please note that students planning on dual enrollment with LCCC and the University of Wyoming (UW) must maintain a nursing GPA of 3.0 or higher. Those students planning on transferring to UW once they received RN licensure must demonstrate a nursing GPA of 2.5 or better. Please contact the UW ReNEW Nursing advisor for individual advising.

Prerequisite courses must be completed with a grade of "C" or better. Students are encouraged to contact the Nursing program directly for program-specific questions. Current Nursing students should refer to the respective catalog in which they began the Nursing program. Admission to the LCCC Nursing Program is competitive and students must be in satisfactory academic standing with a minimum cumulative GPA of 2.5 or higher for the nursing curriculum.

### Program

PREREQUISITE	COURSE	TITLE	CREDITS
GenEd: CS	COLS 1000§	Introduction to College Success: First-Year Seminar . . . . .	3
	ZOO 2015^	Human Anatomy . . . . .	4
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
	<b>OR HIGHER</b>		
			<b>Semester Credits 13</b>
<b>1ST SEMESTER</b>			
	NURS 1100*	Professional Nursing Care in Health Promotion. . . . .	5
	NURS 1115*	Professional Nursing Care in Health Promotion: Clinical One . . . . .	5
	ZOO 2025*^	Human Physiology . . . . .	4
			<b>Semester Credits 14</b>
<b>2ND SEMESTER</b>			
	NURS 1200*	Professional Nursing Care of the Patient with Chronic Illness . . . . .	5
	NURS 1215*	Professional Nursing Care of the Patient with Chronic Illness: Clinical Two. . . . .	5
	PSYC 1000*	General Psychology. . . . .	3
	MICR 2240*	Medical Microbiology. . . . .	4
			<b>Semester Credits 17</b>
Optional	NURS 1980*	Practical Nursing Role Exploration . . . . .	2
			<b>Semester Credits 2</b>

**3RD SEMESTER**

	NURS 2300*	Professional Nursing Care of the Patient with Acute Illness . . . . .	5
	NURS 2315*	Professional Nursing Care of the Patient with Acute Illness: Clinical Three . . . . .	5
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
			<b>Semester Credits 13</b>

**4TH SEMESTER**

	NURS 2400*	Professional Nursing Care of the Patient with Complex Illness. . . . .	5
	NURS 2415*	Professional Nursing Care of the Patient with Complex Illness: Clinical Four . . . . .	5
GenEd: WY	POLS 1000*	American and Wyoming Government . . . . .	3
	<b>OR</b>		
GenEd: WY	HIST 1211*	U.S. to 1865 . . . . .	3
	<b>OR</b>		
GenEd: WY	HIST 1221*	U.S. from 1865 . . . . .	3
	<b>OR</b>		
GenEd: WY	ECON 1200*	Economics, Law, and Government. . . . .	3

<b>Semester Credits</b>	<b>13</b>
<hr/>	
<b>Total Credits</b>	<b>70</b>
<hr/>	
<b>With Optional PN Course</b>	<b>72</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

§ See Page 37 of the catalog for exceptions to the COLS 1000 course requirement. Any approved college seminar course will satisfy this requirement.

**^ Program Comments**

Students should take ZOO 2015 and ZOO 2025. Completion of ZOO 2010 and ZOO 2020 may be accepted however additional prerequisites apply for this option.

**Other Information**

Additional Program Prerequisites -

Kaplan Entrance exam with a score of 70 overall and a 73 on reading comprehension on the same test (within the last three years).

Demonstrated competency to enter ENGL 1010.

All students admitted to the nursing program are expected to carry their own personal health insurance.

**Drug Screening and Criminal Background Checks**

Acceptance into the program is conditional based upon satisfactory completion of a criminal background check and drug screen. Instructions for completion will be provided once a student is accepted into the program.

Students will also be subject to random and for cause drug screening throughout the program. Testing positive on the drug screening or evidence of tampering with a specimen will disqualify a student from participation in a clinical assignment and will result in dismissal from the program.

Certain criminal activity, as evidenced by a criminal background check, may also disqualify a student from clinical participation. See School Policy at [lccc.wy.edu/academics/divisions/HSW](http://lccc.wy.edu/academics/divisions/HSW).

Students are advised that the inability to gain clinical education experiences can result in the inability to meet program objectives and outcomes. These circumstances may prevent acceptance into and/or continuance in the program.

# Paralegal

## Associate of Applied Science

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). Majors must be careful to check with the advisor before enrolling for general education courses since some additional course work may be required.

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
	LEGL 1500*	Introduction to Paralegal Studies ( <i>Fall Only</i> ) . . . . . 3
	LEGL 1710*	Legal Research and Writing I ( <i>Fall Only</i> ) . . . . . 3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . . 3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . . 3
GenEd: QR	MATH 1000*	Problem Solving . . . . . 3
	<b>OR HIGHER</b>	
		<b>Semester Credits 15</b>
SPRING SEMESTER		
	LEGL 1720*	Legal Research and Writing II ( <i>Spring Only</i> ) . . . . . 3
	LEGL 2550*	Evidence and Investigation ( <i>Spring Only</i> ) . . . . . 3
		Choose from faculty-approved elective courses.^ . . . . 3
GenEd: CV	CO/M 2010*	Public Speaking . . . . . 3
	<b>OR</b>	
GenEd: CV	CO/M 1015*	Foundations of Communication . . . . . 3
		<b>Semester Credits 12</b>

**SUMMER SEMESTER**

LEGL 1800*	Law Office Management ( <i>Summer Odd Years</i> ) . . . . .	3
<b>OR</b>		
LEGL 2830*	Computer Applications in the Law ( <i>Summer Even Years</i> ) . . . . .	3
	Choose from faculty-approved elective courses.^ . . . .	3
	<b>Semester Credits</b>	<b>6</b>

**Second Year****FALL SEMESTER**

LEGL 2500*	Civil Procedure and Litigation ( <i>Fall Only</i> ) . . . . .	3
	Choose from faculty-approved elective courses.^ . . . .	3
	Choose from faculty-approved elective courses.^ . . . .	3
	Choose from faculty-approved LEGL elective courses.^ . . . .	3
GenEd: WY	Choose from approved U.S./Wyoming Constitution courses.^ . . . .	3
	<b>Semester Credits</b>	<b>15</b>

**SPRING SEMESTER**

BADM 2010*	Business Law I . . . . .	3
<b>OR</b>	Choose from faculty-approved LEGL elective courses.^ . . . .	3
	Choose from faculty-approved elective courses.^ . . . .	3
	Choose from faculty-approved LEGL elective courses.^ . . . .	3
	Choose from faculty-approved LEGL elective courses.^ . . . .	3
GenEd: LAB	Choose from approved Lab Science courses. . . . .	4
	<b>Semester Credits</b>	<b>16</b>
	<b>Total Credits</b>	<b>64</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

**^ Program Comments**

General education Lab Science courses recommended include POLS 1000, HIST 1211, HIST 1221, or HIST 1251.

Legal Program Electives – Students must complete 15 credit hours (5 courses) from the following list of courses. Courses are not offered every semester. Consult your faculty advisor for recommendations.

BADM 2010	3 credits	Business Law I
LEGL 1800	3 credits	Law Office Management
LEGL 2560	3 credits	Probate Practices and Procedures
LEGL 2570	3 credits	Torts
LEGL 2610	3 credits	Family Law
LEGL 2630	3 credits	Real Estate and Property Law
LEGL 2650	3 credits	Criminal Law and Procedure
LEGL 2670	3 credits	Constitutional Law
LEGL 2680	3 credits	Administrative Law
LEGL 2830	3 credits	Computer Applications in the Law
LEGL 2990	3-5 credits	Paralegal Internship

Paralegal Program Electives – Students must complete 15 credit hours (5 courses) of approved elective courses. Courses are not offered every semester. Consult your faculty advisor for recommendations. Electives should be a balance of different disciplines; students may choose from the following: ACCT, ANTH, ART, BADM, BUSN, CO/M, COSC, CRMJ, EDUC, ENGL, HIST, HMSV, HUMN, MGT, MKT, PHIL, POLS, PSYC, THEA, SPAN, FREN, or JAPN.

**Other Information**

Students must begin the paralegal/legal courses in the fall semester to complete the proper course sequencing for this program.

# Paralegal

## Certificate of Completion

It is the policy of the Paralegal Program at Laramie County Community College that students may transfer no more than six (6) semester hours of legal specialty courses from another institution's program and that program must be approved by the American Bar Association. At this time, LCCC's Paralegal Program does not award legal specialty credit by examination.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	LEGL 1500*	Introduction to Paralegal Studies ( <i>Fall Only</i> ) . . . . .	3
	LEGL 1710*	Legal Research and Writing I ( <i>Fall Only</i> ) . . . . .	3
	BADM 2010*	Business Law I . . . . .	3
		Choose from faculty-approved LEGL elective courses.^ . . . .	3
		<b>Semester Credits</b>	<b>12</b>
2ND SEMESTER			
	LEGL 1720*	Legal Research and Writing II ( <i>Spring Only</i> ) . . . . .	3
	LEGL 2550*	Evidence and Investigation ( <i>Spring Only</i> ) . . . . .	3
		Choose from faculty-approved LEGL elective courses.^ . . . .	3
		Choose from faculty-approved LEGL elective courses.^ . . . .	3
		<b>Semester Credits</b>	<b>12</b>
3RD SEMESTER			
	LEGL 2500*	Civil Procedure and Litigation ( <i>Fall Only</i> ) . . . . .	3
	LEGL 2990	Paralegal Internship ( <i>Fall or Spring</i> ) . . . . .	3-5
	<b>OR</b>	Choose from faculty-approved LEGL elective courses.^ . . . .	3
		<b>Semester Credits</b>	<b>6-8</b>
		<b>Total Credits</b>	<b>30-32</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

### ^ Program Comments

Legal Program Electives – Students must complete 15 credit hours (5 courses) from the following list of courses. Courses are not offered every semester. Consult your faculty advisor for recommendations.

LEGL 1800	3 credits	Law Office Management
LEGL 2560	3 credits	Probate Practices and Procedures
LEGL 2570	3 credits	Torts
LEGL 2610	3 credits	Family Law
LEGL 2630	3 credits	Real Estate and Property Law
LEGL 2650	3 credits	Criminal Law and Procedure
LEGL 2670	3 credits	Constitutional Law
LEGL 2680	3 credits	Administrative Law
LEGL 2830	3 credits	Computer Applications in the Law
LEGL 2990	3-5 credits	Paralegal Internship



# Physical Therapist Assistant

## Associate of Applied Science

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, preceded by a set of prerequisites. Students must maintain a minimum grade of a “C” in each course, in addition to college 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).

Employment opportunities are available in a variety of settings including outpatient physical therapy offices and clinics, hospitals, and skilled nursing facilities.

Program Accreditation: The Physical Therapist Assistant (PTA) curriculum is designed to meet all the accreditation requirements for the Commission on Accreditation in Physical Therapy Education (CAPTE). The PTA program at LCCC is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association (APTA), accreditation@apta.org, 703.684.2782

### First Year – Prerequisites

FALL SEMESTER COURSE	TITLE	CREDITS
	HLTK 1200	2
	ZOO 2010^	4
GenEd: CV	CO/M 2010*	3
	<b>OR</b>	
GenEd: CV	CO/M 1015*	3
GenEd: CW	ENGL 1010*+	3
GenEd: QR	MATH 1400+	3
	<b>OR HIGHER</b>	
		<b>Semester Credits</b>
		<b>15</b>
<b>SPRING SEMESTER</b>		
	HLTK 2510*	2
	PTAT 1600	3
	PTAT 2030	4
	ZOO 2020*^	4
GenEd: CS	COLS 1000^	3
		<b>Semester Credits</b>
		<b>16</b>
<b>SUMMER SEMESTER</b>		
	PTAT 1650*	4
	PTAT 1720*	4
	PTAT 1740*	1
		<b>Semester Credits</b>
		<b>9</b>

### Second Year

FALL SEMESTER		
	EDST 2450*	3
	PTAT 1660*	3
	PTAT 1820*	4
	PTAT 2970*	7
		<b>Semester Credits</b>
		<b>17</b>
<b>SPRING SEMESTER</b>		
	PTAT 1800*	3
	PTAT 1840*	1
	PTAT 2971*	7
GenEd: WY	Choose from approved U.S./Wyoming Constitution courses.	3
		<b>Semester Credits</b>
		<b>14</b>
		<b>Total Credits</b>
		<b>71</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

**^Program Comments**

Some students may qualify for an exemption for COLS 1000 due to prior learning. Information is available on Page 37 of the catalog. See your Academic Advisor for assistance.

**Other Information****Health and Physical Requirements**

All students admitted to the Physical Therapist Assist program are expected to carry their own personal health insurance.

In the professional courses that are required, as well as in the career field, students need the ability to:

Lift and move patients, equipment, and accessories (up to 50 pounds).

Manipulate treatment equipment and measuring instruments using fine motor skills.

Hear audible cues and warnings from patients and equipment.

Utilize sense of touch in order to provide patient care, palpate anatomical landmarks, position patients, and administer treatments.

Teach patients through use of verbal, tactile, and demonstrative cues.

Utilize interpersonal skills to handle patients with physical or emotional trauma and to interact with other people in the classroom, lab, or clinical setting in a professional manner.

**Admissions Process**

Due to program accreditation requirements, the program is limited to 20 students a year. Students interested in applying for the program should contact the program director for specific procedures. Students completing program prerequisites may apply in the fall for the upcoming spring semester.

Selection is based on a student's grade point average, prerequisites completed, the date the application was received, and other criteria as noted on program application materials. Final acceptance will be contingent upon successful completion of program prerequisites, a health physical, and background check.

**Drug Screening and Criminal Background Checks**

LCCC requires drug screens and background checks for all PTA students. At their discretion, clinical sites may require additional drug screening and/or a criminal background check prior to allowing students into the clinical setting. (If required, any associated fees will be the responsibility of the student.) Clinical sites may also require random drug testing and/or drug testing for reasonable cause. Testing positive on the drug screening or evidence of tampering with a specimen will disqualify a student from participation from clinical assignment.

In addition to drug screening, for the safety of patients and health care workers, child abuse clearance and criminal background checks are required by some agencies prior to a clinical assignment. Certain criminal activity, evidenced by a criminal background check, may also disqualify a student from clinical participation.

Students are advised that the inability to gain clinical education experiences can result in the inability to meet program objectives and outcomes. These circumstances may prevent acceptance into and/or continuance in the program.

**Special Scheduling**

In addition to lecture and lab classes, students will complete approximately 560 hours of clinical in area health care facilities during the program. Students will be assigned to clinical sites based on need and availability. Students are expected to provide their own housing and transportation to clinical sites, which may be based out of town.

# Plumbing Technology

## **Credit Diploma**

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.

## **First Year**

<b>1ST SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	CMGT 1520	Introduction to Blueprint Reading and Building Codes . . . . .	3
	FMT 1700*	Introduction to Plumbing . . . . .	3
	FMT 1710*	Plumbing Pipefitting . . . . .	3
	FMT 1720*	Plumbing Piping, Water . . . . .	3
	FMT 1730*	Plumbing Installation . . . . .	3
	HVAC 1600	Mechanical Piping Systems . . . . .	3
			<hr/>
			<b>Semester Credits 18</b>
			<hr/>
			<b>Total Credits 18</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

# Psychology

## Associate of Arts

A psychology major pursues either the Associate of Science or the Associate of Arts degree. This major requires the completion of 19 credit hours in psychology in addition to meeting the general education requirements. The course list below is designed to satisfy all requirements for an Associate of Science or the Associate of Arts degree at Laramie County Community College with a major in psychology. Completion of an Associate of Science degree with a major in psychology can prepare students to transfer into the junior year of a Bachelor of Science degree program. Completion of an Associate of Arts degree can prepare students to transfer into the junior year of a Bachelor of Arts degree program. Psychology majors are strongly encouraged to determine the degree requirements of the specific college and program to which they plan to transfer.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	PSYC 1000*	General Psychology . . . . .	3
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
			<b>Semester Credits 15</b>
2ND SEMESTER			
	PSYC 2300*	Developmental Psychology . . . . .	3
		Choose from faculty-approved elective courses. . . . .	3
GenEd: LAB	BIOL 1003	Current Issues in Biology . . . . .	4
	<b>OR</b>		
GenEd: LAB	BIOL 1010*	General Biology. . . . .	4
GenEd: QR	STAT 2070*	Introductory Statistics for the Social Sciences . . . . .	4
	<b>OR</b>		
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR</b>		
GenEd: QR	MATH 1400+ <b>OR HIGHER</b>	College Algebra . . . . .	3
			<b>Semester Credits 13-14</b>

### Second Year

1ST SEMESTER			
	PSYC 2340*	Abnormal Psychology . . . . .	3
	<b>OR</b>		
	PSYC 2330*	Psychology of Adjustment . . . . .	3
	PSYC 2080*	Psychobiology . . . . .	3
	<b>OR</b>		
	PSYC 2210*	Drugs and Behavior. . . . .	3
		Choose from faculty-approved elective courses. . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
GenEd: STEM	STAT 2050*	Fundamentals of Statistics. . . . .	4
	<b>OR</b>		
GenEd: STEM	STAT 2070*	Introductory Statistics for the Social Sciences . . . . .	4
			<b>Semester Credits 16</b>
2ND SEMESTER			
	PSYC 2000*	Research Psychological Methods. . . . .	4
	PSYC 2380*	Social Psychology . . . . .	3
	<b>OR</b>		
	PSYC 2090*	Psychology of Religion . . . . .	3
		Choose from faculty-approved elective courses. . . . .	3
		Choose from faculty-approved elective courses. . . . .	3
GenEd: CA		Choose from approved Cultural Awareness courses. . . . .	3
			<b>Semester Credits 16</b>
			<b>Total Credits 60-61</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

### Other Information

Students should see a faculty advisor for recommendations for program electives pertaining specifically to the University of Wyoming.

CNSL 2300 is a recommended program elective for students interested in counseling or therapy tracks.

# Psychology

## Associate of Science

A psychology major pursues either the Associate of Science or the Associate of Arts degree. This major requires the completion of 19 credit hours in psychology in addition to meeting the general education requirements. The course list below is designed to satisfy all requirements for an Associate of Science of the Associate of Arts degree at Laramie County Community College with a major in psychology. Completion of an Associate of Science degree with a major in psychology can prepare students to transfer into the junior year of a Bachelor of Science degree program. Completion of an Associate of Arts degree can prepare students to transfer into the junior year of a Bachelor of Arts degree program. Psychology majors are strongly encouraged to determine the degree requirements of the specific college and program to which they plan to transfer.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	PSYC 1000*	General Psychology . . . . .	3
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking. . . . .	3
			<b>Semester Credits 15</b>
2ND SEMESTER			
	PSYC 2300*	Developmental Psychology . . . . .	3
		Choose from faculty-approved elective courses . . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
GenEd: LAB	BIOL 1003	Current Issues in Biology	
	<b>OR</b>		
GenEd: LAB	BIOL 1010*	General Biology . . . . .	4
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR</b>		
GenEd: QR	MATH 1400+ OR HIGHER	College Algebra . . . . .	3
			<b>Semester Credits 16</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	PSYC 2340*	Abnormal Psychology . . . . .	3
	PSYC 2080*	Psychobiology . . . . .	3
	<b>OR</b>		
	PSYC 2210*	Drugs and Behavior. . . . .	3
GenEd: STEM	STAT 2050*	Fundamentals of Statistics. . . . .	4
	<b>OR</b>		
GenEd: STEM	STAT 2070*	Introductory Statistics for the Social Sciences . . . . .	4
		Choose from faculty-approved Lab Science courses. . . . .	4
			<b>Semester Credits 14</b>
2ND SEMESTER			
	PSYC 2000*	Research Psychological Methods. . . . .	4
	PSYC 2380*	Social Psychology . . . . .	3
		Choose from faculty-approved elective courses. . . . .	3
		Choose from faculty-approved elective courses. . . . .	3
GenEd: CA		Choose from approved Cultural Awareness courses. . . . .	3
			<b>Semester Credits 16</b>
			<b>Total Credits 61</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

### Other Information

Students should see a faculty advisor for recommendations for program electives pertaining specifically to the University of Wyoming.

CNSL 2300 is a recommended program elective for students interested in counseling or therapy tracks.

# Psychology – Social Work Concentration

## Associate of Arts

A psychology major pursues either the Associate of Science or the Associate of Arts degree. This major requires the completion of 19 credit hours in psychology in addition to meeting the general education requirements. The course list below is designed to satisfy all requirements for an Associate of Science or the Associate of Arts degree at Laramie County Community College with a major in psychology. Completion of an Associate of Science degree with a major in psychology can prepare students to transfer into the junior year of a Bachelor of Science degree program. Completion of an Associate of Arts degree can prepare students to transfer into the junior year of a Bachelor of Arts degree program. Psychology majors are strongly encouraged to determine the degree requirements of the specific college and program to which they plan to transfer.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	PSYC 1000*	General Psychology . . . . .	3
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
			<b>Semester Credits</b>
			<b>15</b>
<b>2ND SEMESTER</b>			
	PSYC 2300*	Developmental Psychology . . . . .	3
		Choose from faculty-approved elective courses.^ . . . .	3
GenEd: LAB	BIOL 1003	Current Issues in Biology . . . . .	4
	<b>OR</b>		
GenEd: LAB	BIOL 1010*	General Biology. . . . .	4
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR</b>		
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
			<b>Semester Credits</b>
			<b>13</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	PSYC 2080*	Psychobiology . . . . .	3
	PSYC 2340*	Abnormal Psychology . . . . .	3
	<b>OR</b>		
	PSYC 2330*	Psychology of Adjustment . . . . .	3
		Choose from faculty-approved elective courses.^ . . . .	3
GenEd: WY	POLS 1000*	American and Wyoming Government . . . . .	3
GenEd: STEM	STAT 2070*	Introductory Statistics for the Social Sciences . . . . .	4
			<b>Semester Credits</b>
			<b>16</b>
<b>2ND SEMESTER</b>			
	ECON 1010*	Principles of Macroeconomics . . . . .	3
	PSYC 2000*	Research Psychological Methods. . . . .	4
	PSYC 2380*	Social Psychology . . . . .	3
	<b>OR</b>		
	PSYC 2090*	Psychology of Religion . . . . .	3
	SOWK 2000*	Introduction to Social Work . . . . .	3
GenEd: CA	SOC 1000	Sociological Principles . . . . .	3
			<b>Semester Credits</b>
			<b>16</b>
			<b>Total Credits</b>
			<b>60</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Program Electives – Students are encouraged to meet with their advisor or faculty mentor to identify requirements at their target transfer institutions. Suggested electives for transfer to a BA PSYC degree include the following; in addition, two semesters of a world-language are recommended.

- ANTH 1100 4 credits Introduction to Biological Anthropology
- CNSL 2300 3 credits Counseling Skills for Helping Professionals

Recommended program elective for students interested in counseling or therapy tracks.

- HIST 2290 3 credits History of North American Indians
- HIST 2389 3 credits History of Women and the American West
- SOC 1000 3 credits Sociological Principles

#### Other Information

Students should see a faculty advisor for recommendations for program electives pertaining specifically to the University of Wyoming.

# Radiography (X-ray)

## Associate of Applied Science

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), 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.

**The following prerequisite courses must be in progress or completed with a grade of "C" or better by the application deadline (March 1) for the radiography program. Students are encouraged to contact the radiography program faculty directly for program-specific questions.**

### Prerequisite

	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	HLTK 1200	Medical Terminology . . . . .	2
	ZOO 2010^	Anatomy and Physiology I <sup>1</sup> . . . . .	4
	ZOO 2020^	Anatomy and Physiology II <sup>1</sup> . . . . .	4
GenEd: QR	MATH 1400+	College Algebra <sup>1</sup> . . . . .	3
<i>Additional 1st Semester Course</i>			
GenEd: CS	COLS 1000ð	Introduction to College Success: First-Year Seminar. . . . .	3
			<b>Semester Credits</b>
			<b>16</b>

### First Year

#### FALL I

	RDTK 1503*	Introduction to Radiography . . . . .	4
	RDTK 1520*	Radiographic Patient Skills . . . . .	1
	RDTK 1620*	Radiation Biology and Protection . . . . .	3
GenEd: WY	USWYð	Choose from approved U.S./Wyoming Constitution courses. . . . .	3
GenEd: CV	CO/M 2010*ð	Public Speaking. . . . .	3
GenEd: CW	ENGL 1010*+ð	English I: Composition . . . . .	3
			Clinical: Last 7-8 weeks, 10-12 hours/week = 70 hours <sup>2</sup>
			<b>Semester Credits</b>
			<b>17</b>

#### SPRING I

	RDTK 1610*	Radiographic Imaging I. . . . .	3
	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
			Clinical: TTh, 12 hours/week = 180 hours <sup>2</sup>
			<b>Semester Credits</b>
			<b>12</b>

#### SUMMER I

	RDTK 1683*	Radiographic Positioning II . . . . .	3
	RDTK 1684*	Radiographic Lab II. . . . .	1
	RDTK 1713*	Clinical Education II . . . . .	4
			Clinical: MWF 24 hours/week = 192 hours
			+ 20 shiftwork hours = 212 hours <sup>2</sup>
			<b>Semester Credits</b>
			<b>8</b>

## Second Year

### FALL II

RDTK 2583*	Radiographic Positioning III . . . . .	3
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
	Clinical: First 4 weeks, MTWTHF = 29 hours/week + Last 11 weeks, MWF = 21 hours/week = 325 hours <sup>2</sup>	

**Semester Credits    15**

### SPRING II

RDTK 2630*	Radiographic Pathology . . . . .	1
RDTK 2603*	Survey of Technical Specialties . . . . .	2
RDTK 2900*	Radiography Seminar . . . . .	4
RDTK 2613*	Clinical Education IV. . . . .	7
	Clinical: MWF = 21 hours/week = 315 hours <sup>2</sup>	

**Semester Credits    14**

**Total Credits    82**

**Total Clinical Hours    1,102**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

∅ Indicated course may be taken prior to program admission however all courses must be completed before or during the semester progression as indicated.

<sup>1</sup> Science and math courses must be five years current.

<sup>2</sup> Clinical hour totals are approximate and may vary slightly because of scheduled college holidays/planning days.

#### ^ Program Comments

Additional Supplemental courses not required but may be taken to improve a student's application score include:

HLTK 2300	3 credits	Health Care Ethics
PSYC 1000	3 credits	General Psychology
PHYS 1050	4 credits	Concepts of Physics

Prerequisites and other courses in the radiography curriculum are only eligible for transfer credit from regionally accredited institutions and/or JRCERT-accredited programs. Students seeking advanced standing will be evaluated on an individual basis and may be required to take competency examinations monitored by the faculty to determine the level at which the student will enter the program. Official transcripts will be required. All transcripts will be evaluated by LCCC's registrar and the radiography program director for transfer credit and/or advanced placement, as applicable.

#### Drug Screening and Criminal Background Checks

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 after a student's program acceptance and at the student's expense.

At their discretion, clinical sites may also require a drug screening and/or a criminal background check prior to allowing students into the clinical setting. (If required, any associated fees will be the responsibility of the student.) In addition, LCCC and the clinical sites may require random drug testing and/or drug testing for reasonable cause. Generally, the urine drug test screens for alcoholic beverages, illegal drugs, or drugs that impair judgment while in the clinical agency. Testing positive on the screening or evidence of tampering with a specimen will disqualify a student from participation from clinical assignment.

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. 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. For more information, please see the complete School of Health Sciences & Wellness Policies for Allied Health Students posted on the school website. Certain criminal activities, as evidenced by a criminal background check, may also disqualify a student from clinical participation.

Students are advised that the inability to gain clinical education experiences can result in the inability to meet program objectives and outcomes. These circumstances may prevent acceptance into and/or progression through the program and may ultimately result in dismissal from the program.

NOTE: Applicants who have been convicted of a felony (or have pled guilty or nolo contendere to a felony) should request a copy of a letter concerning his/her eligibility status for licensure from the Wyoming State Board of Radiologic Technologist Examiners and the American Registry of Radiologic Technologists. The Wyoming State Board of Radiologic Technologist Examiners can deny licensure if the Board feels that such denial is in the public's interest. The American Registry of Radiologic Technologists can also deny certification for the same reason.



## Social Sciences

### Associate of Arts

The Social Science Associate of Arts degree program is recommended for students who need concentrated social science courses to transfer to another educational institution or for employment enhancement. This course of study provides basic knowledge and skills students need to be successful in upper-level specialty courses. The curriculum provides flexibility in order to individualize learning needs within the requirements of the college's associate's degree with a minimum loss of credit when transferring. Because of the varied directions students can take in the field of social science, they are urged to work closely with their faculty advisor in their concentration of study in outlining a course of study that will meet their needs, especially if they plan to transfer into a specific discipline.

#### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
GenEd: CS	COLS 1000	Choose from approved Social Sciences courses. ^	6
GenEd: CW	ENGL 1010*+	Introduction to College Success: First-Year Seminar	3
GenEd: QR	MATH 1000*	English I: Composition	3
	<b>OR</b>	Problem Solving	3
	MATH 1400+	College Algebra	3
	<b>OR</b>	Introductory Statistics for the Social Sciences	4
	STAT 2070*		
	<b>OR HIGHER</b>		

**Semester Credits 15-16**

#### 2ND SEMESTER

		Choose from approved Social Sciences courses. ^	6
GenEd: AA		Choose from approved Aesthetic Analyses courses.	3
GenEd: CA		Choose from approved Cultural Awareness courses.	3
GenEd: WY		Choose from POLS 1000, HIST 1211, HIST 1221, or HIST 1251.	3

**Semester Credits 15**

#### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
		Choose from approved Social Sciences courses. ^	3
		Choose from faculty-approved elective courses.	6
GenEd: CV	CO/M 2010*	Public Speaking	3
GenEd: STEM		Choose from approved STEM courses. STAT 2070 recommended.	3-4

**Semester Credits 15-16**

#### 2ND SEMESTER

		Choose from approved Social Sciences courses. ^	6
		Choose from faculty-approved elective courses.	6
GenEd: LAB		Choose from ANTH 1100, BIOL 1003, BIOL 1010 or GEOG 1010. ^	4

**Semester Credits 16**

**Total Credits 61-63**

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Students should consider the following recommendations when choosing a GenEd LAB course.

ANTH 1100 is recommended for students interested in Anthropology.

BIOL 1003 or BIOL 1010 is recommended for students interested in Psychology or Social Work.

GEOG 1010 is recommended for students interested in Government Studies or History.

Social Science Courses – Students should choose courses from the following disciplines: AMST, ANTH, CRMJ, ECON, GEOG, HIST, POLS, PSYC or SOC **except** the below courses.

CRMJ 1320	ECON 1200	POLS 1005
CRMJ 1510	GEOG 1040	POLS 1009
CRMJ 2220	GEOG 1050	POLS 2070
CRMJ 2350	GEOG 1100	POLS 2128
CRMJ 2380	GEOG 1220	POLS 2470
CRMJ 2420	HIST 2390	

# Spanish – Education Concentration

## Associate of Arts

Students interested in studying Spanish with the intent of earning an Associate of Arts degree or transferring to a four-year university for a Bachelor of Arts degree should major in Spanish. A Spanish degree empowers students to understand, speak, read, and write Spanish and gain a broad understanding of the Hispanic civilization and culture in the work place and within the United States.

Laramie County Community College's Spanish Program offers two paths for obtaining an Associate of Arts degree: Spanish – Liberal Arts and Spanish Teaching. Both of these emphases are intended for those majoring in Spanish at a four-year institution. Double majoring with Spanish is recommended for many careers. Consult your academic advisor for further information.

Students pursuing a career in education either as Spanish teachers or bilingual school administrators should complete an Associate of Arts degree with an emphasis in Spanish Teaching. This pathway allows students to complete the coursework in Spanish and also complete their required course load in education-related courses. Students completing this path are encouraged to double major with Spanish and Education, doing so will more effectively prepare them for transfer to a four-year institution.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
GenEd: CW	SPAN 1010	First Year Spanish I	4
GenEd: CS	ENGL 1010*+	English I: Composition	3
GenEd: AA	COLS 1000	Introduction to College Success: First-Year Seminar	3
GenEd: CA		Choose from approved Aesthetic Analysis courses	3
		Choose from approved Cultural Awareness courses	3
<b>Semester Credits</b>			<b>16</b>
2ND SEMESTER			
	SPAN 1020*	First Year Spanish II	4
GenEd: LAB		Choose from faculty-approved elective courses. <sup>^</sup>	3
GenEd: QR	MATH 1000* <sup>^</sup>	Choose from approved Lab Science courses	4
	<b>OR</b>	Problem Solving	3
GenEd: QR	MATH 1400* <sup>^</sup>	College Algebra	3
	<b>OR HIGHER</b>		
<b>Semester Credits</b>			<b>14</b>

### Second Year

1ST SEMESTER			
	SPAN 2030*	Second Year Spanish I	4
GenEd: STEM		Choose from faculty-approved elective courses. <sup>^</sup>	3
GenEd: WY		Choose from approved STEM courses	4
GenEd: CV	CO/M 2010*	Choose from approved U.S./Wyoming Constitution courses	3
		Public Speaking	3
<b>Semester Credits</b>			<b>17</b>
2ND SEMESTER			
	SPAN 2040*	Second Year Spanish II ( <i>Spring Only</i> )	4
		Choose from faculty-approved elective courses. <sup>^</sup>	3
		Choose from faculty-approved elective courses. <sup>^</sup>	3
		Choose from faculty-approved elective courses. <sup>^</sup>	3
<b>Semester Credits</b>			<b>13</b>
<b>Total Credits</b>			<b>60</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### <sup>^</sup>Program Comments

Students pursuing Elementary Education should choose MATH 1100 and EDEL 1410 in lieu of MATH 1000 or MATH 1400. The total program credit hours for this option is 61 credits.

Program Electives – Consult your faculty advisor for recommendations.

EDEX 2484	3 credits	Introduction to Special Education
EDFD 1010	1 credit	Introduction to Teaching
EDFD 2020	3 credits	Foundations of Education
EDFD 2100	3 credits	Educational Psychology
EDST 2450	3 credits	Human Life Span Development
EDUC 2100	2 credits	Public School Practicum
HIST 2390/HUMN 2395	3 credits	Mexican Civilization
HUMN 1010	3 credits	Introductory Humanities I
ITEC 2360	3 credits	Teaching with Technology
SPAN 1071	3 credits	Intensive Spanish Abroad Conversation
SPAN 2070	3 credits	Intensive Spanish Abroad
SPAN 2140	3 credits	Introduction to Spanish Literature

# Spanish – Liberal Arts Concentration

## Associate of Arts

This program is intended for students interested in studying Spanish with the intent of earning an Associate of Arts degree or transferring to a four-year university for a Bachelor of Arts degree. A Spanish degree empowers students to understand, speak, read, and write Spanish and gain a broad understanding of the Hispanic civilization and culture in the world and within the United States.

Laramie County Community College Spanish Program offers two paths for obtaining an Associate of Arts degree: Spanish – Liberal Arts and Spanish – Education. Both of these concentrations are intended for those majoring in Spanish at a four-year institution. Double majoring with Spanish is recommended for many careers. Consult your academic advisor for further information.

This pathway allows students to complete an Associate of Arts degree in Spanish with an emphasis in liberal arts, allowing students to further pursue a bachelor's degree in a liberal arts field or increase their employability by becoming bilingual. Students who complete Spanish broaden their career opportunities in many different fields such as travel, broadcasting, translating, law enforcement, nursing, international business, public relations, diplomacy, FBI, CIA, advertising, management, government, public relations, social service, and many others.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	SPAN 1010	First Year Spanish I . . . . .	4
GenEd: AA		Choose from approved Aesthetic Analysis courses. . . . .	3
GenEd: CA		Choose from approved Cultural Awareness courses. . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
			<b>Semester Credits</b>
			<b>16</b>

2ND SEMESTER	COURSE	TITLE	CREDITS
	SPAN 1020*	First Year Spanish II. . . . .	4
		Choose from faculty-approved elective courses <sup>1</sup> . . . . .	3
GenEd: LAB		Choose from approved Lab Science courses. . . . .	4
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR</b>		
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
			<b>Semester Credits</b>
			<b>14</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	SPAN 2030*	Second Year Spanish I. . . . .	4
		Choose from faculty-approved elective courses. . . . .	3
		SPAN 2140 recommended <sup>2</sup> . . . . .	3
GenEd: STEM		Choose from approved STEM courses. . . . .	4
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking. . . . .	3
			<b>Semester Credits</b>
			<b>17</b>

2ND SEMESTER	COURSE	TITLE	CREDITS
	SPAN 2040*	Second Year Spanish II ( <i>Spring Only</i> ) . . . . .	4
		Choose from faculty-approved elective courses. <sup>3</sup> . . . . .	9
			<b>Semester Credits</b>
			<b>13</b>
			<b>Total Credits</b>
			<b>60</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

#### ^ Program Comments

Students transferring to the University of Wyoming are recommended to participate in a study abroad experience. Students should consider enrolling in SPAN 2070 or SPAN 1071.

<sup>1</sup> Program Electives – Students must choose **one (1)** course from the following faculty-approved program electives: AMST 2010, ANTH 2210 (*Spring Only*), ENGL 2340, HIST 2290 (*Fall Only*), HIST/WMST 2389 (*Spring Only*), HUMN/SOC 1080.

<sup>2</sup> Program Electives – Students must choose **one (1)** course from the following faculty-approved program electives: ANTH 1200, ANTH 1300, BUSN 2000, ECON 1000, GEOG 1020, HIST 2320, PHIL 2311, SPAN 2140.

<sup>3</sup> Program Electives – Students must choose **three (3)** courses from the following faculty-approved program electives: ART 1000, HUMN 1020, HIST 2390/HUMN 2395, PHIL 1000, SPAN 1071 (*Spring Only*), SPAN 2070 (*Spring Only*), SPAN 2140.

# Speech-Language Pathology Assistant

## Associate of Applied Science

The Associate in Applied Science (AAS) in Speech-Language Pathology Assistant, SLPA, 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 clerical support, administer speech, language and hearing screenings, assist in communication assessments, provide articulation and language therapy services following a documented treatment plan, assist with documentation of speech-language pathology services in educational or healthcare settings, 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, including bilingual populations, and provides 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 course, English 1010, must be completed prior to application to the program. Prospective students interested in the program should contact the Dean of the Health Science and Wellness School for details about the admission and application process. Additional information is also available on the program website at [lccc.wy.edu/programs/speechLanguagePathology/index.aspx](http://lccc.wy.edu/programs/speechLanguagePathology/index.aspx)

**A grade of "C" or higher is required for all courses in the SLPA program.**

### First Semester Prerequisites

GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
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### First Year

FALL SEMESTER COURSE		TITLE	CREDITS
	SLPA 1500*	Introduction to Speech Language . . . . .	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
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
			<b>Semester Credits 15</b>

### SPRING SEMESTER

GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
	SLPA 1502*	Field Observation I . . . . .	1
	SLPA 1506*	Introduction to Phonetics . . . . .	3
	SLPA 2500*	Introduction to Audiology and Aural Rehabilitation . . . . .	2
	SLPA 2505*	Adult Communication Disorders . . . . .	3
	SLPA 2530*	Language Disorders and Intervention . . . . .	3
			<b>Semester Credits 15</b>

### Second Year

#### FALL SEMESTER

	SLPA 1520*	Voice and Fluency . . . . .	3
	SLPA 2502*	Field Observation II . . . . .	2
	SLPA 2520*	Articulation and Phonology Disorders and Intervention . . . . .	3
	SLPA 2535*	Special Populations for SLPA . . . . .	2
	SLPA 2601*	Screening Processes . . . . .	2
GenEd: QR	MATH 1000	Problem Solving . . . . .	3
		<b>OR HIGHER</b>	
			<b>Semester Credits 15</b>

#### SPRING SEMESTER

	SLPA 1503*	SLPA Seminar . . . . .	1
	SLPA 2600*	Alternative and Augmentative Communication . . . . .	2
	SLPA 2602*	Internship Management and Procedures . . . . .	4
	SLPA 2970*	SLPA Internship . . . . .	6
GenEd: WY	POLS 1000	American and Wyoming Government . . . . .	3
			<b>Semester Credits 16</b>
			<b>Total Credits 64</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Surgical Technology

## Associate of Applied Science

Surgical technologists are allied health professionals who are an integral part of the surgical team. Their primary role is to work with surgeons, anesthesiologists, registered nurses, and other surgical technologists in delivering patient care and assuming appropriate responsibilities before, during, and after surgery. Specifically, surgical technologists apply and maintain the principles of sterile technique and safety in the operation room: prepare, handle, sterilize, and care for surgical instruments, supplies, equipment, and supplies for various surgical cases; apply critical thinking skills to anticipate procedural steps and corresponding instrumentation; and pass surgical instrumentation and supplies to the surgeon. The goal of the Surgical Technology Associates 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; demonstrate the ability to maintain a stable emotional state, even under stressful conditions, which enables the effective use of reason and good judgment in patient care situations; and demonstrate the formation of a strong sterile conscience.

The program has limited enrollment and admits one class each fall. The first two semesters in the course sequencing are required to be completed or in progress prior to application to the program. Prospective students should check the Surgical Technology website or contact the Program Director for admission application information.

Once the student has been accepted, the intensive 11-month surgery core program combines online lectures and discussions with hands-on laboratory practice, and supervised clinical experiences in actual patient care settings to provide students with a variety of learning opportunities.

Program Accreditation: 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).

### First Year – Prerequisites

1ST SEMESTER	COURSE	TITLE	CREDITS
	HLTK 1200	Medical Terminology . . . . .	2
	ZOO 2010^	Anatomy and Physiology I . . . . .	4
GenEd: CS	COLS 1000^	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR HIGHER</b>		
<b>Prerequisite Credits</b>			<b>15</b>

### First Year – Prerequisites

2ND SEMESTER	COURSE	TITLE	CREDITS
	HLTK 2510*	Pathophysiology . . . . .	2
	MICR 2240*	Medical Microbiology . . . . .	4
	ZOO 2020*^	Anatomy and Physiology II . . . . .	4
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
	<b>OR</b>		
GenEd: CV	CO/M 1015*	Foundations of Communication . . . . .	3
<b>Prerequisite Credits</b>			<b>16</b>

### Second Year

#### 1ST SEMESTER – FALL

SURG 1600*	Introduction to Surgical Technology . . . . .	3
SURG 1610*	Surgical Technology Theory . . . . .	4
SURG 1620*	Surgical Technology Skills Lab I . . . . .	3
SURG 1685*	Surgical Pharmacology . . . . .	2
HLTK 2300*	Health Care Ethics . . . . .	3
<b>Semester Credits</b>		<b>15</b>

#### 2ND SEMESTER – SPRING

SURG 1630*	Surgical Technology Skills Lab II . . . . .	1
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
<b>Semester Credits</b>		<b>15</b>

#### 3RD SEMESTER – SUMMER

SURG 2850*	Surgical Technology Clinical II . . . . .	7
SURG 2895*	Surgical Technology Clinical Synthesis II . . . . .	1
<b>Semester Credits</b>		<b>8</b>
<b>Total Credits</b>		<b>69</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

**^ Program Comments**

SURG 1750 is offered in the first 8 weeks.

SURG 2750 is offered in the second 8 weeks.

**Other Information**

**Drug Screening and Criminal Background Checks**

Clinical sites require a drug screening and/or a criminal background check prior to allowing students into the clinical setting. (Any associated fees will be the responsibility of the student.) Clinical sites may also require random drug testing and/or drug testing for reasonable cause. Testing positive on the drug screening or evidence of tampering with a specimen will disqualify a student from participation from clinical assignment.

In addition to drug screening, for the safety of patients and health care workers, child abuse clearance and criminal background checks are required by some agencies prior to a clinical assignment. Certain criminal activity, as evidenced by a criminal background check, may also disqualify a student from clinical participation.

Students are advised that the inability to gain clinical education experiences can result in the inability to meet program objectives and outcomes. These circumstances may prevent acceptance into and/or continuance in the program.

# Technical Agriculture Operations

## Associate of Applied Science

The Technical Agriculture Operations program will help to develop management and mechanical technical skills found in the production agriculture. Skills include animal and crop production, welding, diesel, electricity and hydraulics. Students who complete this degree will be employable as a farm or ranch manager, farm or ranch hand, herdsman, feedlot manager, equipment management or those who want to return to the family farm or ranch.

### First Year

FALL SEMESTER COURSE		TITLE	CREDITS
	ANSC 1010	Livestock Production ( <i>Fall Only</i> ) . . . . .	4
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
	WELD 1555	Welding Technology Safety ( <i>Fall Only</i> ) . . . . .	2
	WELD 1755	Shielded Metal Arc Welding I ( <i>Fall Only</i> ) . . . . .	4
	WELD 1771	Gas Metal Arc Welding/Flux Core Arc Welding ( <i>Fall Only</i> ) . . . . .	4
			<b>Semester Credits</b>
			<b>17</b>

### SPRING SEMESTER

DESL 1501	Automotive and Diesel Industrial Standards . . . . .	1
DESL 1540*	Diesel Electrical. . . . .	5
DESL 1610*	Engine Rebuilding I. . . . .	5
DESL 1650*	Diesel Fuel Systems Tuning . . . . .	5
		<b>Semester Credits</b>
		<b>16</b>

### Second Year

#### FALL SEMESTER

	AGEC 2020*	Farm-Ranch Business Management ( <i>Fall Only</i> ) . . . . .	4
	IST 1710	DC Electricity ( <i>Fall Only</i> ) . . . . .	2
	IST 1711	DC Electrical Circuits ( <i>Fall Only</i> ) . . . . .	1
	IST 1712	AC Electricity ( <i>Fall Only</i> ) . . . . .	2
	IST 1713	AC Electrical Circuits ( <i>Fall Only</i> ) . . . . .	1
	MATH 1510	Technical Mathematics I ( <i>Fall Only</i> ) . . . . .	3
<b>OR</b>			
	MATH 1000	Problem Solving . . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . .	3
			<b>Semester Credits</b>
			<b>16</b>

#### SPRING SEMESTER

	AGEC 2010*	Farm-Ranch Business Records ( <i>Spring Only</i> ) . . . . .	2
	AECL 1000	Agroecology ( <i>Spring Only</i> ) . . . . .	4
	IST 1610	Fluid Power ( <i>Spring Only</i> ) . . . . .	2
	IST 1611	Fluid Power Circuits ( <i>Spring Only</i> ) . . . . .	1
GenEd: CV	CO/M 2010*	Public Speaking. . . . .	3
GenEd: CW	ENGL 1010	English I: Composition . . . . .	3
			<b>Semester Credits</b>
			<b>15</b>
			<b>Total Credits</b>
			<b>64</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

## Technical Studies

### Associate of Applied Science

The Associate of Applied Science degree in Technical Studies is intended for individuals who desire to build upon a Department of Labor-recognized apprenticeship training program, individuals who received training in the United States military, or students who have completed the Industrial Maintenance, Plumbing, or Electrical 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 training) 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. Students will be advised while their apprenticeship and training will be evaluated for awarding of credit on an individual basis.

#### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
		Approved technical program credits . . . . .	18
		<b>Semester Credits</b>	<b>18</b>
		Approved technical program credits . . . . .	18
		<b>Semester Credits</b>	<b>18</b>

#### Second Year

##### FALL SEMESTER

GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
	MGT 1200	Human Resources Management (fall only) . . . . .	3
	MGT 1000	Introduction to Supervision . . . . .	3
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR</b>		
	MATH 1510*	Technical Mathematics I . . . . .	3
		<b>Semester Credits</b>	<b>12</b>

#### Second Year

##### SPRING SEMESTER

	BADM 1000*	Introduction to Business . . . . .	3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses . . . . .	3
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
		<b>Semester Credits</b>	<b>12</b>
		<b>Total Credits</b>	<b>60</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.



# Theatre

## Associate of Arts

The Theatre Associate of Arts introduces students to the disciplines within theatre arts through practical, production-based work. Students complete comprehensive foundation theatre and humanities courses, preparing them for University theatre programs or a career in theatre arts.

Program Articulation: This program is articulated with the University of Wyoming. Any deviations from the prescribed course list will not articulate.

### First Year

FALL SEMESTER COURSE		TITLE	CREDITS
GenEd: AA	THEA 1000*	Introduction to Theatre . . . . .	3
	THEA 1100*	Beginning Acting ( <i>Fall Only</i> ) . . . . .	3
	THEA 2000	Theatre Production . . . . .	3
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
			<b>Semester Credits 15</b>
SPRING SEMESTER			
	HUMN 1010*	Introductory Humanities I . . . . .	3
	<b>OR</b>		
	HUMN 1020*	Introductory Humanities II . . . . .	3
	THEA 2000	Theatre Production . . . . .	3
	THEA 2100	Acting II ( <i>Spring Only</i> ) . . . . .	3
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR</b>		
GenEd: QR	MATH 1400+	College Algebra . . . . .	3
GenEd: STEM		Choose from approved STEM courses. . . . .	3-4
			<b>Semester Credits 15-16</b>

### Second Year

FALL SEMESTER			
	THEA 2000	Theatre Production . . . . .	3
	THEA 2010	Backgrounds of Drama I ( <i>Fall Only</i> ). . . . .	3
GenEd: CA	FREN 1010	First Year French I . . . . .	4
	<b>OR</b>		
GenEd: CA	SPAN 1010	First Year Spanish I . . . . .	4
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
GenEd: WY		Choose from approved U.S/Wyoming Constitution courses. . . . .	3
			<b>Semester Credits 16</b>
SPRING SEMESTER			
	FREN 1020*	First Year French II . . . . .	4
	<b>OR</b>		
	SPAN 1020*	First Year Spanish II. . . . .	4
	THEA 2000	Theatre Production . . . . .	3
	THEA 2020	Backgrounds of Drama II ( <i>Spring Only</i> ). . . . .	3
	THEA 2160	Introduction to Stage Make-Up ( <i>Spring Only</i> ) . . . . .	3
GenEd: LAB		Choose from approved Lab Science courses. . . . .	4
			<b>Semester Credits 17</b>
			<b>Total Credits 63-64</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

# Welding Technology

## Associate of Applied Science

The Welding Technology program of study leads to an Associate of Applied Science degree 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, computer-aided drafting along with precision machining tool operation. Students gain knowledge and skills necessary to prepare them for weld qualification to code specification(s).

### First Year

FALL SEMESTER COURSE	TITLE	CREDITS
CMGT 1520	Introduction to Blueprint Reading and Building Codes . . . . .	3
IST 1520	Introduction to Industrial Safety . . . . .	3
WELD 1655*	Allied Cutting Processes . . . . .	2
WELD 1755*	Shielded Metal Arc Welding I . . . . .	4
WELD 1756*	Shielded Metal Arc Welding II . . . . .	4
WELD 1771*	Gas Metal Arc Welding/Flux Core Arc Welding . . . . .	4
WELD 2650*	Gas Tungsten Arc Welding . . . . .	4
	<b>Semester Credits</b>	<b>24</b>
<b>SPRING SEMESTER</b>		
WELD 1760*	Advanced Shielded Metal Arc Welding . . . . .	4
WELD 2680	Welding Metallurgy . . . . .	2
WELD 1805*	Pipe Welding I . . . . .	4
WELD 1810*	Pipe Welding II . . . . .	4
WELD 1815*	Pipe Welding III . . . . .	4
BADM 1000	Introduction to Business . . . . .	3
<b>OR</b>		
ENTR 1500	Introduction to Entrepreneurship . . . . .	3
	<b>Semester Credits</b>	<b>21</b>

### Second Year

<b>FALL SEMESTER</b>		
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . . 3
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses. . . . . 3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . . 3
GenEd: QR	MATH 1510*+	Technical Mathematics I . . . . . 3
	<b>OR</b>	
	MATH 1000*	Problem Solving . . . . . 3
	OR HIGHER	
	<b>Semester Credits</b>	<b>12</b>
<b>SPRING SEMESTER</b>		
	ENTK 2500*	Computer-Aided Drafting I . . . . . 3
		Choose from faculty-approved
		Cultural Awareness general education courses. . . . . 3
	<b>OR</b>	
		Choose from faculty-approved
		Aesthetic Awareness general education courses. . . . . 3
GenEd: CV	CO/M 2010*^	Public Speaking. . . . . 3
	<b>OR</b>	
GenEd: CV	CO/M 1015*^	Foundations of Communication . . . . . 3
	HMDV 1510	Success in the Workplace: Soft Skills. . . . . 3
	<b>Semester Credits</b>	<b>12</b>
	<b>Total Credits</b>	<b>69</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+ If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.

## Welding Technology (Combination Welding)

### **Credit Diploma**

The Welding Technology (Combination Welding) credit diploma 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 weld 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.

### **First Year**

<b>FALL SEMESTER COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
CMGT 1520	Introduction to Blueprint Reading and Building Codes . . . . .	3
IST 1520	Introduction to Industrial Safety . . . . .	3
WELD 1655*	Allied Cutting Processes . . . . .	2
WELD 1755*	Shielded Metal Arc Welding I . . . . .	4
WELD 1756*	Shielded Metal Arc Welding II . . . . .	4
WELD 1771*	Gas Metal Arc Welding/Flux Core Arc Welding . . . . .	4
WELD 2650*	Gas Tungsten Arc Welding . . . . .	4
<b>Semester Credits</b>		<b>24</b>
<b>Total Credits</b>		<b>24</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

## Welding Technology (Advanced Pipe Welding)

### **Credit Diploma**

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.

### **First Year**

<b>SPRING SEMESTER</b>	<b>COURSE</b>	<b>TITLE</b>	<b>CREDITS</b>
	WELD 1760*	Advanced Shielded Metal Arc Welding . . . . .	4
	WELD 1805*	Pipe Welding I . . . . .	4
	WELD 1810*	Pipe Welding II . . . . .	4
	WELD 1815*	Pipe Welding III . . . . .	4
	WELD 2680	Welding Metallurgy . . . . .	2
	BADM 1000	Introduction to Business . . . . .	3
	<b>OR</b>		
	ENTR 1500	Introduction to Entrepreneurship . . . . .	3
<b>Semester Credits</b>			<b>21</b>
<b>Total Credits</b>			<b>21</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

# Wind Energy

## Associate of Applied Science

The Associate of Applied Science degree in Wind Energy is designed for students who want to gain valuable industry skills while pursuing a basic academic foundation. General education requirements, industrial maintenance knowledge and skills, and specific wind power industry topics are combined to provide the groundwork for direct industry employment.

### First Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	IST 1660*	Mechanical Drives . . . . .	2
	IST 1661*	Mechanical Drive Assemblies . . . . .	1
	IST 1710*	DC Electricity . . . . .	2
	IST 1711*	DC Electrical Circuits . . . . .	1
	IST 1712*	AC Electricity . . . . .	2
	IST 1713*	AC Electrical Circuits . . . . .	1
	WTT 1000	Introduction to Wind Energy . . . . .	3
	WTT 1100	Climb Safety and Tower Rescue Training . . . . .	2
GenEd: CS	COLS 1000	Introduction to College Success: First-Year Seminar . . . . .	3
GenEd: CW	ENGL 1010*+	English I: Composition . . . . .	3
<b>Semester Credits</b>			<b>20</b>

### 2ND SEMESTER

	IST 1610*	Fluid Power . . . . .	2
	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
GenEd: QR	MATH 1000*	Problem Solving . . . . .	3
	<b>OR HIGHER</b>		
<b>Semester Credits</b>			<b>15</b>

### Second Year

1ST SEMESTER	COURSE	TITLE	CREDITS
	IST 1810*	Programmable Logic Controllers . . . . .	2
	IST 1811*	PLC Circuits I . . . . .	1
	WTT 1300*	Theoretical Concepts of Rotating Machines . . . . .	3
	WTT 2200*	Advanced Wind Turbine Generator Mechanical Systems . . . . .	3
		Choose from approved Lab Science or STEM courses . . . . .	3-4
GenEd: CV	CO/M 2010*	Public Speaking . . . . .	3
<b>Semester Credits</b>			<b>15-16</b>

### 2ND SEMESTER

	WTT 2300*	Wind Turbine Data Acquisition . . . . .	2
	WTT 2400*	Power Generation, Transmission, and Distribution . . . . .	3
	WTT 2600*	Advanced Industrial Motor Control Applications . . . . .	4
GenEd: WY		Choose from approved U.S./Wyoming Constitution courses . . . . .	3
<b>Semester Credits</b>			<b>12</b>
<b>Total Credits</b>			<b>62-63</b>

\* This course has at least one prerequisite. Check the Course Descriptions section of the catalog to see the course prerequisites.

+If the placement test score is not adequate for course enrollment, students must complete the appropriate developmental course(s) before enrolling. These courses may increase the total number of program credits. Students should review their math and writing placement with their advisor before planning out their full program schedules.



# 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 create financial information in accordance with Generally Accepted Accounting Principles (GAAP). Students evaluate how financial information is used in making business decisions. Prerequisite: Completion of MATH 0970 and ENGL 0810 or equivalent placement test score.

### **ACCT 2020 3 CREDITS PRINCIPLES OF ACCOUNTING II**

ACCT 2020 is a continuation of ACCT 2010. Students prepare accounting transactions for corporations and partnerships, and analyze stockholder's equity and the statement of cash flows. Students examine reports and information needed by the management of a business to make good decisions. Students recognize the role accounting information plays in aiding the functions of planning, budgeting and control of a business. 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 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.

## 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 test score.

### **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 test score.

### **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 test score.

**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 test score, 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 test score, and completion of ADDN 1000, ADDN 1016, CNSL 2300.

## Agriculture

**AGRI 1010** **3 CREDITS**  
**COMPUTERS: AGRICULTURE**  
Students develop skills in the use of computers in agriculture and agribusiness. Students develop computer literacy, practical application and evaluate industry standard hardware and software.

**AGRI 1030** **3 CREDITS**  
**INDUSTRIES IN AGRICULTURE**  
Students examine multiple aspects of the agriculture industry as well as the purpose and philosophy of higher education as it relates to the different sectors of the agriculture industry.

**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 test score.

**AGEC 1020** **3 CREDITS**  
**AGRICULTURE ECONOMICS II**  
Students explore the impact of markets on the distribution and use of food and fiber. Exploration will include how decisions of consumers, producers, governmental policy, and externalities cause inefficiencies within a market based on economy. Market risk management is discussed as an applied strategy to mitigate inefficiencies within a market. Prerequisite: Completion of AGECE 1010.

**AGEC 2005** **1-9 CREDITS**  
**RESEARCH IN AGRICULTURE BUSINESS**  
Students engage in a self-guided research project in agriculture business. Students demonstrate the research process by selecting a hypothesis and then applying their understanding of business principles to answer the research questions. Instructor approval required.

**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 test score.

**AGEC 2020** **4 CREDITS**  
**FARM-RANCH BUSINESS MANAGEMENT**  
Students evaluate basic tools of management and decision making and apply those to problems found in agribusiness management. Exploration of the four functions of management is used to provide an understanding of the complex issues a manager faces on a daily basis. Students also discover the process of recourse acquisition and resource distribution important in the farm and ranch.

**AGEC 2395** **3 CREDITS**  
**CAPSTONE COURSE FOR AGRICULTURE MAJORS**  
Students consolidate the entire spectrum of their educational experience into the development of a management information system for an existing farm or ranch operation. Students select a farm/ranch property, secure public information, then develop the business plan for a complete year's operation. Students present their project to the landowner for their review upon completion of the capstone project. Prerequisite: Students graduating from the agriculture program and approval of their advisor.

**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 examine the sources and costs of credit available for agriculture and the current public policies affecting agricultural credit markets. Prerequisite: Completion of MATH 0900, or equivalent placement test score.

**AGEC 2500** **3 CREDITS**  
**AGRICULTURAL TRADE POLICY**  
Students are introduced to the basic trends in agriculture and related trade policies beginning with a review of early agricultural legislation. Students become knowledgeable about domestic and foreign policy as it relates to global agricultural and agribusiness issues. Students consider multi-cultural differences and their effect on agricultural trade and policy along with alternative public policy options and opinions.

## Agriculture – Agroecology

**AECL 1000** **4 CREDITS**  
**AGROECOLOGICAL**  
Students explore conventional and sustainable agriculture systems and compare those systems in both developed and developing countries. Ecological interactions within food producing systems are explored with an emphasis on sustainable agriculture systems. Students learn the basics of biological components and their interactions. Sustainable agriculture is studied in depth, incorporating agriculture into the three pillars of sustainability.

**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 test scores.

**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 test score.

**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 test scores, 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 test score.

**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

**RGMG 2500**                      **2 CREDITS**  
**RANGELAND PLANT IDENTIFICATION**

Students classify, describe, and site identify the most important rangeland and riparian plants in western North America. Students gain confidence in using plant taxonomic keys and study the important ecological roles of these plants.

## 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 test score.

**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 test score.

## 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 test score.

### **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**

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. For non-art majors and pre-school and elementary education majors.

### **ART 1010 3 CREDITS** **INTRODUCTION 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 test score.

### **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 test score.

### **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 test score.
- 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 test score.
- 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 METALS I** 3 CREDITS

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 METALS II** 3 CREDITS

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 METALS III** 3 CREDITS

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 CERAMICS I** 3 CREDITS

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 CERAMICS II** 3 CREDITS

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 CERAMICS III** 3 CREDITS

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 SURVEY OF ASTRONOMY** 4 CREDITS

Students gain a greater understanding of astronomy through direct observation, laboratory application, and lecture. Students compare the planets and satellites in our solar system; sort out the life, birth, and death of stars; and recognize unique objects such as quasars and black holes. On-campus observing sessions will be scheduled at night and are required for on-campus students. Online students complete observations with binoculars. Prerequisite: Completion of MATH 1070 and ENGL 0810, or equivalent placement test scores.

## Automotive Body Repair

**AUBR 1500 AUTO BODY HAND/HYDRAULIC TOOLS** 3 CREDITS

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 INTRODUCTION TO AUTO BODY REPAIR** 3 CREDITS

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 COLLISION DAMAGE APPRAISING** 3 CREDITS

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 AUTO BODY WELDING** 3 CREDITS

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 AUTO BODY REPAIR I** 3 CREDITS

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 AUTO BODY REPAIR II** 3 CREDITS

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 AUTO BODY REPAIR III** 3 CREDITS

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 AUTO BODY REPAIR IV** 3 CREDITS

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 1600 AUTO BODY UPHOLSTERY** 3 CREDITS

Students use an industrial sewing machine to demonstrate common stitch types. Students differentiate the materials used in automotive upholstery. Students demonstrate basic seat and interior panel construction.

**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.

**AUBR 1950**                      **1-15 CREDITS**  
**PRACTICUM (AREA OF SPECIALTY)**

Practice courses are supplemental in nature and aligned to a particular course contained in a regular instructional program. These courses list the course titles they are augmenting plus the word "practicum." They are designed to enhance the learning process by providing additional, supervised hands-on experiences. A student may take up to 15 credit hours in practicum courses as approved by the instructor.

## 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 may 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.

**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 completion of or concurrent enrollment in MATH 0980, or equivalent placement test scores.

**BIOL 1390** **4 CREDITS**  
**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**  
**BIOLOGY OF PLANTS AND FUNGI**

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**  
**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 test score.

## 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 test score.

### **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** **BUSINESS LAW I**

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 test score.

### **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.

## Chemistry

### **CHEM 1000 4 CREDITS** **INTRODUCTORY CHEMISTRY**

In the study of introductory chemistry, 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 0980, MATH 0990 or MATH 1070, or equivalent placement test score.

### **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 test score, 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.

## College Success

### **COLS 1000 3 CREDITS** **INTRODUCTION TO COLLEGE SUCCESS: FIRST-YEAR SEMINAR**

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.

## Communication

### **CO/M 1015 3 CREDITS FOUNDATIONS OF COMMUNICATION**

Students explore communication contexts and develop skills in the following areas: interpersonal communication, public speaking, and small group communication. This course is designed primarily for applied sciences degrees and certificate programs. Prerequisite: ENGL 0810 or equivalent placement test score.

### **CO/M 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 test score.

### **CO/M 1040 3 CREDITS INTRODUCTION 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.

### **CO/M 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.

### **CO/M 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 test score.

### **CO/M 2500 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 test score.

## Computer Applications

### **CMAP 0900 2 CREDITS FUNDAMENTALS OF COMPUTERS**

An introductory course in the fundamentals of computer usage. Students develop knowledge of basic computer skills. Students gain skill and knowledge of basic computer hardware and software.

### **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 test score.

### **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 test score.

### **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 1650 1 CREDIT INTRODUCTION TO NETWORKING**

This course provides students with a basic understanding of local area networking using a popular LAN system. Students become knowledgeable about and acquire an understanding of networking fundamentals (components, topologies, protocols, and security), and commonly used network commands.

### **CMAP 1700 1 CREDIT WORD PROCESSING I:**

Students acquire beginning word processing skills including document creation, deleting and inserting text, moving, copying, printing, text formatting, using multiple documents, finding and replacing text, running spell check, using writing tools, and creating tables.

### **CMAP 1715 3 CREDITS WORD PROCESSING**

Students acquire word processing skills including document creation, modification, and integration; mail merge and related concepts; style, formatting, and template use and development; creating and sharing online documents. Students customize documents using drawing, graphics, text special effects, charts, tables, macros, columns, linking, and indexes/tables of contents.

### **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 0970 or equivalent placement test score.

### **CMAP 1765 3 CREDITS SPREADSHEET APPLICATIONS**

Students are provided with an in-depth review of spreadsheet applications. Students use spreadsheet commands to build and maintain spreadsheets and workbooks, printing, graphics use, data queries, file operations, and macros. Students create advanced data tables and charts, data models, and solve complex problems using equations. Student's import and export data across several applications, and write simple code for spreadsheet applications. Prerequisite: Completion of MATH 0900 or equivalent placement test score.



**CMAP 1800** **1 CREDIT**  
**INTRODUCTION TO DATABASE APPLICATIONS**

A study of the techniques used in file organization, storage, and retrieval using a popular database management system.

**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 1990A** **3 CREDITS**  
**TOPICS: VIRTUALIZATION**

Students in this course learn basic and advanced approaches to virtual machine installation, configuration, and management. Students explore the various advantages and disadvantages of virtualization. Topics covered include hardware requirements, operating system virtualization, application virtualization, techniques to minimize both downtime and maintenance, and an overview of virtualizing infrastructure. Prerequisite: Completion of CSCO 2000 or MSFT 2578.

**CMAP 1990B** **1 CREDIT**  
**TOPICS: TECHNOLOGY IN THE CLASSROOM**

This is a hands-on course designed to teach instructors how to apply up-to-date technology in their classroom. The tools to be used include both software and hardware and are used to enhance the learning management system (ANGEL). Examples include cameras, Bamboo pens, cell phones, Respondus, Tegrity, Camtasia, Impatica, virtual storage space, clickers, and Net-Ops. Prerequisite: Must be a current LCCC employee or instructor approval.

**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 2580** **3 CREDITS**  
**WEB PROGRAMMING**

Students acquire knowledge and skills necessary to create computer programs for use on the Web. Topics include popular scripting languages, client and server side scripting, database access, and other current Web programming concepts. Cross-listed with INET 2580. Prerequisite: Completion of any programming course and INET 1580 or equivalent experience.

**CMAP 2630** **2 CREDITS**  
**PRESENTATION GRAPHICS: MICROSOFT POWERPOINT**

This course prepares students to create and share presentations in face-to-face and online environments using popular presentation software applications. Students develop skills in developing cohesive, well-developed presentations, creating slides, utilizing image, video, and audio files effectively and professionally; importing graphs and tables into presentations; and sharing presentations for editing and presentation via online services.

**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 I (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. Cross-listed with HSEC 1500. 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. Cross-listed with HSEC 1520. 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. Cross-listed with HSEC 1530. 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 files 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 on employment of appropriate defensive measures in a hostile environment. Prerequisite: CSEC 1500 or valid CompTIA Security+ certification or instructor consent.

**CSEC 1990A** **3 CREDITS**  
**TOPICS: NETWORK ATTACK**  
**PRINCIPLES II**

Students acquire knowledge and skills to program code that exploits computer vulnerabilities. Students learn C and assembly programming languages for use in writing shellcode as a means to subvert computer security measures. Students practice these techniques with an emphasis on securing systems from such attacks. Prerequisite: Completion of CSEC 1520.

**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. Cross-listed with HSEC 2013. 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. Cross-listed with HSEC 2013. Instructor consent required.

## Computer Applications – Internet Technology

**INET 1550** **1 CREDIT**  
**INTRODUCTION TO THE INTERNET**

Students gain and demonstrate knowledge about the worldwide network of computers and users known as the Internet. Students also acquire skills in accessing worldwide databases. Topics covered include FTP, web browsers, the World Wide Web, effective search techniques, online communications, and online security.

**INET 1580** **3 CREDITS**  
**WEB PAGE AUTHORING**

Students learn how to create a webpage and websites by utilizing simple text editors. Students gain functional knowledge of the hypertext markup language (HTML), cascading style sheets (CSS) and establish a website portfolio consisting of multiple sites created throughout the course. Prerequisite: Completion of ENGL 0810 or equivalent placement test score.

**INET 1640** **3 CREDITS**  
**WEB DEVELOPMENT TOOLS:**

Students acquire knowledge and skills about creating web pages using current web development software. Topics include web page design, site definition, table layout, templates, CSS (Cascading Style Sheets), and applying industry standards. Prerequisite: Completion of or concurrent enrollment in INET 1583, or instructor approval.

**INET 2020** **3 CREDITS**  
**DESIGNING E-COMMERCE WEB SITES**

Students create e-commerce web sites. Topics include applicable design, shopping cart application, security software, site navigation, and web marketing concepts. Prerequisite: Completion of INET 1640 or INET 2620 or instructor approval.

**INET 2580** **3 CREDITS**  
**WEB PROGRAMMING**

Students acquire knowledge and skills necessary to create computer programs for use on the Web. Topics include popular scripting languages, client and server side scripting, database access, and other current Web programming concepts. Cross-listed with CMAP 2580. Prerequisite: Completion of any programming course and INET 1580 or equivalent experience.

**INET 2620** **3 CREDITS**  
**DESIGNING EFFECTIVE WEB SITES**

Students evaluate current web sites for evidence of web standards, semantic code, and acceptable design practices. Students plan, design and develop web sites which demonstrate adherence to web standards and design principles. Students create original sites to meet the needs and desires of fictitious clients and justify their design decisions both orally and in writing. Students employ specific web design software to create a rich portfolio collection of original work and guided projects that incorporate words and media. Prerequisite: Completion of INET 1580.

## Computer Applications – Linux

**LINUX 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.

**LINUX 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 LINUX 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**

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**

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 1505** **1 CREDIT** **INTRODUCTION TO CONSTRUCTION MANAGEMENT**

Students learn about the construction management profession and the role of the construction manager in various fields of construction. Students acquire knowledge about the variety of allied careers in the construction industry and ethics required of individuals working in the construction industry. Prerequisite: Completion of ENGL 0810 or equivalent placement test score.

### **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.

### **CMGT 2560** **3 CREDITS** **CONSTRUCTION AND INDUSTRY SAFETY**

Students learn safety policies and procedures of a construction site. Students acquire knowledge in safe handling of industrial power tools, personal protective equipment, and electrical safety. In addition, students learn about the implementation of practical safety standards and the consequences of violating those standards in the work place. Students receive a valid 30-hour OSHA card upon successful completion of this course. Prerequisite: Completion of ENGL 0810 or equivalent placement test score.

## 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 a command of basic skills including listening, responding, encouraging, and initiating change in interpersonal communication through mediation and conflict resolution. 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 test score.

### **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 IGMT 2400.

## 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 scalars. 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**  
**CLINICAL INDEPENDENT STUDY**

Students demonstrate the ability to provide comprehensive patient care and maintenance of clinical skills in preparation for clinical boards. Students expand clinical experience by providing patient care in public health clinical sites. Prerequisite: Completion of four terms of the Dental Hygiene program.

## 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**

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** **2 CREDITS**  
**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 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**

An introduction to contemporary economic principles and the foundations of a market based economic system, with an emphasis on macroeconomic measurement. Students examine current economic issues and events. Prerequisite: Completion of ENGL 0810 or equivalent placement test score.

### **ECON 1010 3 CREDITS PRINCIPLES OF 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. Prerequisites: Completion of ENGL 1010 and MATH 0980 or MATH 1070 or equivalent test score.

### **ECON 1020 3 CREDITS PRINCIPLES OF 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 0970 and ENGL 0810 or equivalent placement test score, or instructor approval.

## Education

### **EDUC 2100 2 CREDITS PUBLIC SCHOOL PRACTICUM**

In this capstone course, students explore educational topics such as classroom management, learning differences, and pedagogy in addition to working in a public school setting for a minimum of 30 hours. Students observe, assist in the classroom, and teach a formal lesson under the supervision of a classroom teacher in addition to LCCC coursework. Students must pass a background check to be eligible for this course. Prerequisite: Completion of or concurrent enrollment in EDFD 2100, and a GPA 2.5 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 INTRODUCTION TO EARLY CHILDHOOD EDUCATION**

Students explore the field of early childhood education in this introductory course. Students visit different early childhood programs 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 profession. (Note: This course requires 10 hours of observation in early childhood settings; students must provide their own transportation to the sites.)

### **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 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 1 CREDIT INTRODUCTION TO TEACHING**

Students explore career options within the teaching profession through observations, discussions, and research. Prerequisite: Completion of ENGL 0810.

**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 2450** **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: Completion of ENGL 1010 or instructor approval.

## 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 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**  
**INTRODUCTION 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. Prerequisite: Completion of ENGL 1010.

## Education – Instructional Technology

**ITEC 2360** **3 CREDITS**  
**TEACHING WITH TECHNOLOGY**  
In this course for pre-service teachers, 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 K-12 classroom. Prerequisite: Completion of MATH 0900 or equivalent placement test score.

## 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 I**  
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.

## 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**  
**INTRODUCTION TO  
ENGINEERING COMPUTING**

An introduction to spreadsheets and structured programming for engineering students. Students learn the methodology used in the engineering profession for analyzing problems. In laboratory, students solve example problems using appropriate computer software. Corequisite: Concurrent enrollment in MATH 2200.

**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: 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, MATH 2210, and 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 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.

## Engineering Technology

**ENTK 1505** **1 CREDIT**  
**ENGINEERING PROBLEM SOLVING  
WITH SPREADSHEETS**

Students solve engineering problems through the use of computer spreadsheets. Topics include functions, referencing, conditional statements, graphs, trend lines, and iterative solvers. Prerequisite: Completion of ENGL 0810 or equivalent placement test score.

**ENTK 1515** **3 CREDITS**  
**TECHNICAL DRAFTING**

In this course, students develop manual drafting skills for technical communication and solving graphical problems. Students gain knowledge in lettering, single-view drawings, descriptive geometric construction, multi-view projections, auxiliaries, sections, oblique, isometrics, and perspectives. Students also gain comprehension of visualization and spatial problems. Prerequisite: Completion of MATH 0980 or equivalent placement test score.

**ENTK 1560** **3 CREDITS**  
**FREEHAND SKETCHING, INKING,  
AND RENDERING FOR DRAFTING**

In this course, students develop sketching and inking skills in single-view drawings, multi-view projections, auxiliaries, sections, oblique, isometrics, and perspectives. Students render technical sketches applying the process of creating, shading, and texturing an image.

**ENTK 1580** **4 CREDITS**  
**PRINCIPLES OF TECHNOLOGY**

Students develop necessary skills and knowledge in the principles of technology as applied to the scientific concepts and laws of force, work, rate, resistance, energy, and power. Students gain an understanding and working knowledge of these principles through practical application experiences. The course is specifically designed for students, both science and non-science majors, who plan to pursue careers as technicians. Cross-listed with PHYS 1080. Prerequisite: Completion of MATH 0980 or equivalent placement test score.

**ENTK 1740** **3 CREDITS**  
**ARCHITECTURAL BUILDING INFORMATION MODELING DESIGN I**

In this course, students examine basic topics in architectural CADD software combined with an emphasis in residential architectural design. Successful students acquire knowledge and develop skills in 3-dimensional modeling, parametric building design, building information modeling (BIM), site planning and preparation, and presentation. Students begin to evaluate building codes, materials, structures, and architectural design, and gain experience with construction documents. Prerequisite: Completion of MATH 0980 or equivalent placement test score, or instructor approval.

**ENTK 2070** **3 CREDITS**  
**ENGINEERING SURVEYING**

Students learn the basic land surveying principles of measuring distances, elevations, and angles. Students learn to apply methods of calculations and applications for error theory in measurements. Students are introduced to surveying instruments and equipment along with the methods of surveying for site locations and construction sites. Prerequisite: Completion of MATH 1405 or instructor approval.

**ENTK 2500** **3 CREDITS**  
**COMPUTER-AIDED DRAFTING I**

An introductory course in CAD. Students learn how to create a drawing, make changes, and output to paper. Prerequisite: Completion of MATH 0980 or equivalent placement test score, or instructor approval.

**ENTK 2505** **3 CREDITS**  
**COMPUTER-AIDED DRAFTING II**

A continuation of ENTK 2500 using advanced CAD skills. Prerequisite: Completion of ENTK 2500 or instructor approval.

**ENTK 2510** **3 CREDITS**  
**COMPUTER-AIDED DRAFTING III**

This course is a continuation of ENTK 2505. Students acquire knowledge in advanced AutoCAD features such as viewports, hatches, line types, 3-D objects, solid modeling, paper spare plotting, and AutoLISP. The course is for practicing professionals (engineers and technicians). Prerequisite: Completion of ENTK 2500 or instructor approval.

**ENTK 2520** **3 CREDITS**  
**ADVANCED MECHANICAL DRAFTING**

An advanced drafting course where students produce three sets of advanced machine working drawings, including the tolerancing of mating parts. Drawing will be done using AutoCAD. Prerequisite: Completion of ENTK 2500 or instructor approval.

**ENTK 2540** **3 CREDITS**  
**ARCHITECTURAL BUILDING INFORMATION MODELING DESIGN II**

In this course, students examine advanced topics in architectural CADD software combined with an emphasis in commercial architectural design. Successful students acquire knowledge and develop skills in 3-dimensional modeling, geometry, spatial relationships, form, structural systems, and properties of building components. Students apply BIM to demonstrate the entire building of construction and facility operation. Prerequisite: Completion of ENTK 1740 or instructor approval.

**ENTK 2550** **3 CREDITS**  
**CIVIL DRAFTING TECHNOLOGY**

A course where students learn to solve a wide variety of civil drafting problems by completing written assignments and drawings utilizing AutoCAD. Prerequisite: Completion of ENTK 2500 or instructor approval.

**ENTK 2555** **3 CREDITS**  
**MANUFACTURING AND DESIGN I**

Students develop knowledge and skills for creating and constructing basic manufacturing drawings, making modifications to existing drawings, and performing basic paper output through printing techniques. Students practice construction techniques of basic objects and perform proper drafting etiquette while gaining experience in geometric problem-solving analysis. Prerequisite: Completion of ENTK 2500 or instructor approval.

**ENTK 2560** **3 CREDITS**  
**MANUFACTURING AND DESIGN II**

Students develop advanced knowledge and skills of the application for creating and constructing work manufacturing drawings, making modifications to existing drawings, and performing paper output through printing techniques. Students practice advanced construction techniques of complex objects, basic assembly of objects, and perform proper drafting protocol. Prerequisite: Completion of ENTK 2555 or instructor approval.

**ENTK 2570** **3 CREDITS**  
**AUTODESK TOOLS:**

Students develop knowledge and skills in creating drawings that are necessary to communicate project intent. The course employs realistic scenarios in order for students to acquire the ability to develop, plan, and implement working drawings of a project utilizing a variety of AutoDesk tools such as Architectural, Mechanical, Land Desktop, and Revit Structural Building Systems.

**ENTK 2580** **3 CREDITS**  
**MICROSTATION I**

Students develop knowledge and skills for creating and constructing mechanical drawings, making modifications to existing drawings, and performing basic paper output through printing techniques. Students practice construction techniques of basic objects and perform proper drafting etiquette. Prerequisite: Completion of MATH 0980 or equivalent placement test score, or instructor approval.

**ENTK 2610** **3 CREDITS**  
**CONSTRUCTION MATERIALS AND METHODS**

In this course, students investigate various materials and methods used in construction. Students acquire knowledge in fundamental principles of structural, physical, long-term performance, and product manufacturing techniques. Students also analyze and compare different material applications and detailing of structural and nonstructural building components in both construction and architectural design. Common construction methods are introduced, and building details are explored. Prerequisite: Completion of ENGL 0810 or equivalent placement test score, or instructor approval.

**ENTK 2660 3 CREDITS**  
**FUNDAMENTALS OF CONSTRUCTION COST ESTIMATION**

In this course, students investigate the basic concepts of construction planning, specification, and blueprint reading. Using traditional hand methods and computer-enhanced procedures, students acquire knowledge and develop skills in estimating quantity and cost activities for general conditions, site work, concrete and form work, and masonry estimating. Prerequisite: Completion of ENTK 2610 or instructor approval.

## 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 score.

**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 I: COMPOSITION**

A composition course emphasizing expository and persuasive writing using computers. Students write six-eight expository essays that employ all stages of the writing process. Students conduct college-level research; practice critical reading and analysis; logically organize essays through claims and evidence; apply knowledge of audience, purpose, and genre within writing assignments, following standardized conventions of English grammar and MLA formatting. Prerequisite: Completion of ENGL 0810 or equivalent placement test score.

**ENGL 1020 3 CREDITS**  
**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 2020 3 CREDITS**  
**INTRODUCTION TO LITERATURE**

Students critically read and interpret texts in a variety of literary genres, periods, and movements; explore multiple theories of reading and discourse; and write analytical essays about literature. Prerequisite: Completion of ENGL 1010.

**ENGL 2040 3 CREDITS**  
**CREATIVE WRITING**

Students develop tools based in the tradition of creative writing, tools with which they will create their own poetry, fiction, and creative nonfiction. Students read and study an array of poetry, fiction, and creative nonfiction too in order to absorb best practices for developing craft. Students participate in writing workshops. May be repeated for up to two times for credit. Prerequisite: Completion of ENGL 1010.

**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: MIDDLE AGES TO THE RESTORATION**

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: PRE-COLONIAL TO CIVIL WAR**  
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: CIVIL WAR TO PRESENT**  
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. Co-requisite: 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

**ENTR 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 test score.

**ENTR 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 ENTR 1500.

**ENTR 2540** **2 CREDITS**  
**SMALL BUSINESS FINANCIAL MANAGEMENT**  
A course that focuses on developing skills for financial management of a small business. Students prepare and analyze both personal and business financial statements. Students also develop decision-making skills grounded in profitability, break-even analysis, forecasting, and working capital management. Students are encouraged to use their own businesses or use case study businesses for development of statements. Prerequisite: Completion of ACCT 2010.

**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.

## Equine Studies

**EQST 1505** **4 CREDITS**  
**BASIC HORSEMANSHIP**  
Designed for beginning horsemen who desire training in horsemanship skills and horse care. Students are introduced to proper horse handling, safety, saddling, round penning, and basic riding skills. Prerequisite: Acceptance into the Equine Science program.

**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 1565** **2 CREDITS**  
**BASIC TRIMMING AND HOOF CARE**  
 A basic course on proper trimming techniques and minor corrective work. Students gain actual experience trimming horses under supervision. Students must provide their own tools.
- EQST 1570** **3 CREDITS**  
**HORSESHOEING I**  
 A basic course on proper trimming and shoeing. Topics include leveling and balancing feet, shaping shoes to horse's feet, nailing, and clinching. Students gain knowledge of the anatomy and physiology of the lower leg and foot. Students shoe live horses when competent enough, with instructor permission. Students must provide their own tools.
- EQST 1615** **2 CREDITS**  
**GREEN HORSE/GREEN RIDER**  
 An introductory course designed for student riders and/or horses who are unprepared for more advanced training or equitation courses. Students set and achieve individual goals with the aid of the instructor. Prerequisite: Students must provide their own horses, which are broken to ride and under control.
- EQST 1625** **2 CREDITS**  
**GREEN HORSE/GREEN RIDER II**  
 A continuation of EQST 1615, a course in which student riders and/or horses have mastered basic techniques. Student riders and horses demonstrate continued refinement of gaits, communication responses, and equitation techniques. Humane equine care is demonstrated and critiqued. Prerequisites: Students must provide their own horses. Completion of EQST 1615 or permission of the instructor.
- 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 event 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 1770** **2 CREDITS**  
**BASIC REINING TECHNIQUES**  
 Students acquire knowledge about and develop skills in the training and riding of reining horses. Topics include leg controls, backing, circles, picking up leads, changing leads, turn-arounds, roll backs, and running patterns. The course follows those rules established by the National Reining Horse Association (NRHA). The training program of each student is tailored to fit both horse and rider. Prerequisite: Students must provide their own horse for this course. Instructor signature required.
- 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 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 2825** 4 CREDITS  
**ADVANCED HORSE MANAGEMENT AND TRAINING**

A continuation of EQST 1900, emphasizing advanced greenbreaking. Prerequisite: Completion of EQST 1900.

**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**

A continuation of equine training courses in a minimally guided yet, fully observed atmosphere. Students work with the instructor to determine their career goals and discipline in the horse training industry and through self-guided learning, explore their chosen discipline. Students train colts from green broke to specialization in a discipline. This course is an alternative to participation in the internship course for satisfaction of the degree requirements for the Equine Science - Training Management program. Prerequisite: Completion of EQST 1685 and EQST 2560.

**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 2122** 1 CREDIT  
**CHILD GROWTH AND 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 test score.

**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 test score.

**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 test score.

**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 credit worthiness.

**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 2020.

**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.

**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 1110.

**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.

## 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 test score, 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.

### **GEOG 1010 4 CREDITS INTRODUCTION 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 test score.

### **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 test score.

### **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 test score, and familiarity with a Windows-based computer operating system.

## Geology

### **GEOG 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.

### **GEOG 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 or equivalent placement test score.

### **GEOG 1200 4 CREDITS HISTORICAL GEOLOGY**

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 or equivalent placement test score.

## 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.

## 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 back 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** **4 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, HVAC1600, and HVAC 1610, or instructor approval.

**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. Prerequisite: Completion of IST 1710, IST 1711, IST 1712, IST 1713, HVAC 1600, and HVAC 1610, or instructor approval.

**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 and analyze a survey of United States history commencing with the 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 to the first half of American history. Students also evaluate the Wyoming Constitution. Prerequisite: Completion of ENGL 0810 or equivalent placement test score.

**HIST 1221** 3 CREDITS  
**U.S. FROM 1865**

Students study and evaluate events from the Reconstruction era to the present day including political, economic, and social aspects of American life and the development of the United States as a world power. Students study the essentials of the United States Constitution in context to the second half of American history. Students also evaluate the Wyoming Constitution. Prerequisite: Completion of ENGL 0810 or equivalent placement test score.

**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 placement into ENGL 1010.

**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 2000** 3 CREDITS  
**AMERICAN REVOLUTION**

This survey course covers the period from 1763 to 1789. Students evaluate the reasons the American Revolution occurred; the political, social, ethnic and military aspects of the American Revolution; the failure of the Articles of Confederation; and the adoption of the U.S. Constitution. Prerequisite: ENGL 0910 or equivalent placement test scores.

**HIST 2020** 3 CREDITS  
**U.S. MILITARY HISTORY**

Students examine every major American military campaign. Students analyze the causes of the American military involvement, decisions, and actions of the United States' Armed Forces from the colonial period through the Persian Gulf conflict. Prerequisite: Completion of ENGL 0810 or equivalent placement test score.

**HIST 2080** 3 CREDITS  
**HOLOCAUST**

Students learn the background of European anti-Semitism, the rise of the Nazi Party, the origins of the Second World War, and the events that led to the destruction of European Jewry. Students trace those events and perceptions that allowed the Holocaust to emerge, particularly the development of racial anti-Semitism and religious anti-Judaism. Students explore Christian perspectives and actions, including the behavior and teachings of the church, its leaders and lay members during the Holocaust. Students explore the religious motivations for the extraordinary courage displayed by Christians who risked their lives to save Jews. Students assess the politics behind the Holocaust and how World War II affected Jews throughout Europe. Cross-listed with RELI 2080 Holocaust. Prerequisite: Completion of ENGL 0810.

**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 2130** **3 CREDITS**  
**ANCIENT ROME**

Students survey ancient Rome from its legendary origins to the fall of the Roman Empire. Students examine several aspects of this long and complex story, including political, social, military, religious and cultural traditions and their contributions to the modern world. Students complete an in depth analysis of Julius Caesar, early Christianity and Roman military conquests. Prerequisite: Completion of ENGL 0810 or equivalent placement test score.

**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 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 WMST 2389. 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 test score.

**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.

**Homeland Security**

**HSEC 1000** **3 CREDITS**  
**HOMELAND SECURITY: A GLOBAL IMPACT**

Students review the history of homeland security and discuss its current state and impact on social, political, economic and cultural elements. Students examine threats to homeland security including natural, man-made, and technological disasters, terrorism and Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE) threats. Students identify the roles and responsibilities of government agencies, non-government organizations and individual citizens as they relate to homeland security.

**HSEC 1001** **3 CREDITS**  
**SCHOOL SAFETY**

Students examine security protocol, preparedness, and threat response at educational facilities, including natural, man-made, and technological disasters. Students analyze the relationship between schools and first responders. Students review risk and threat assessments, school safety planning, strategies for safer schools, training, education, exercises, and develop the tools necessary to coordinate and facilitate a school safety program. Prerequisite: Completion of or concurrent enrollment in HSEC 1000.

**HSEC 1003** **3 CREDITS**  
**HOMELAND SECURITY AND FIRST RESPONDERS**

Students examine the unique role of local first responders during natural, man-made, and technological disasters. Students evaluate first responders' actions at responses and recoveries in which the Incident Command System was employed. Prerequisite: Completion of or concurrent enrollment in HSEC 1000.

**HSEC 1025** **3 CREDITS**  
**EMERGENCY MANAGEMENT**

Students examine emergency management strategies for all types of disasters covered under the homeland security's "all-hazard" approach. Students assess, plan, and prepare effective emergency response plans that include environmental and social considerations, as well as disaster recovery and hazard mitigation. Prerequisite: Completion of or concurrent enrollment in HSEC 1000.

**HSEC 2001** **3 CREDITS**  
**LEGAL, POLICY, AND PRIVACY ISSUES**

Students analyze major federal laws and their impact on policies, strategies, and plans for dealing with various threats to homeland security. Students review the legal roles and responsibilities of government agencies, non-government organizations, and individual citizens for U.S. national security. Students discuss various policy and strategy issues, including balancing security, civil liberties, and privacy. Students examine the legal rights and restrictions granted to the private and public sectors as it applies to homeland security. Prerequisite: Completion of or concurrent enrollment in HSEC 1000.

**HSEC 2004** **3 CREDITS**  
**HOMELAND SECURITY AND LAW ENFORCEMENT**

Students use criminological or criminal justice framework to analyze terrorist groups and individuals; terrorist origins, goals, dynamics, ideologies; counterterrorism; and homeland security. Students examine the structure and dynamics of terrorism, terrorist weapons, strategies and tactics, how they evolve, the ways in which they operate, how terrorists obtain funding, their use of the media, and theories of counterterrorism. Students review definitions of terrorism, analyze specific concepts, and examine issues that arise when responding to terrorism or the threat of terrorism. Prerequisite: Completion of or concurrent enrollment in HSEC 1000.

**HSEC 2010** **3 CREDITS**  
**CYBERSECURITY**

Students examine how the information revolution has created a new critical infrastructure—the internet. Students analyze the impact a cyber attack can have on national security, economic security, and/or public health and safety. Students evaluate cybercrimes and responses and recognize how the computer has become a tool, target, and place for criminal activity and national security threats. Students analyze the convergence of existing laws with new policies as well as explore the increase and impact of sophisticated cyber criminals and international cybercrime. Prerequisite: Completion of or concurrent enrollment in HSEC 1000.

**HSEC 2015** **3 CREDITS**  
**CRITICAL INFRASTRUCTURES**

Students analyze threats to critical facility and network infrastructure from an "all-hazards" perspective. Students examine the full range of natural, technological, and man-made disasters and the impact on our nation's critical infrastructure. Students develop risk and threat assessments, safety plans, and strategies for safer facilities and networks. Students identify the processes for implementing training, education, exercises, and evaluations to ensure infrastructure safety. Prerequisite: Completion of or concurrent enrollment in HSEC 1000.

**HSEC 2025** **3 CREDITS**  
**TERRORISM**

Students analyze the roots of terrorist activities throughout the world and discuss national, regional, and global effects of historical and recent terrorist acts, including the proliferation of weapons of mass destruction (WMD) and the impact of Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE) weapons. Students compare and contrast opposing viewpoints, leading students to develop a broad understanding of the evolution of terrorism and counterterrorism. Students consider historical defenses as well as new concepts and innovations for the prevention and mitigation of terrorist attacks.

## 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 test score.

**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 test score.

**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 test score.

**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 test score.

**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 licenses 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 HSMV 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 test score.

**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 test score.

**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 test score.

**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 test score.

## 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**  
**INTRODUCTION 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.

## Integrated Systems Technology

**IST 1520** **3 CREDITS**  
**INTRODUCTION 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** **2 CREDITS**  
**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** **2 CREDITS**  
**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 1730** **2 CREDITS**  
**INTRODUCTION TO ELECTRICAL FUNDAMENTALS**

Students examine Direct Current (DC) theories and apply the knowledge to components of the electrical system. Students compute and analyze basic Alternative Current (AC) and DC circuit calculations and theories and apply this knowledge to electrical systems and electrical equipment. Students identify various methods of producing voltage, classify essential generator and motor design along with construction and operating principles. Instructor approval required.

**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.

**IST 1830** **2 CREDITS**  
**INTRODUCTION TO MECHANICAL FUNDAMENTALS**

Students examine mechanical concepts found in plant operations. Students evaluate piping systems and identify dimensions, connections, blinding, and other plant piping system components. Students apply terminology used in plant operations and examine steam traps, strainers and their applications. Students also examine pumps, drivers, compressors, fans, and heat exchangers. Students operate common hand tools in disassembling and assembling components of piping systems. Instructor approval required.

## 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 and study of human movement. Students explore the many sub-disciplines of human movement 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, physical education epidemiology, and athletic training.

**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 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 with a C or better.

**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 test score.

**MGT 1100 3 CREDITS**  
**RETAIL MANAGEMENT**

Students are introduced to the role of management in retailing. Students study retail strategic management, managing the supply chain, site location, customer service and store layout. Prerequisite: Completion of ENGL 0810 or equivalent placement test score.

**MGT 1200 3 CREDITS**  
**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 test score.

**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 test score.

**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 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.

## Marketing

**MKT 1000 3 CREDITS**  
**PERSONAL SELLING**

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 test score.

**MKT 1300 3 CREDITS**  
**ADVERTISING**

Students explore the strategies, techniques and principles behind effective advertising, as well as the history and role of advertising. Topics covered include marketing, planning, and researching in successful advertising. Prerequisite: Completion of BADM 1000 or equivalent preparation.

**MKT 2100** **3 CREDITS**  
**PRINCIPLES OF MARKETING**  
Students investigate the marketing discipline with emphasis on vocabulary, principles, functional interrelationships, marketing strategies, practices and problems in national and international environments. Prerequisite: Completion of ECON 1010.

## Mass Media/Multimedia

**MMMM 1000** **3 CREDITS**  
**INTRODUCTION TO MASS MEDIA**  
In this general survey course, students explore the major mass media and their roles in modern society. Topics include books, magazines, newspapers, movies, radio, recordings, television, new electronic media, internet, advertising, public relations, and media law, ethics and social responsibility. Students trace the historical development of each medium and analyze its impact upon American culture. Prerequisites: Completion of ENGL 0810 or equivalent placement test score.

**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 test score, 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 test score, 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**

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 test score.

**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 test score.

**MATH 0970 4 CREDITS  
QUANTITATIVE REASONING I**

Students integrate numeracy, proportional reasoning, algebraic reasoning, and understanding of functions. Students explore numerical concepts, quantitative reasoning, graphical displays of data, proportional relationships in real-world problems, problem solving with equations, functions, linear models and other mathematical models using an activity based approach. Students develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. This is the first course in the Quantitative Reasoning sequence. This course is recommended to students who plan to continue the sequence by enrolling in MATH 1070 after successfully completing this course. Successful completion of MATH 1000 is equivalent to successful completion of MATH 0970 and MATH 1070. Students cannot receive credit for MATH 1000 and MATH 1070. Prerequisite: Completion of MATH 0900 or equivalent placement test score.

**MATH 0980 4 CREDITS  
INTEGRATED COLLEGE  
ALGEBRA ALGEBRAWAY I**

Students investigate linear equations, graphing, relations, functions and radicals. Students solve and graph linear equations, perform operations on rational and radical expressions, factor polynomials, and use function notation. This is the first course in the Algebraway sequence. This course is recommended to students who plan to enroll in MATH 1380 after successfully completing this course. Completion of MATH 1400 is equivalent to successful completion of MATH 0980 and MATH 1380. Students cannot receive credit for MATH 1380 and MATH 1400. Prerequisite: Completion of MATH 0900 or equivalent placement test score.



**MATH 1000** **3 CREDITS**  
**PROBLEM SOLVING**

Students acquire knowledge and develop skills that will enable them to formulate, analyze, and interpret quantitative arguments in a variety of settings; use a hand-held calculator in problem solving; and solve application problems in a variety of real world situations. Successful completion, grade C or higher, of MATH 1000 is equivalent to successful completion of MATH 0970 and MATH 1070. Students cannot receive credit for MATH 1000 and MATH 1070. MATH 1000 will not meet a prerequisite for MATH 1400. Prerequisite: Equivalent placement test score.

**MATH 1070** **3 CREDITS**  
**QUANTITATIVE REASONING II**

Students use real-world sources to solve problems numerically, algebraically, and graphically. Students explore numerical concepts, graphical displays of data, problem solving with equations, basic statistics and other mathematical models using an activity based approach. Application problems are taken from fields including business, personal finance, environmental sciences, social sciences, and public and personal health. This is the second course in the Quantitative Reasoning sequence. Completion of MATH 0970 and MATH 1070 is equivalent to successful completion of MATH 1000. Students cannot receive credit for MATH 1000 and MATH 1070. Prerequisite: Completion of MATH 0970.

**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 test score. 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 1380** **3 CREDITS**  
**INTEGRATED COLLEGE ALGEBRA ALGEBRAWAY II**

Using a functional approach to algebra, students investigate the use of linear and quadratic functions and their graphs, solve systems of linear equations and inequalities, rational and polynomial equations and inequalities, and solve exponential and logarithmic functions. This course is recommended to students who are planning to complete the Algebraway sequence. Successful completion of MATH 0980 and MATH 1380 is equivalent to successful completion of MATH 1400. Students cannot receive credit for MATH 1380 and MATH 1400. Prerequisite: Completion of MATH 0980.

**MATH 1400** **3 CREDITS**  
**COLLEGE ALGEBRA**

Students learn fundamental mathematical concepts using numeric, graphic, and symbolic methods. Successful students acquire knowledge and develop skills to investigate linear, quadratic, polynomial, rational, exponential and logarithmic functions; solve systems of linear equations; and understand and use function notation. Completion of MATH 1400 is equivalent to successful completion of MATH 0980 and MATH 1380. Students cannot receive credit for MATH 1380 and MATH 1400. Prerequisite: Equivalent placement test score.

**MATH 1401** **3 CREDITS**  
**PRE-CALCULUS**

Students explore concepts related to functions that are constructed from (1) linear, quadratic, cubic, and higher degree polynomials, (2) exponential, (3) logarithmic, (4) square root, cube root, and general fractional powers, (5) absolute, and (6) one over x, and one over x squared, and general rational functions involving sums, differences, products, quotients, and compositions of these six general types of functions. MATH 1401 is equivalent to successful completion of MATH 0990 and MATH 1390. Students cannot receive credit for MATH 1390 and MATH 1401. Prerequisite: Equivalent placement test score.

**MATH 1405** **3 CREDITS**  
**PRE-CALCULUS TRIGONOMETRY**

Students acquire knowledge and develop skills that enable them to define, evaluate, and graph trigonometric functions and their inverses; solve trigonometric equations; solve triangles; solve applications using vectors; and represent complex numbers in trigonometric form. 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, equivalent placement test score.

**MATH 1450** **5 CREDITS**  
**PRE-CALCULUS ALGEBRA/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 test score.

**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 test score.

**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 test score.

**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 test score.

**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 test score.

**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 completion of or concurrent enrollment in 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 completion of or concurrent enrollment in 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 process improvement 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 IN CODING**

This course is the study of common disease processes and the drugs used in their treatment. Students study the description of 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 or concurrent enrollment in 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**  
**INTRODUCTION TO MUSIC**

Students study the basic fundamentals of music, music literature, and composers of all historical periods. Students develop strategies necessary for intelligent listening. 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.

**MUSC 1010** **1 CREDIT**  
**MUSIC FUNDAMENTALS**

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.

**MUSC 1023** **3 CREDITS**  
**MUSIC AND SOUND TECHNOLOGY**

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 test score.

**MUSC 1025** **3 CREDITS**  
**INTRODUCTION TO MUSIC EDUCATION**

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.

**MUSC 1030** **3 CREDITS**  
**WRITTEN THEORY I**

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.

**MUSC 1035** **1 CREDIT**  
**AURAL THEORY I**

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.

**MUSC 1040** **3 CREDITS**  
**WRITTEN THEORY II**

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.

**MUSC 1045** **1 CREDIT**  
**AURAL THEORY II**

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.

**MUSC 1051** **1 CREDIT**  
**APPLIED MUSIC INSTRUCTION I**

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.

**MUSC 1052** **1 CREDIT**  
**APPLIED MUSIC INSTRUCTION II**

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.

**MUSC 1150** **1 CREDIT**  
**GUITAR I**

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.

**MUSC 1290** **1 CREDIT**  
**ELEMENTARY CLASS PIANO I**

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.

**MUSC 1295** **1 CREDIT**  
**ELEMENTARY CLASS PIANO II**

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.

**MUSC 1310** **1 CREDIT**  
**PUBLIC SCHOOL METHODS: BRASS I**

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.

**MUSC 1315** **1 CREDIT**  
**PUBLIC SCHOOL METHODS: BRASS II**

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.

**MUSC 1320** **1 CREDIT**  
**PUBLIC SCHOOL METHODS: PERCUSSION I**

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 SYMPHONY**

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 CHAMBER 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 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 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.

**MUSC 1480** **1 CREDIT**  
**STRING ENSEMBLE**

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.

**MUSC 2000** **3 CREDITS**  
**INTRODUCTION TO CONDUCTING**

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.

**MUSC 2024** **3 CREDITS**  
**WORLD MUSIC**

Students develop strategies for listening to the sounds of various musical cultures, including Africa, Asia, Indonesia, India, and Eastern Europe, among others. Students analyze the context of musical expressions around the world and interpret the meaning of music through complex networks of signification (i.e. race, ethnicity, socioeconomic identity, religion, etc.).

**MUSC 2030** **3 CREDITS**  
**WRITTEN THEORY III**

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.

**MUSC 2035** **1 CREDIT**  
**AURAL THEORY III**

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.

**MUSC 2040** **3 CREDITS**  
**WRITTEN THEORY IV**

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.

**MUSC 2045** **1 CREDIT**  
**AURAL THEORY IV**

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.

**MUSC 2050** **3 CREDITS**  
**MUSIC HISTORY SURVEY I**

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.

**MUSC 2055** **3 CREDITS**  
**MUSIC HISTORY SURVEY II**

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.

**MUSC 2060** **1 CREDIT**  
**JAZZ IMPROVISATION I**

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.

**MUSC 2065** **1 CREDIT**  
**JAZZ IMPROVISATION II**

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.

**MUSC 2071** **1 CREDIT**  
**APPLIED MUSIC INSTRUCTION III**

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.

**MUSC 2072** **1 CREDIT**  
**APPLIED MUSIC INSTRUCTION IV**

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.

**MUSC 2150** **1 CREDIT**  
**GUITAR II**

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.

**MUSC 2290** **1 CREDIT**  
**ELEMENTARY CLASS PIANO III**

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.

**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**

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 health 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**

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 health care 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**

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**

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**  
**INTRODUCTION 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 0970 and ENGL 0810 or equivalent placement test score.

**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 test score.

**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 test score.

**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 test score.

**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 test score.

## **Physical and Health Education – PE Activities**

**PEAC 1006** **1 CREDIT**  
**WEIGHT FREE WORKOUT**

Students learn and practice weight-free exercises which increase the student's muscular strength, muscular endurance, flexibility, and cardiorespiratory endurance levels.

**PEAC 1007** **1 CREDIT**  
**FITNESS CHALLENGE**

Students learn full body workouts consisting of a warm up, speed and agility, cardio intervals, resistance training, plyometrics, core stabilization, and flexibility exercises. Through the workouts, students overall fitness levels will be enhanced.

**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 1013** **1 CREDIT**  
**FUNCTIONAL FITNESS**

Students increase core strength and conditioning by addressing their cardiorespiratory endurance, stamina, strength, flexibility, power, speed, coordination and agility. Students perform multiple, diverse, and randomized physical challenges. Students develop the basic foundation of physical skills, diet, metabolic conditioning, and weight lifting.

**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 1023** **1 CREDIT**  
**HIKING**

An introductory course teaching the fundamental skills of hiking. The student recognizes safety and seasonal considerations associated with hiking. Student practices hiking preparedness, leadership, wilderness safety, leave-no-trace principles, and basic survival. The student is challenged to assess, analyze and solve a variety of situations with limited resources. Students hike a variety of trails in Laramie County and surrounding areas.

**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 1037** **1 CREDIT**  
**FITNESS WALKING**

Students learn the proper techniques, equipment, and health benefits associated with fitness walking. Student learn various types of walking routines and develop an individualized walking program.

**PEAC 1044** **1 CREDIT**  
**BEGINNING TAE KWON DO**

Students learn the Korean martial art of Tae Kwon Do. Students learn self-discipline, self-confidence, weight control, respect, courtesy, and the art of self-defense. Students demonstrate skills of blocking, punching, kicking, one-step sparring, free sparring, and self-defense stances. Students test for a yellow belt in Tae Kwon Do.

**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 1050** **1 CREDIT**  
**BEGINNING TENNIS**

Students acquire knowledge of the rules, terminology, and skills for the sport of tennis. By successfully completing the course, the student develops the fundamental skills to continue with tennis as a lifetime activity.

**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 1246** **1 CREDIT**  
**THERAPEUTIC RELAXATION**

Students learn the basic principles and techniques of massage, stress reduction, lifestyle relaxation, breathing techniques, and stress management.

**PEAC 1250** **1 CREDIT**  
**ARCHERY**

Students apply the basic techniques of indoor and outdoor target archery emphasizing the care and use of equipment, range safety, stance and shooting techniques, scoring and competition. Students practice and develop appropriate motor skills to allow them to successfully participate and utilize archery as a lifetime leisure activity.

- PEAC 1255** **1 CREDIT**  
**BEGINNING GOLF**  
 Students learn golf rules, etiquette, terminology, and playing strategies. They practice and develop appropriate skills to allow them to successfully participate in golf as a lifetime leisure activity.
- PEAC 1257** **1 CREDIT**  
**BEGINNING RACQUETBALL**  
 Students apply basic skills, rules, and strategies of racquetball. Students practice and develop appropriate skills to allow them to successfully participate in racquetball as a lifetime activity.
- PEAC 1260** **1 CREDIT**  
**BEGINNING VOLLEYBALL**  
 Students apply knowledge of rules, terminology and play strategies for volleyball. Students also practice and develop appropriate motor skills to allow them to successfully participate in volleyball as a lifetime activity.
- PEAC 1261** **1 CREDIT**  
**BEGINNING SOCCER**  
 Students apply knowledge of rules, terminology, and play strategies for soccer. Students also practice and develop appropriate motor skills to allow them to successfully participate in soccer as a lifetime activity.
- PEAC 1263** **1 CREDIT**  
**BEGINNING BASKETBALL**  
 Students apply rules, terminology, and play strategies of basketball. Students also practice and develop appropriate motor skills to allow them to successfully participate in basketball as a lifetime leisure activity.
- PEAC 1273** **1 CREDIT**  
**HEAVY RESISTANCE CONDITIONING**  
 Students demonstrate proper lifting and spotting techniques for the strength and conditioning of the body's major muscle groups. Students develop, implement, and modify a resistance training program geared to their specific goals.
- PEAC 1287** **1 CREDIT**  
**ROCK CLIMBING**  
 Students acquire skills in safety, knot tying, rope handling, climbing, belaying techniques, climbing signals, bouldering, and rappelling. Students begin with indoor climbs and progress to outdoor climbs at local outdoor sites.
- 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 1301** **1 CREDIT**  
**INTRODUCTION TO BALLROOM DANCE**  
 Students apply elementary principles and techniques in social ballroom dance patterns. Students develop the ability to perform basic movement patterns and analyzing music as it relates to ballroom and social dance.
- PEAC 1560** **1 CREDIT**  
**BEGINNING ORIENTEERING**  
 Students learn various types of orienteering and proper orienteering techniques such as compass skills, map reading, and cross country travel. Students apply basic fitness skills while practicing the fundamentals of map and compass utilization with an emphasis on topographic map interpretation and field navigation techniques. In addition to the standard orienteering compass, students use the Global Positioning System to navigate.
- 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**  
**ADVANCED 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 approval required.
- PEAC 2086** **1 CREDIT**  
**CAMPING ADVENTURES**  
 The ultimate goal of the course is to develop sophisticated, knowledgeable campers who are capable of outdoor camping, for any reasonable length of time, with the confidence to safely enjoy the experience. Emphasis is on personal fitness, prevention and treatment of common camping injuries, and setting up and enjoying an environmentally safe camp. Students plan and organize a two-night/three-day camping trip.
- PEAC 2087** **1 CREDIT**  
**RAFTING ADVENTURES I**  
 A beginning/intermediate-level course introducing students to basic river running. After being introduced to basic river-running techniques and safety issues, students complete a two-day, combination float/white water rafting trip.
- PEAC 2098** **1 CREDIT**  
**INTERMEDIATE SNOWSHOEING**  
 This is the second course in a two-course series. Students build upon skills learned in PEAC 1298, Snowshoeing including selection of proper clothing, footwear, and snowshoe equipment. Students learn 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 use backcountry navigation techniques. Prerequisite: Completion of PEAC 1098 or instructor approval.
- PEAC 2161** **1 CREDIT**  
**ADVANCED 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 approval required.
- PEAC 2163** **1 CREDIT**  
**ADVANCED 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 approval required.
- PEAC 2172** **1 CREDIT**  
**ADVANCED VOLLEYBALL II**  
 This course is a continuation of Advanced Volleyball. Students examine strength training principles specific to the sport of volleyball. Students develop individual skills unique to the sport of volleyball. Prerequisite: Instructor approval required.

**PEAC 2262** **1 CREDIT**  
**ADVANCED SOCCER II**

This course is a continuation of Advanced Soccer. Students examine strength training principles specific to the sport of soccer. Students develop individual skills unique to the sport of soccer. Prerequisite: Instructor approval required.

**PEAC 2263** **1 CREDIT**  
**ADVANCED BASKETBALL II**

This course is a continuation of Advanced Basketball. Students examine strength training principles specific to the sport of basketball. Students develop individual skills unique to the sport of basketball. Prerequisite: Instructor approval required.

## **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 OF 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** **1 CREDIT**  
**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**  
**ORTHOPEDECS**

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 the 280-hour clinical 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 the 280-hour clinical at an affiliate site that provides physical therapy services. 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. Student receiving credit for PHYS 1110 cannot receive credit for PHYS 1050 or PHYS 1310. Prerequisite: Completion of MATH 0980 or MATH 0990 or placement at MATH LEVEL II (or higher) and completion of ENGL 0810 (or placement at a READING LEVEL III (or higher) or at a WRITING LEVEL II (or higher)).

**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 test score.

**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 test scores.

**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 spring 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 test score.

**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. Typically offered in fall semester only. Students receiving credit for PHYS 1320 cannot receive credit for PHYS 1050 or PHYS 1120. Prerequisite: Completion of PHYS 1310 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**

An introductory course in the organization and structure of the national and state governments. 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 or concurrent enrollment in ENGL 1010.

### **POLS 1005 1 CREDIT**

#### **COMPUTER APPLICATIONS IN POLITICAL SCIENCE**

Students examine issues related to data production and analysis in areas related to government and politics including the legislative, executive and judicial branches, public opinion and voting behavior. Prior knowledge of computers is not necessary. Corequisite: Concurrent enrollment in POLS 1000.

### **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 2070 3 CREDITS**

#### **POLITICS OF STATE AND LOCAL GOVERNMENT**

Students analyze recent developments in American state and local politics. They are encouraged to explore how the policy-making process at the city-county level interacts with politics at the state level. Students research specific Wyoming political issues. Because many political science instructors require research papers, ENGL 1010 or its equivalent is strongly recommended. Prerequisite: Completion of POLS 1000.

### **POLS 2128 3 CREDITS**

#### **TERRORISM**

Students complete an historical overview of terrorism and formulate answers to the questions: What is terrorism? Who or what perpetrates terror? What are the motives and intentions of terrorists? Students develop a vocabulary and conceptual toolkit to understand terrorism domestically and internationally. Students examine political and religious fundamentalism, some of the cultural actors who played key roles in current movements, and the effects of these issues on individuals. They explore how social scientific tools can be used to understand conflict. Finally, students consider America's war on terrorism and world politics. Prerequisite: Completion of POLS 1000 or instructor approval. There is a substantial writing component, completion of ENGL 1010 is highly recommended.

### **POLS 2310 3 CREDITS**

#### **INTRODUCTION 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**  
**INTRODUCTION 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**  
**GOVERNMENT 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 test score.

**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: Completion of PSYC 1000 and STAT 2050 or STAT 2060 or STAT 2070.

**PSYC 2080** **3 CREDITS**  
**PSYCHOBIOLOGY**

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 relate in detail healthy and impaired brain function to behavior. Topics include neural transmission, nervous system organization, sensation, perception, sleep, learning, memory, language, emotion, thirst, hunger cognition, movement, drug effects on behavior, consciousness, psychological disorders, and brain disorders. 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 how psychoactive substances affect behavior, including both psychotherapeutic agents and 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. Development theory, research findings, and applications to current issues in child psychology are addressed. 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 PSYC 1000 and ENGL 1010, or instructor approval.

**PSYC 2340** **3 CREDITS**  
**ABNORMAL PSYCHOLOGY**

This course provides a general overview of abnormal behavior, emphasizing types, etiology and treatment methods. Students demonstrate an understanding and are capable of describing and discussing facts, principles, and concepts that are basic to a scientific understanding of mental disorders. Students demonstrate an understanding of the behavioral, biological, cognitive, genetic, and social contributions and aspects of mental disorders as well as the psychological and psychopharmacological treatments that have been shown to be effective for the specific mental disorders. Prerequisite: Completion of PSYC 1000 and ENGL 1010.

**PSYC 2380** **3 CREDITS**  
**SOCIAL PSYCHOLOGY**

Students demonstrate an understanding of 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.

## 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, reading placement test score at Level III, demonstrated competency to enter into ENGL 1010, and MATH 1070 or MATH 1400 or equivalent placement test score.

### **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 anthrography, 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.

## Religious Studies

**RELI 1490** **3 CREDITS**  
**TOPICS: INTRO TO RELIGION**

Students study major religious ideas and development, from ancient times to our contemporary world. Students analyze major religious movements throughout world history and examine the impact of religious beliefs and structures on the political, literary, cultural and social dimensions of society. Prerequisites: ENGL 0810 or equivalent placement test score for ENGL 1010.

**RELI 2080** **3 CREDITS**  
**HOLOCAUST**

Students examine the background of European anti-Semitism, the rise of the Nazi Party, the origins of the Second World War, and the events that led to the destruction of European Jewry. Students trace those events and perceptions that allowed the Holocaust to emerge, particularly the development of racial anti-Semitism and religious anti-Judaism. Students explore Christian perspectives and actions, including the behavior and teachings of the church, its leaders and lay members during the Holocaust. Students explore the religious motivations for the extraordinary courage displayed by Christians who risked their lives to save Jews. Students assess the politics behind the Holocaust and how World War II affected Jews throughout Europe. Cross-listed with HIST 2080 Holocaust. Prerequisite: Completion of ENGL 0810.

## Sheetmetal Apprentice

**SMAP 1910** **3 CREDITS**  
**SHEETMETAL APPRENTICE I**

Provide students with the job skills necessary to enter, remain or advance as a member of the local sheetmetal workforce.

**SMAP 1920** **3 CREDITS**  
**SHEETMETAL APPRENTICE II**

Provide students with the job skills necessary to enter, remain or advance as a member of the local sheetmetal workforce.

**SMAP 1930** **3 CREDITS**  
**SHEETMETAL APPRENTICE III**

Provide students with the job skills necessary to enter, remain or advance as a member of the local sheetmetal workforce.

**SMAP 1940** **3 CREDITS**  
**SHEETMETAL APPRENTICE IV**

Provide students with the job skills necessary to enter, remain or advance as a member of the local sheetmetal workforce.

**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.

## Social Work

**SOWK 2000** **3 CREDITS**  
**INTRODUCTION 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 score.

## 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 test score.

**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 SPAN 1010 or equivalent course.

**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 class discussion. Ten 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 learn the fundamentals of anatomy, physiology and neurology related to speech production and hearing in a lab setting. Systems reviewed include respiration, phonation, articulation, resonance, hearing and neurological. Prerequisite: Instructor approval required.

**SLPA 1505** **3 CREDITS**  
**INTRODUCTION TO SPEECH AND**  
**LANGUAGE DEVELOPMENT**

Students explore normal speech and language development. Topics include communication development and differentiation of normal from disordered communication. Students also examine hearing development, literacy development and language diversity. Prerequisite: Instructor approval required.

**SLPA 1506** **3 CREDITS**  
**INTRODUCTION TO PHONETICS**

Students are introduced to the articulatory foundations of the description and classification of speech sounds. Students review the International Phonetic Alphabet (IPA), physiological properties of the speech mechanism, methods of transcription and dialectal variations. 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 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 and combines on-site observations with class discussion and demonstrations. Student placements 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. Prerequisite: Completion of SLPA 1502.

**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**  
**ARTICULATION/PHONOLOGY DISORDERS & INTER**

Students discriminate between articulation and phonological disorders and identify therapy 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 1511.

**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 with low-incidence populations (such as craniofacial anomalies, TBI, Cerebral Palsy, genetic and metabolic disorders, Autism Spectrum Disorder, and syndromes). Prerequisite course: SLPA 1511

**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 2520.

**SLPA 2601** **2 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 1500.

**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, computer applications, multicultural issues, and behavior management. Completion of SLPA 2502.

**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 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 test score and MATH 1380 or higher, or equivalent placement test score for MATH 1405.

### **STAT 2050 4 CREDITS FUNDAMENTALS OF STATISTICS**

This course involves a study of statistical concepts used in biological sciences. Students identify types of data and their appropriate descriptive and inferential statistics; calculate and interpret descriptive measures for datasets; 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 bioscience 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 test score and MATH 1380 or higher, or equivalent placement test score for MATH 1405.

### **STAT 2070 4 CREDITS INTRODUCTORY STATISTICS FOR THE SOCIAL SCIENCES**

Students apply statistical concepts used in social science 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 social science 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 MATH 1000 or higher or equivalent placement test score for MATH 1400 and ENGL 1010.

## 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**

Students are introduced 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. Prerequisite: Acceptance into the surgical technology program.

### **SURG 1610 4 CREDITS SURGICAL TECHNOLOGY THEORY**

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 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. Students also develop critical thinking competence in aseptic practice by identifying analyzing, and correcting errors in sterile technique. 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. 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 postoperative 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 1620 and SURG 1685. Corequisite: Concurrent enrollment in SURG 1850.

**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: Completion of SURG 2750 and SURG 2810. Corequisite: Concurrent enrollment in SURG 2895.

**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: Completion of SURG 2750 and SURG 2810. Concurrent enrollment in SURG 2850.

## 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 test score.

**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.

**THEA 1475** **3 CREDITS**  
**INDEPENDENT STUDIES**

**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. May be repeated for up to four times for credit.

**THEA 2010** **3 CREDITS**  
**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**  
**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**  
**INTRODUCTION TO STAGE MAKE-UP**  
Introduction to 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 test score.

**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 turning energy from the wind into electricity. Students explore the history and projected future of producing energy from the wind. Students identify the various scales of wind turbines, design types, and their major subcomponents. Students perform a general analysis of sites where wind turbine installation is developing, along with analyzing federal and state policy regarding the production of power from large- and small-scale wind turbines.

**WTT 1100** 2 CREDITS  
**CLIMB SAFETY AND TOWER RESCUE TRAINING**

Students identify the safety hazards associated with wind turbine maintenance activities. They also explain and demonstrate the safe practices required to mitigate those hazards and respond to tower rescue situations. (S/U grade only)

**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 will be placed 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 analyze, troubleshoot, and document critical wind turbine generator systems. Students perform systems analysis and diagnostics evaluation to develop solutions based on given data. Students also 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 submit written corrections for inaccuracies. Students perform preventive maintenance procedures on an operational wind turbine generator. 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 the resultant data and control/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 1380 or higher, 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 1380 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 with a grade of C or higher.

# Administration and Full-Time Faculty

**Kristin Abraham**, Instructor, English; BA, Central Michigan University; MFA, West Virginia University

**Danielle Adams**, Instructor, Accounting/Business; AS, Laramie County Community College; BS, MS, University of Wyoming

**Melissa Adkins**, Instructor, Mathematics; BS, Emporia State University; MS, PhD, Colorado State University

**Margaret Albert**, Instructor, Zoology/Biology; BS, University of Wyoming; DVM, Colorado State University

**Megan Alsop**, Interim Instructor, Nursing/Clinical & Simulation Coordinator; BSN, University of West Florida

**William Amick**, Program Coordinator, Computer Information Systems; BS, Indiana State University; BS, MS, Western Governor's University

**Teresa Authier**, Librarian; BA, University of Wyoming; MSIS, University of North Texas

**Paula Badgett**, Librarian; BA, University of Utah; MLIS, University of Washington

**Kim Bender**, Associate Vice President, Institutional Effectiveness; BS, University of Mary; MA, PhD, University of Oklahoma

**Robert Benning**, Instructor, Auto Body Repair; Diploma, AOS, Wyoming Technical Institute; AAS, Laramie County Community College; Master Collision Repair Technician, National Institute for Automotive Service Excellence

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**Amanda Brown**, Instructor, Psychology; M.S. Counselor Education, University of Wyoming (UW); B.A. Psychology, Chadron State College (CSC); B.S. Biology: Human Anatomy, Chadron State College (CSC); A.S. Chemistry, Laramie County Community College (LCCC)

**Kari Brown-Herbst**, Director, Center for Excellence in Teaching; BA, Kalamazoo College; MAE, Marian College

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**Francis Cook**, Instructor, Instrumental Music; BA, MA, Ithaca College; PhD, University of Northern Colorado

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**Brandon Geisler**, Instructor, HVAC; Certificates in advanced and basic HVAC, Laramie County Community College

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- Jeffrey Shmidl**, Instructor, Economics/Finance; AS, Casper College; BS, MSF, MSE, University of Wyoming
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- Matthew West**, Instructor, Art; BFA, Rochester Institute of Technology; MFA, Southern Illinois University
- Melissa Williams**, Instructor, Mathematics; MS, University of Rhode Island; BA, Eastern Connecticut State University
- Bryan Wilson**, Dean, School of Math & Sciences; AS, Laramie County Community College; BS, MS, University of Wyoming
- Monica Wilson**, Instructor, Mathematics; AA, Portland Community College; BA, MA, Oregon State University
- Adam Winn**, Instructor, Adult Basic Education; AA, AS, Laramie County Community College; BA, LaRocha College
- Marie Yearling**, Instructor, Microbiology; BS, Ohio University; PhD, Colorado State University
- Melanie Young**, Instructor, English; BA, MA, University of Northern Colorado
- Shannon Zavorka**, Instructor, Statistics; BA, MS, PhD, University of Northern Colorado
- Jermyn Zink**, Director, Physical Plant; AAS, Community College of the Air Force; BS, Wayland Baptist University; MBA, Trident University
- David Zwonitzer**, Instructor, English/Philosophy; BA, MA, University of Northern Colorado

# Managerial, Professional and Classified Staff

- Pamela Adams**, Assistant, Administrative II
- Darla Albright**, Associate Teacher
- Jose Arenas**, Assistant Coach, Men's Soccer
- Kristian Arnusch**, Specialist, Operations
- Marina Asbel**, Teacher
- Robert Baker**, Specialist, HR Development & Training
- La Rita Balken**, Specialist, Grounds I
- Janine Bangerter**, Assistant, Executive Admin I
- Alexandria Barker**, Representative, Admissions
- Joshua Barrere**, Specialist, Systems & Technology Support
- Natalie Basolo**, Specialist, Student Services
- Dianne Bath**, Advisor, Academic
- Michelle Beahm**, Technician, Accounting I
- Robert Beckman**, Technician, Physical Plant (Temporary)
- Terry Benson**, Custodian I
- Shauna Best**, Technician, Accounting I
- Timothy Bjornson**, Administrator, SQL Database
- Vicki Boreing**, Assistant, Executive Admin III
- Suzann Briggs**, Custodian I
- Tamatha Brue**, Associate Teacher
- Amy Brumfield**, Advisor, Academic
- Jesse Brumfield**, Advisor, Academic
- Ken Bunya**, Director, Systems & Technology Support
- Natalie Burgess**, Assistant, Administrative I
- Gary Carlson**, Custodian II
- Kimberly Castaneda**, Assistant, Administrative II
- Janice Cheever**, Specialist, Technical Skill Training
- Kim Cisler**, Assistant, Administrative I
- Andrea Clubb**, Coordinator, Disability Services
- Keri Coats**, Head Coach, Women's Volleyball
- Colby Collier**, Custodian II
- Terry Cook**, Manager, F.E. Warren Air Force Base
- Edith Cox**, Manager, Application Support
- Caitlin Cox**, Advisor, Academic
- Mark Crase**, Manager, Facilities Operations
- James Crosby**, Director, Campus Safety
- Shelly Cruz**, Custodian I
- Stephen Crynes**, Director, Student Success
- Carolyn Cuestas**, Technician, Library Services
- Cathy Curtis**, Assistant, Administrative I
- Judy Cuthbertson**, Associate Teacher
- Jonathan Dachel**, Technician, Architectural
- Christine DeBruyn**, Associate Teacher
- Pamela DeMartin**, Supervisor, Accounting & Payroll
- Jennifer Dempsey**, Director, Learning Commons
- Melissa Dishman**, Coordinator, Scholarships & Annual Giving
- Cynthia Downey**, Associate Teacher
- Raymond Dykstra**, Custodian II
- Richard Evelo**, Manager, Grounds Maintenance
- Bobby Farnes**, Supervisor, Trades Technicians
- Allison Felker**, Counselor
- Marcus Felker**, Coordinator, GEAR UP
- Candace Ferrall**, Proctor, Exam Lab
- Jason Ficca**, Head Coach, Men's Basketball
- Alan Fitch**, Specialist, Grounds II
- Jessica Ford**, Coordinator, Student Success
- Kimberly Freimuth**, Assistant, Executive Admin I
- Melissa Gallant**, Specialist, Facilities & Events
- William Gallatin**, Safety Officer
- Shayne Gancze**, Technician, Audiovisual I
- Ashley Garcia**, Teacher
- James Gardner**, Head Coach, Women's Soccer
- Julie Gerstner**, Analyst, Business
- Vince Gibson**, Head Coach, Men's Soccer
- Scot Gillespie**, Custodian I
- Seth Glause**, Head Coach, Rodeo
- Christie Goertel**, Manager, Life Enrichment
- Katie Gooch**, Specialist, Student Services
- Ricky Gould**, Custodian I
- Kellie Green-Kashin**, Coordinator, Eastern Laramie County
- Marie Gulizia**, Custodian I
- Tiffany Gutierrez**, Assistant, Administrative I
- Rakhshi Hamid**, Director, Center for Secondary Students
- Sarah Hannes**, Director, Admissions
- Danny Harris**, Technician, HVAC/R
- Gabrielle Hartog**, Specialist, Student Services
- Kallinda Henderson**, Custodian I
- Loretta Henry**, Technician, Campus Printing II
- Linda Herget**, Specialist, Library Public Services
- Ezekiel Hernandez**, Custodian I
- Elizabeth Hewitt**, Advisor, Academic
- Robert Hing**, Specialist, Systems & Technology Support
- Jennifer Hooke**, Specialist, HR Information Systems
- Bryon Hopper**, Specialist, Mail/Warehouse
- Krista Howe**, Advisor, Academic
- Taylor Hunt**, Coordinator, GEAR UP
- Sierra Huston**, Interim Associate Teacher
- Rachel Hutchens**, Safety Officer
- Elizabeth Ivie**, Assistant, Administrative III
- Marvin Jackson**, Custodian I
- Danielle Jensen-Ryan**, Analyst, Research
- Nicole Johnson**, Associate Teacher
- Sheri Johnson**, Assistant, Executive Admin I
- Patricia Johnson**, Teacher
- Darlene Kaelin**, Assistant, Administrative III
- Michelle Kallhoff**, Assistant, Executive Admin I
- Adam Keizer**, Coordinator, Career Services
- Laura Kelley**, Associate Teacher
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- Timothy Kochery**, Designer, Instructional II
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- Stacy Landon**, Technician, Library Services

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