

*Catalog*  
*2014-2015*

LARAMIE COUNTY COMMUNITY COLLEGE





# Laramie County Community College

## Catalog 2014-2015

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**Serving Southeast Wyoming**

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# LCCC Calendar 2014-2015

## Fall Semester 2014

### Apr. 14-Aug. 24 Registration

August 1	Payment Due Date for Early Fall Registration (after this date, payment is due upon registration)
August 11	Administrative Withdrawal for Nonpayment
August 18-22	Faculty Development/College Inservice and Advising
August 22	Administrative Withdrawal for Nonpayment
<b>August 24</b>	Last Day to Register <b>A Block (A16, A12, A8)</b>
<b>August 25</b>	Fall Semester <b>A Block (A16, A12, A8 week)</b> Classes Begin (Monday through Friday) Cheyenne /Albany County Campuses
<b>August 29</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>A8</b> )
Aug. 30-31	Saturday and Sunday Classes Do Not Meet This Weekend Prior to Labor Day
Sept. 1	Labor Day (college closed)
<b>Sept. 3</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>A12</b> )
<b>Sept. 7</b>	Last Day to Register <b>B Block (B14)</b>
<b>Sept. 8</b>	First Day of Classes ( <b>B14</b> )
<b>Sept. 8</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>A16</b> )
<b>Sept. 8</b>	End of 50% Refund Period ( <b>A8</b> )
Sept. 9	First Financial Aid Disbursement
<b>Sept. 10</b>	End of 50% Refund Period ( <b>A12</b> )
<b>Sept. 15</b>	End of 50% Refund Period ( <b>A16</b> )
<b>Sept. 18</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>B14</b> )
<b>Sept. 21</b>	Last Day to Register <b>B Block (B12)</b>
<b>Sept. 22</b>	First Day of Classes ( <b>B12</b> )
<b>Sept. 25</b>	End of 50% Refund Period ( <b>B14</b> )
<b>Sept. 29</b>	Last Day to Withdraw ( <b>A8</b> )
<b>Sept. 30</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>B12</b> )
Oct. 3	Deadline to Turn In Graduation Applications
<b>Oct. 7</b>	End of 50% Refund Period ( <b>B12</b> )
<b>Oct. 13</b>	Last Day to Register <b>B Block (B8)</b>
<b>Oct. 14</b>	Last Day to Withdraw ( <b>A12</b> )
<b>Oct. 17</b>	Last Day of Classes ( <b>A8</b> )
<b>Oct. 20</b>	First Day of Classes ( <b>B8</b> )
<b>Oct. 24</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>B8</b> )
<b>Oct. 31</b>	Last Day to Withdraw ( <b>A16</b> )
<b>Oct. 31</b>	End of 50% Refund Period ( <b>B8</b> )
Nov. 4	Advising and Faculty Connections/Planning Day – No Classes
<b>Nov. 5</b>	Last Day to Withdraw ( <b>B14</b> )
<b>Nov. 11</b>	Last Day to Withdraw ( <b>B12</b> )
Nov. 11	First Day of Spring Registration for Currently Enrolled Students
<b>Nov. 14</b>	Last Day of Classes ( <b>A12</b> )
Nov. 18	First Day of Open Registration for Spring
<b>Nov. 24</b>	Last Day to Withdraw ( <b>B8</b> )
Nov. 26-30	Thanksgiving Holiday (college closed)
Dec. 1	Classes Resume
Dec. 6	Saturday Exam Day
Dec. 8-12	Final Exam Period
<b>Dec. 12</b>	Last Day of Fall Semester ( <b>A16, B14, B12, B8</b> )
Dec. 15	Grading Day (Grades Due by 12 noon)
Dec. 24-Jan. 4	Winter Break (college closed)

## Spring Semester 2015

### Nov. 11-Jan. 19 Registration

Dec. 24-Jan. 4	Winter Break/New Year's Day Holiday (college closed)
Jan. 5	Registration Resumes
Jan. 5	Payment Due Date for Early Spring Registration (after this date, payment is due upon registration)
Jan. 9	Administrative Withdrawal for Nonpayment
Jan. 12-16	College Inservice and Advising
Jan. 19	Martin Luther King/Equality Day (college closed)
<b>Jan. 19</b>	Last Day to Register <b>A Block (A16, A12, A8)</b>
<b>Jan. 20</b>	Spring Semester <b>A Block (A16, A12, A8)</b> Classes Begin (Monday through Friday) Cheyenne/Albany County Campuses
<b>Jan. 26</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>A8</b> )
<b>Jan. 28</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>A12</b> )
<b>Feb. 1</b>	Last Day to Register <b>B Block (B14)</b>
<b>Feb. 2</b>	First Day of Classes <b>B Block (B14)</b>
<b>Feb. 2</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>A16</b> )
<b>Feb. 2</b>	End of 50% Refund Period ( <b>A8</b> )
Feb. 3	First Financial Aid Disbursement
<b>Feb. 4</b>	End of 50% Refund Period ( <b>A12</b> )
<b>Feb. 9</b>	End of 50% Refund Period ( <b>A16</b> )
<b>Feb. 12</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>B14</b> )
<b>Feb. 13</b>	Midterm ( <b>A8</b> )
Feb. 13	Deadline to Turn In Graduation Applications
<b>Feb. 15</b>	Last Day to Register <b>B Block (B12)</b>
<b>Feb. 16</b>	First Day of Classes ( <b>B12</b> )
<b>Feb. 19</b>	End of 50% Refund Period ( <b>B14</b> )
<b>Feb. 23</b>	Last Day to Withdraw ( <b>A8</b> )
<b>Feb. 24</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>B12</b> )
<b>Feb. 27</b>	Midterm ( <b>A12</b> )
<b>March 3</b>	End of 50% Refund Period ( <b>B12</b> )
<b>March 13</b>	Midterm ( <b>A16</b> )
<b>March 13</b>	Last Day of Classes ( <b>A8</b> )
March 14-15	Saturday and Sunday Classes Meet this Weekend
March 16-22	Spring Break No Classes (college services available Monday through Thursday)
<b>March 16</b>	Last Day to Register <b>B Block (B8)</b>
March 20	College Closed Friday
March 23	Classes Resume
<b>March 23</b>	Last Day to Withdraw ( <b>A12</b> )
<b>March 23</b>	First Day of Classes ( <b>B8</b> )
<b>March 27</b>	Midterm ( <b>B14</b> )
<b>March 31</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>B8</b> )
<b>April 3</b>	Midterm ( <b>B12</b> )
<b>April 3</b>	End of 50% Refund Period ( <b>B8</b> )
April 7	Advising and Faculty Connections/Planning Day – No Classes
<b>April 7</b>	Last Day to Withdraw ( <b>A16</b> )
<b>April 12</b>	Last Day to Withdraw ( <b>B14</b> )
<b>April 17</b>	Midterm ( <b>B8</b> )
<b>April 17</b>	Last Day of Classes ( <b>A12</b> )
<b>April 20</b>	Last Day to Withdraw ( <b>B12</b> )

April 21	First Day of Summer and Fall Registration for Currently Enrolled Students
<b>April 27</b>	Last Day to Withdraw ( <b>B8</b> )
April 28	First Day of Open Registration for Summer and Fall
May 9	Saturday Exam Day
May 11-15	Final Exam Period
<b>May 15</b>	Last Day for Spring Semester ( <b>A16, B14, B12, B8</b> )
May 16	Commencement
May 18	Grading Day (Grades Due at 12 noon)

### **Summer Semester 2015** – (May 26-July 31)

#### **April 14-May 31 Registration**

April 14	Summer Financial Aid Applications Available
May 4	Payment Due Date for Early Summer Registration (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 (A10, A8, A5)</b>
<b>June 1</b>	Summer Semester <b>A Block (A10, A8, A5)</b> Classes Begin
June 1	Deadline to Turn in Graduation Applications
<b>June 4</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>A5</b> )
<b>June 5</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>A8</b> )
June 5	College Closed 12:00 – 5:00/No Classes (afternoon only)
<b>June 8</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>A10</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> )
<b>June 14</b>	Last Day to Register for <b>B Block (B8)</b>
<b>June 15</b>	First Day of Classes B Block ( <b>B8</b> )
<b>June 15</b>	End of 50% Refund Period ( <b>A10</b> )
<b>June 17</b>	Midterm ( <b>A5</b> )
<b>June 19</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>B8</b> )
<b>June 21</b>	Last day to Withdraw ( <b>A5</b> )
<b>June 26</b>	Midterm ( <b>A8</b> )
<b>June 26</b>	End of 50% Refund Period ( <b>B8</b> )
<b>July 2</b>	Midterm ( <b>A10</b> )
<b>July 2</b>	Last day of Classes ( <b>A5</b> )
July 3	Independence Day observed (college closed)
<b>July 5</b>	Last Day to Register <b>B Block (B5)</b>
<b>July 6</b>	First Day of Classes ( <b>B5</b> )
<b>July 6</b>	Last day to Withdraw ( <b>A8</b> )
<b>July 9</b>	Last Day to Drop Without Receiving a W on Transcripts and to receive a 100% refund ( <b>B5</b> )
<b>July 10</b>	Midterm ( <b>B8</b> )
July 10	Laramie Jubilee Day (no classes/college closed Albany County Campus only)
<b>July 13</b>	Last Day to Withdraw ( <b>A10</b> )
<b>July 16</b>	End of 50% Refund Period ( <b>B5</b> )
<b>July 20</b>	Last Day to Withdraw ( <b>B8</b> )
July 22	Cheyenne Day (no classes/college closed Cheyenne Campus only)
<b>July 23</b>	Midterm ( <b>B5</b> )
<b>July 24</b>	Last Day of Classes ( <b>A8</b> )
<b>July 27</b>	Last Day to Withdraw ( <b>B5</b> )
<b>Aug. 7</b>	Last Day of Summer Classes ( <b>A10, B8, B5</b> )
Aug. 10	Grades Due by 9 a.m.

# 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.

Carol Merrell, Chair (2014)  
 Kevin Kilty, Vice Chair (2014)  
 William Dubois, Secretary (2016)  
 Edwin Mosher, Treasurer (2016)  
 Don Erickson (2016)  
 Brenda Lyttle (2014)  
 Christine Lummis (2016)

## 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.

### **2014 LCCC Foundation Board of Directors**

George McIlvaine, President  
 Anna Marie Hales, Vice President  
 Stig Hallingbye, Secretary  
 Kathy Mawford, Treasurer  
 Joe Schaffer, LCCC President  
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Miriam Abernathy  
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 Carol Merrell, Trustee  
 Edward Prosser  
 Ann Redman  
 Sandra Surbrugg  
 Lee Wagner  
 Molly Williams

### **LCCC Foundation Staff**

Lisa Murphy, Associate Vice President  
 of Institutional Advancement  
 Diane Germond, Accounting and Finance Specialist  
 Brenda Laird, Director of Scholarships and Annual Giving  
 Jawnie Sanders, Administrative Assistant  
 Tucker Stover, Director of Corporate Development  
 and Major Gifts  
 Lisa Trimble, Director of Alumni Affairs  
 and Event Planning

Inquiries concerning the Foundation should be directed to:  
 LCCC Foundation  
 1400 East College Drive  
 Cheyenne, Wyoming 82007  
 307.778.1285  
[www.lcccfoundation.edu](http://www.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/Professional Associations

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

- The Higher Learning Commission of the North Central Association of Colleges and Schools, 230 South LaSalle Street, Suite 7-500, Chicago, IL 60604-1411, 800.621.7440, info@hlcommission.org.
- American Bar Association (ABA), Standing Committee on Legal Assistants, 750 North Lake Shore Drive, Chicago, IL 60611, 312.988.5677.
- 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.
- National Institute for Automotive Service Excellence (ASE), 13505 Dulles Technology Drive, Herndon, VA 22071-3415, 703.742.3800.
- National League for Nursing Accrediting Commission (NLNAC), 3343 Peachtree Road NE, Suite 500, Atlanta, GA 30326, 404.975.5000.
- Wyoming State Board of Nursing, 1810 Pioneer Avenue, Cheyenne, WY 82001, 307.777.7601.
- Commission on Accreditation of Allied Health Education Programs (CAAHEP), 1361 Park Street, Clearwater, FL 33756, 727.210.2350 (Diagnostic Medical Sonography, Emergency Medical Services–Paramedics, and Surgical Technology programs).
- American Wind Energy Association, 1501 M Street, NW, Suite 1000, Washington D.C. 20005

- Commission on Accreditation in Physical Therapy Education (CAPTE), 111 North Fairfax Street, Alexandria, VA 22314-1488, 703.706.3245.
- Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP), 8301 Lakeview Parkway, #111-312, Rowlett, TX 75088, 1.214.703.8445 (Emergency Medical Services–Paramedics program).
- 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:

- North Central Association of Colleges and Schools,
- Council of North Central Community and Junior Colleges,
- American Association of Community Colleges,
- National Association for Student Personnel Administrators,
- Mountain States Association of Community Colleges,
- Rocky Mountain Association of Collegiate Registrars and Admissions Officers,
- American Association of Collegiate Registrars and Admissions Officers,
- Wyoming Admissions Officers,
- Association of College Unions–International,
- National Association for Campus Activities,
- American Association of College and University Housing Officers,
- National Academic Advising Association,
- National Association of Colleges and Employers,
- National Association of Student Financial Aid Administrators,
- Rocky Mountain Association of Student Financial Aid Administrators,
- 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)

Laramie County Community College occupies facilities situated on a 271-acre campus. The site is immediately southeast of Cheyenne. Primary access routes to the college are College Drive, connecting to Interstate 25 west of LCCC, and South College Drive, connecting to Interstate 80 northeast of LCCC. Numerous off-campus facilities are also utilized.

The main campus consists of 21 buildings. Built with financing provided by bond issues approved in 1971, 1979, 1989, and 2006, along with state and federal mineral funds and supplemented by revenue bonds issued through the LCCC Foundation, new facilities have allowed the college to expand many programs and activities.

## Albany County Campus

1125 Boulder Drive, Laramie, Wyoming  
307.721.5138 or 800.522.2993, Ext. 4250 (toll free)

The Albany County Campus (ACC) of LCCC is a full-service campus – extending the lifelong educational opportunities of a community college to the citizens of Albany County. Numerous degree programs, both career/technical and academic/transfer, are available through the ACC. In addition to degree programs, the ACC offers a wide variety of credit courses to help students prepare for college, complete general education requirements, or enrich their personal lives.

The Albany County Campus provides its students with support services similar to those available to the Cheyenne campus students. Counseling services, academic advising, career guidance, adult re-entry assistance, and financial aid information are available. On-site HSEC and placement testing are provided. Student groups are active and plan several activities each semester for students and their families.

The ACC library services are the same as those on the main campus and promote information literacy by offering library research instruction, individualized assistance with online databases and other Internet applications, and interlibrary loan. The ACC Library offers a comfortable space for study and research with easy access to print and online library collections, daily newspapers, popular magazines, the student computer lab, and tutoring services from the Student Success Center. The ACC Library has a rotating McNaughton collection of bestselling fiction and nonfiction books. These popular leased books offer variety and interest without requiring permanent shelf space in the library.

The Student Computing Lab is open and staffed during the same hours as the ACC Library. In addition to 29 computer workstations, a scanner and printer are available. Two more workstations are located in the library study area.

The Student Success Center (SSC) provides LCCC credit students with tutors and resources in the areas of English, math, business, language, and the sciences. Tutoring is provided on either a one-to-one or small group basis.

The Teaching and Learning Center (TLC), which is also housed within the Student Success Center, provides noncredit day and evening instruction in Adult Basic Education (ABE), High School Equivalency certification (HSEC), English for Speakers of Other Languages (ESOL), Compass preparation, Career Readiness Certificate preparation, citizenship preparation, literacy, and functional academic skills. Students may register and begin classes on a 8-week rotation. Programs at the Teaching and Learning Center are designed to help students improve their functional skills in reading, writing, mathematics, English, social studies, science, and computer literacy.

## F. E. Warren Air Force Base Outreach Center

Building 841, 307.773.2113

LCCC is committed to serving the residents of the entire community. Classes are offered at F. E. Warren Air Force Base and are scheduled especially for military personnel. However, civilians of the Warren/Laramie County community may enroll.

Classes are conducted on an accelerated basis. Four eight-week terms are scheduled each academic year with classes scheduled at lunch, twilight, and evening hours. Classes are also scheduled for weekends and for those personnel who are assigned to rotating work schedules.

A full-time LCCC representative works in the F. E. Warren Air Force Base Education Office.

## Eastern Laramie County Outreach Center

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

LCCC is committed to serving Eastern Laramie County residents with classes and programs. Course offerings vary from semester to semester. Offerings include credit, continuing education, personal and professional improvement, life enrichment courses, and ESOL, ABE, and HSEC preparation.

## Residence Halls

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 occurring in the residence halls, plus the convenience of being close to classes and other campus resources.

LCCC's east and north 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 264 students.

The four-person suites in the east and north halls are very 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 and north 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 to have them set up.

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 and 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)

The Ludden Library integrates print and electronic resources, technology, services, and a knowledgeable staff to support the college's curricular and instructional programs. With a physical collection of almost 60,000 items and electronic subscriptions to over 100 research databases, the library strives to meet the research needs of LCCC students.

In addition to providing both on- and off-campus access to resources, the library also provides research and information literacy assistance. Students are encouraged to contact the library with any questions regarding how to access materials remotely, how to find quality information resources, and how to correctly cite and use those resources in their assignments.

The library has 22 public access computer workstations and an additional 20 computers in the Library Instruction Room that are available for use whenever the room is not reserved. Laptops are available for checkout. The library also has photocopy machines, scanners, calculators, laminator, and fax machine.

## Physical Education Complex

Physical Education Building, 307.778.1315

The college has an outstanding physical education facility that is fully equipped to provide a variety of physical education courses and recreational 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.

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

## Student Computer Center

Fine Arts Building, Room 171, 307.778.HELP (4357)

The Student Computer Center is equipped with 40 Pentium 3.06 Ghz computers and 19-inch flat panel monitors for student use. A color laser printer and two black-and-white laser printers also are available to students free of charge. The state-of-the-art equipment provides students with the technology they need to prepare for the future. The center is open seven days a week, and the hours are posted outside the main door.

### 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.

## Multimedia Classrooms

LCCC has created a number of high tech classrooms containing SMARTboard interactive white boards, 2000-lumen projectors, DVD, VCR, sound system, wireless lapel microphones, cassette recorder/player, document projector, computer, laptop station, and a remote wireless touch screen control panel. From this portable panel, the instructor can control all technology, including the lighting, from any point in the room, creating a more flexible learning environment.

## Disability Support Services

Education and Enrichment Center, Rooms 222-223

The Disability Support Services (DSS) provides confidential assistance for students with documented disabilities. In the DSS, students will find services and adaptive equipment to assist with mobility, sensory, and perceptual concerns.

Students who have questions or want to make arrangements for DSS services should call 307.778.1359 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 nondegree-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, Room 117, Student Services 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.

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) and for student concerns contact Judy Hay, Title IX Coordinator, Vice President of Student Services, [jhay@lccc.wy.edu](mailto:jhay@lccc.wy.edu), or for faculty and staff concerns contact Peggie Kresl-Hotz, Title IX Deputy Coordinator, Executive Director of Human Resources, [peggiekreslhotz@lccc.wy.edu](mailto:peggiekreslhotz@lccc.wy.edu).

## Admissions Definitions

- A. Ability to benefit – Students may demonstrate the ability to benefit from college-level work based on the COMPASS or WorkKeys test. Score requirements are available from the Admissions Office.
- B. Accredited – Accredited by one of the regional accrediting bodies.
- C. Degree-seeking student – A student who intends to complete a degree or certificate at Laramie County Community College.
- D. Admission – an admission status that indicates that a student has submitted all necessary paperwork and meets the admission requirements.
- E. New Students – Individuals who have successfully completed fewer than 12 semester hours of college level work at another college, or have never attended a postsecondary institution.
- F. Transfer Students – Individuals who have successfully completed college classes at another regionally accredited postsecondary institution and provided official transcripts as documentation.

## Admissions Categories

LCCC admits the following categories of students:

- A. All applicants who are new to Laramie County Community College or transferring from another college may be admitted if they hold a high school diploma from an accredited high school or successfully completed a AA, AS, AAS degree, or are HSEC recipients.
- B. Applicants who are new to Laramie County Community College and are graduates of a non-accredited high school or home school may be admitted following a review of the applicant's transcript on an individual basis determining that the student has graduated from a legitimate high school or home-school program.
- C. Applicants over the age of 18 who do not meet the criteria in Sections A or B may be admitted as nondegree-seeking students. These applicants may be admitted as special degree-seeking students if they can demonstrate the ability to benefit from college-level work.
- D. Students under the age of 18 who are enrolled in secondary school courses may enroll in credit courses concurrently at LCCC.

## Admissions Process

- A. Students Seeking a Degree or Certificate
  1. New students – To be fully admitted as degree-seeking, all new students are required to submit an application for admission. In addition, applicants must submit official college transcripts if they have taken any college courses prior to applying to Laramie County Community College, or official high school or HSEC transcripts.
  2. Transfer students – To be fully admitted as degree-seeking students, transfer students are required to submit an application for admission and official transcripts from all previous colleges attended. Students who have earned bachelor's or an associate's degree from a regionally accredited college will not be required to submit high school transcripts.
- B. Students Not Seeking a Degree or Certificate
  1. Individuals who are pursuing courses for personal enrichment or professional development and not seeking a degree or certificate will be required to submit an application for admission but will not be required to submit official transcripts.
  2. These individuals will be provided with enrollment privileges and must still provide documentation of meeting course prerequisites via official or unofficial transcripts prior to registration.
  3. Non-degree seeking students will be limited to 6 credits of enrollment per semester unless they complete the full admissions requirements in A above.
- C. LCCC Students Returning after an Absence
  1. 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 to the Student Records Office.
  2. Returning students must resubmit transcripts if they have been away from LCCC for five or more years or if they have taken courses at another postsecondary institution since their last enrollment at LCCC.
- D. Students Changing to Degree-Seeking Status
  1. Students who determine that they would like to change their status to degree- or certificate-seeking will be

required to reapply and submit official high school or HSEC transcripts and official transcripts from each college attended.

- E. Admission to Selective Programs
  1. All students must apply for general admission to LCCC prior to applying to selective programs. See Section A 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 admissions requirements.
- F. Revoking Admission
  1. Admission to LCCC may be revoked for Code of Conduct violations prior to enrollment at the discretion of the Vice President of Student Services.

## 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 Student Records Office declaring means and source of support while attending school in the United States, as required by the United States Citizenship and Immigration Services.
- B. Unless enrolling in an English for speakers of other languages class, 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).

## 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.

- A. This residency policy shall be published in catalogs of the college districts.
  1. A student previously classified as a nonresident may be reclassified any time prior to the end of the published refund period of any term in which he/she qualifies.
  2. A properly registered student, who is classified as a resident by one Wyoming community college, will be considered a resident at all Wyoming community colleges.
- B. Classification Procedures.
  1. Residence classification shall be initiated for each student at the time the application for admission is accepted and whenever a student has not been in attendance for more than one (1) semester.



2. Individuals or their legal dependents, who are U.S. citizens or are in an immigrant status and certain nonimmigrants, may qualify for residency.
  3. Nonimmigrants and their dependents, who possess a valid visa from the U.S. Citizenship and Immigration Services with a classification of Temporary Workers or Intracompany Transferee and eligible for education, may qualify for residency. Eligibility for consideration will be based on the privileges and limitations of the visa held by the applicant.
  4. Community college districts may require applicants to supply information to document residency status.
- C. Residence. Any of the following may be used by a student and would result in an individual being classified or reclassified as a Wyoming resident for tuition purposes:
1. A graduate of a Wyoming high school or recipient of a HSEC in Wyoming who enrolls in a community college within twelve (12) months of either high school graduation or HSEC completion;
  2. An individual who can provide written verification that he/she has lived in Wyoming continuously for one (1) year prior to enrolling;
  3. A legal dependent under the age of 24, or a spouse of a resident of the State of Wyoming who qualifies as a resident based upon this policy;
  4. A legal dependent under the age of 24 of a Wyoming community college graduate;
  5. A student who marries a Wyoming resident shall be granted resident classification at the beginning of the next term following the marriage;
  6. Active Wyoming National Guard members and U.S. Armed Forces members stationed in Wyoming and their dependents;
  7. Members of the U.S. Armed Forces who move to Wyoming within twelve (12) months from the date of honorable discharge from the service;
  8. An individual who can provide written verification from an employer that he/she will be employed in Wyoming for an anticipated period of not less than seven (7) months, and such employment is the principal means of support;
  9. Persons temporarily absent from the state due to military service, attendance at educational institutions, or other types of documented temporary absences will not have their resident status voided by such absence.
- D. Exceptions. In accordance with W.S. 21-17-105, an individual who does not reside in Wyoming may be considered a resident for tuition purposes if he/she meets all of the following criteria:
1. Has been employed in Wyoming for at least seven (7) months, and such employment is the applicant's principal means of support;
  2. Pays Wyoming taxes as required by law;
  3. Resides in a state with a similar law; and
  4. Is willing to submit an affidavit to the above.

## Academic Skills Assessment and Placement Policy

Academic skills assessment and subsequent placement are essential to 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 policy:

- A. All new students unless otherwise exempted (See "Exemptions" below) must undergo basic skills assessment in the areas of reading, writing, and mathematics prior to their initial class registration at LCCC.
- B. Students who lack necessary prerequisite skills for academic requirements of college-level courses must enroll in developmental course work in the applicable areas of reading, writing, and/or mathematics. Students must complete developmental requirements before enrolling in college-level courses that have these skills as prerequisites.
  1. All students wishing to enroll in ENGL 1010 must provide satisfactory evidence of basic writing skills by attaining an English placement test score as defined in the class schedule or a satisfactory grade (S/C or better) in ENGL 0700 or ENGL 1001 or equivalent.
  2. All students wishing to enroll in a college-level math course must provide satisfactory evidence of basic math skills by attaining a math placement test score as defined in the class schedule or a satisfactory grade (S/C or better) in the appropriate developmental math prerequisite course (MATH 0900, 0920, 0921, 0925, or 0930 or equivalent).
  3. Students whose reading assessment test scores are below college level will be limited to those courses for which they have the prerequisite reading level skills. Students whose reading assessment test scores are at level II or lower must enroll in ENGL 0520 during their first semester at LCCC.

### 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. Students who have taken the ACT and scored at the minimum level or higher within the previous two years. Students must provide proof of scores to the Admissions Office.
- B. Students who hold college degrees from a regionally accredited college/university.
- C. The Student Records Office 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 0900, 0920, 0930, 1000, or 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.
  3. Exemption from reading placement exam: Completion of 12 credits of college-level courses, with a grade of C or higher, that are transferable to a program of study at LCCC.
- D. Students who audit courses.

## Registration

### **Student Planning & Success**

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.

Beginning with the Spring semester of 2014:

- all degree-seeking students new to LCCC will be assigned an advisor prior to registering for their first semester and will be contacted regarding an initial meeting;
- through this partnership, advisors and students will share the responsibility for student success that continues throughout the students' time at LCCC;
- advisors will assist students in learning the college academic policies & processes, adopting successful student behaviors, and clarifying goals;
- some students will work closely with faculty mentors as well after their first semester to maximize opportunities in their chosen program of study.

### **Course Load**

Twelve hours constitute a minimum full-time course load, but the normal load for one semester is 16 semester 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. Obtain a drop/add form from the Student Records Office.
2. List courses to be dropped or added. The instructor's and dean's signature is required for adding a course after the first day of class. The school dean's signature is required for dropping a course after the withdrawal date.
3. Return the completed form to the Student Records Office or add and drop via Eagles Eye.

NOTE: A VETERAN MUST CONTACT THE CAMPUS VETERANS OFFICE WHEN ANY CHANGE OF SCHEDULE IS MADE.

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.

## Withdrawal Procedures

In the event a student must withdraw from a course, that student should initiate the process by obtaining a withdrawal form from the Student Records Office and completing it. 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 required to see a financial aid representative 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 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.

## **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 Withdrawals on Financial Aid**

A partial or total withdrawal by a financial aid recipient may impact the student's standing with regard to financial aid satisfactory academic progress standards. To obtain an outline for the financial aid academic progress standards, contact the Financial Aid Office. A total withdrawal will result in a recalculation of the student's financial aid eligibility. Please refer to the section titled Return to Title IV Funds for Federal Financial Aid Recipients.

## Tuition and Fees

Tuition and student fees are for the academic year 2014-2015. Tuition and fees are subject to change. Please check the website for current rates.

### **Wyoming Resident** (12 or more hours)\*

Tuition .....	\$ 996.00 a semester
Student Fees .....	\$ 420.00 a semester
Total .....	\$1,416.00 a semester

### **Out-of-State Student** (12 or more hours)\*

Tuition .....	\$2,988.00 a semester
Student Fees .....	\$ 420.00 a semester
Total .....	\$3,408.00 a semester

## WUE (Western Undergraduate Exchange)

(12 or more hours)\*

Tuition .....\$1,488.00 a semester

Student Fees .....\$ 420.00 a semester

Total.....\$1,908.00 a semester

\*An additional \$10 per credit technology fee is charged over and above 12 credit hours.

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

### Wyoming Resident (1-11 credit hours)

Tuition .....\$ 83.00 a credit hour/semester

Student Fees .....\$ 35.00 a credit hour/semester

Total.....\$118.00 a credit hour/semester

### Out-of-State Student (1-11 credit hours)

Tuition .....\$249.00 a credit hour/semester

Student Fees .....\$ 35.00 a credit hour/semester

Total.....\$284.00 a credit hour/semester

### WUE (Western Undergraduate Exchange) (1-11 credit hours)

Tuition .....\$124.00 a credit hour/semester

Student Fees .....\$ 35.00 a credit hour/semester

Total.....\$159.00 a credit hour/semester

The following fees and expenses apply to all students:

#### Credit by Examination Fee

CLEP Subject Examination Fee

(subject to change) .....\$80.00

plus administrative fee to LCCC .....\$20.00

Departmental Examination Fee

(per credit hour).....\$25.00

DSST Subject Examination Fee

(subject to change) .....\$80.00

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

Transcript Fee (official copy) .....\$ 5.00

Graduation Fee (nonrefundable) .....\$20.00

Cap and Gown Fee, estimated.....\$40.00

Course Fees ..... Vary according to course

Compressed Video Fee

(for students at the remote receiving site).....\$20.00

Online Fee (per credit hour) .....\$10.00

Books and Course Supplies, estimated.....\$660 per semester

## Deferred Tuition and Fee 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 under payment options for your student account or at the Student Records, Financial Aid, or Accounting 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	*July 16	15%	4	Aug-Nov
	*August 15	25%	3	Sept-Nov
	*August 31	50%	2	Oct-Nov
Spring	*December 18	15%	4	Jan-Apr
	*January 15	25%	3	Feb-Apr
	*January 30	50%	2	Mar-Apr
Summer	*May 19	30%	2	June-July
	*June 9	50%	1	July

\*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 under payment options for your student account or at the Student Records, Financial Aid, or Accounting Offices.

## 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 EaglesEye or submit an add/drop form to the Student Records Office to officially drop or withdraw from any course. *The effective date of the change is the date the form is received by the Student Records Office or the date the online transaction is processed.*

Graduation fees are nonrefundable.

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

## **Return of Title IV Funds for Federal Financial Aid Recipients**

*This policy applies to students who have been awarded assistance through the Federal Pell Grant, FSEOG, Federal Loan, or Federal PLUS Loan programs. For these students, this policy overrides the LCCC Refund Policy that is outlined above.*

Federal financial aid is intended to help with education-related expenses for an entire term.

Students who withdraw, drop out, are expelled, or are administratively withdrawn after the beginning of classes will be subject to the federal refund policy. In addition, students may be required to repay a portion or all the assistance they received. Funds from refunds and repayments will be returned to the government in the following order as required by federal regulations: unsubsidized Federal Loan, subsidized Federal Loan, Federal PLUS Loan, Federal Pell Grant, or Federal SEOG.

Examples of Return of Title IV Funds repayment calculations are available upon request at the Financial Aid Office.

## 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 more than 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 he/she is 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 Student Records Office/Registrar. For additional information, please refer to the "Academic Skills Assessment and Placement Policy" on [Page 9](#).

## **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. Attendance guidelines are outlined in the course syllabus.

## **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 re-enroll in a course in an attempt to earn a higher grade.

## **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. If the work for the incomplete is not completed within the time allowed, then the "I" will automatically be 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. 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, as outlined below.
2. For courses fewer than 16 weeks in length, 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 enrolled in 11 or fewer semester hours who earn a grade point average of 3.5 or higher will be listed on the Dean'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 throughout the year in the offices of the Vice President of Student Services, Campus Living and Learning, the Ludden Library, or on LCCC's website. 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

Three 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 Student Records Office 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 options to return the student to good standing.

The first and second semesters 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 and develop an

education success plan which addresses the cause of his or her academic challenges.

The third 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 for an additional probationary semester. Students who do so will be notified of the status of the appeal within ten business days of receipt of the appeal.

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 only at the discretion of the academic advisor. Students who have not enrolled at LCCC for five or more years will be treated as standard readmission students.

#### **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 poor prior performance once a student has demonstrated her/his ability to succeed academically. Students wishing to pursue academic forgiveness should discuss the options available with their academic advisor.

#### **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 his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her 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 Records Office.

#### **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 Records Office at the LCCC campus concerning the award of credit for nontraditional learning.

## **Distance Learning**

Distance learning courses currently offered by Laramie County Community College include online courses and compressed video courses.

### **Online (Internet) 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. Students must have access to a computer that is connected to the Internet. Most online courses can be approved for VA benefits depending on the student's program.

### **Compressed Video Courses**

Compressed video is a technology that allows students at an alternate site to receive instruction on a video monitor. Students at the alternate site receive instruction simultaneously with students at the LCCC main campus classroom (EEC 132). Students can see and talk to one another at all sites.

### **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 Dean of Enrollment Services.

## **Credit by Examination**

Credit by examination is designed to measure knowledge learned in school, on the job, through reading, through observation or through life experiences. This testing program is another method of accumulating credit toward degree completion. The components of the program are as follows:

1. CLEP (College Level Examination Program) and DSST (formerly DAN TES)  
Subject examinations cover material taught in courses with similar titles at LCCC. The college will grant the same amount of credit equivalency to students earning a satisfactory score as it grants to students

who successfully complete the course. Each subject examination is 90 minutes long. LCCC does not award credit for CLEP general exams.

2. DEP (Departmental Examination Program)–  
Specific LCCC course examinations  
Credit for some courses offered by LCCC may be earned through departmental examinations if a CLEP subject examination is unavailable. If an LCCC course exists for which a student would like to earn credit through an examination, the student should contact the appropriate school dean to determine whether that possibility exists. Minimum scores for departmental examinations are established by the individual schools. Refer to Testing Guidelines for more information.
3. FLATS (Foreign Language Achievement Testing Services)  
FLATS provides students the opportunity to receive credit in language courses taught through LCCC. Credit may only be earned for courses not available through other test opportunities (CLEP, DSST, or Departmental Exam). The amount of credit earned is equivalent to the amount of credit offered by LCCC. Tests require two and one-half hours to complete. All policies and procedures pertaining to CLEP and DSST will apply to FLATS.

CLEP, DSST, FLATS, and the DEP can be administered at Laramie County Community College. For additional information, contact the Testing Center, Arp Building, Room 169, 307.778.1105.

### **Transcript Entries**

To qualify for credit by examination, a student must be enrolled at LCCC. Credit awarded through credit by examination programs will be applied to the total hours earned and will be entered on the student's transcript. A student may use credit by examination to fulfill all degree/certificate graduation requirements except for the mandatory 15-credit hour residency requirement. All credits by examination 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.

Credit for credit by examination subject examinations will be granted 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 The College Board. FLATS scores must be requested through the FLATS at Brigham Young University. Students should be aware that not all colleges have the same policies regarding acceptance of credit by examination. Therefore, if a student is transfer-bound, it is the student's responsibility to find out whether credit by examination earned at LCCC will transfer to another institution.

### **Testing Guidelines**

1. Registration information for CLEP, DSST, and FLATS examinations may be obtained at the Testing Center.
2. CLEP, DSST, and FLATS examinations will be administered by scheduled appointment.

3. All CLEP, DSST, and FLATS 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, DSST, and FLATS. An administrative fee of \$20 is assessed for each CLEP, DSST, or FLATS subject examination.
5. CLEP, DSST, and FLATS examinations may not be repeated within six months from the time the examination was administered.
6. Departmental examinations are administered and scheduled by the instructor of the individual department.
7. 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 Student Records Office will send transcripts of records 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 Student Records Office. 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 [Page 17](#).

### **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

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
Biology	4 or 5	BIOL 1010, General Biology I	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	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 1000, American and Wyoming Government (must complete POLS 1100)	3
Language and Composition	4 or 5	ENGL 1010, English Composition	3
Literature and Composition	4 or 5	ENGL 1010, English Composition	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, Intermediate 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 <b>or</b> STAT 2070, Introductory Stat for Social Science	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, LCCC Procedure 5700
- 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 Campus Living and Learning Office, or the Vice President of Student Services 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

College Community Center, Room 129, 307.778.4397

LCCC's professionally licensed, mental health staff provides full-service counseling, which includes individual and group counseling, psychological assessment, 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 for help in determining an appropriate course of action. If a crisis occurs during evening or weekend hours, call 911 and campus safety. Students at the Albany County Campus should call 307.772.4254.

## Disability Support Services (DSS)

Education and Enrichment Center, Rooms 222-223  
307.778.1359; TTY 307.778.1266

Disability Support Services (DSS) at Laramie County Community College provides comprehensive, confidential services for LCCC students with documented disabilities. Services and adaptive equipment to assist with mobility, sensory and perceptual concerns are available through the DSS, and all services are provided free of charge to LCCC students.

DSS maintains a library of resource information including disability issues, available college scholarships for students with disabilities, ADA facts and regulations, tips for college students with ADD and/or learning disabilities, and much more.

Students who have questions or want to make arrangements for services should call 307.778.1359 for an appointment with a DSS staff member. Students at the Albany County Campus should call 307.721.5138.

## Student Planning and Success

Advising Center, College Community Center Room 128,  
307.778.1214

Student Planning & Success includes the services of Advising, Career Services, and Sage TRiO. Advising and Sage TRiO are located in the Advising Center in the College and Community Center, and the Career Services office is located in the Student Services Building north lobby.

The Advising Center provides academic advising to all new students, general studies majors, pre-nursing majors, and students on academic probation or suspension. Advisors can also assist students with the transfer process and with major and career exploration. Students interested in career interest assessments may meet with an advisor by appointment to take either the Kuder Journey, the Myers-Briggs Type Indicator and/or the Strong Interest Inventory. Students at the Albany County Campus should call 307.721.5138.

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

- Clarifying career/life goals
- Identifying interests, skills, and workplace values through the Kuder® Journey Assessments

- Choosing a major and exploring career options
- Creating a personalized timeline and “game plan”
- Preparing for and conducting successful job searches on and off campus
- Drafting and refining a resume/cover letter/personal statement
- Researching employers, industry, and transfer programs
- Learning interview essentials and practicing successful interview skills
- Understanding the concept of networking and using networking for career exploration purposes

## Students Achieving Goals in Education (SAGE TRiO)

College Community Center, Room 128, 307.778.4314

Students Achieving Goals in Education (SAGE) is a federally funded TRiO project that assists eligible students to remain in college, graduate, and/or transfer to four-year colleges. SAGE TRiO works with students who are low-income, first-generation college, and/or students with disabilities to ensure that they achieve their full academic potential. SAGE advisors foster a supportive academic environment by providing academic, personal, and financial aid advising; mentoring; assistance to identify the barriers to educational goals; and assistance to develop master academic plans that ensure academic success. SAGE works closely with other campus support offices to provide comprehensive services that add up to Students Achieving Goals in Education.

## Testing Center

Arp Building, Room 169, 307.778.1105

Numerous tests are available in the following areas: College Level Examination Program (CLEP) tests, DSST (formerly DANTEs), LCCC departmental exams, the LPN STEP, Test of Essential Academic Skills (TEAS), and other standardized testing instruments. Academic skills assessment and placement tests are described in the catalog on [Page 9](#).

## Alcohol and Drug Education and Prevention

Counseling and Campus Wellness, 307.778.1311

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 very 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 that states that drugs and alcoholic beverages may not be present on campus or at college-sponsored student activities. (Alcohol may be used for instructional (nonconsumption) 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 probation for a period of time to be determined on a case-by-case basis. 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.

## Student Success Center

College Community Center, Room 128, 307.778.4315

The Student Success Center is a multidisciplinary tutoring and academic skills center. The Student Success Center houses self-help materials such as videos, audio tapes, computer software, workbooks and handouts.

LCCC students may make regular appointments or drop in to work with a tutor to clarify, supplement and enhance individual study or course instruction. Students may request tutoring for any or all of the courses in which they are enrolled. Services are available six days a week with day and evening hours. Please call for current semester hours. Tutoring request cards are available in the Student Success Center.

Students interested in becoming tutors may pick up an application in CCC, Room 128 or call 307.778.4315 for more information.

## LCCC Exam Lab

Education and Enrichment Center, Room 224, 307.778.1274

The LCCC Exam Lab provides a service within the college to administer online, make-up, and other educational institutions' exams. (Fees may be charged for proctoring other institutions' exams.) LCCC provides testing accommodations for students with special needs as recommended by the Disability Support Services staff. The Exam Lab also administers Microsoft Office Specialist (MOS) exams in Word, Excel, Outlook, etc.

The Exam Lab is certified to proctor exams through Pearson VUE, North American Technician Excellence (NATE), Electronic Technician Association (ETA), Applied Measurement Professionals, Inc. (AMP), and HVAC Excellence. The Exam Lab is also approved to administer the TOEFL and the college's graduate exit assessment.

## Adult Career and Education System (ACES)

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 Basic Education (ABE), High School Equivalency Certificate (HSEC) preparation, Adult Secondary Education (ASE), and English for Speakers of Other Languages (ESOL). 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 Basic Education (ABE)**

ABE 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 for Speakers of Other Languages (ESOL)**

The English for Speakers of Other Languages 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, 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, 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: [www.lccc.wy.edu/about/compliance](http://www.lccc.wy.edu/about/compliance) and in the Campus Safety Office.

The Campus Safety Office prepares incident reports on reported crimes and all other incidents on campus. Any criminal activity is reported immediately to the 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 the Campus Safety or through the Office of the Vice President of Student Services.

## Campus Security 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 they are needed.

LCCC has installed free courtesy/security telephones at strategic locations throughout the campus. On the wall adjacent to each telephone are instructions on what to do in the event of crimes and other emergencies.

The college employs a security 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 Campus Safety Officers, while unable to make arrests, are employed to enforce traffic and parking regulations; 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.

For further information, please contact Campus Safety at 307-778-1122. The Campus Safety Patrol Office is housed in the Modular Building which is located to the east of the Residence Hall. The Director of Campus Safety's office is located in the Business Building (B213; Telephone: 307-778-1340).

Campus Safety patrol officers may be contacted via cell phone at 307-630-0645 or 307-630-0866. Campus Safety should be contacted to report crimes, suspicious activity, or emergencies.

## 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 2010 fall semester, 346 first-time, full-time, degree- or certificate-seeking students enrolled at Laramie County Community College (LCCC). Of this group, referred to as the fall 2010 graduation rate cohort, 49 (14.16%) had graduated from LCCC and 115 (33.24%) had transferred to another college or university by August 31, 2013.

The fall 2010 graduation rate cohort included 31 students who received student aid related to an athletics program. Of this group, 5 (16.13%) had graduated from LCCC and 14 (45.16%) had transferred to another college or university by August 31, 2013.

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

### 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 2011 semester, 370 first-time, full-time, degree- or certificate-seeking students enrolled at Laramie County Community College. Of this group, 215 (58.11%) were still enrolled at LCCC or had graduated as of October 2012.

Anyone with additional questions should contact the Manager 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 Life and Dean of Students

Student Services Room 115, College Community Center, Rooms 109, 109A, 307.778.1108

The Student Life team provides 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 many 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)

College Community Center, Student Lounge, 307.778.4336

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. 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

College Community Center, Room 141, 307.778.1182

The Campus Activities Board (CAB) is a group of students who provide activities to help 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 the activities they sponsor. 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. Students at the Albany County Campus should call 307.721.5138 for more information.

## **Service Learning**

307.778.1279

Service Learning combines classroom instruction with community service, focusing on critical, reflective thinking as well as personal and civic responsibility. Service Learning activities involve students in addressing local, community-identified needs while developing their academic skills and commitment to their community. Faculty utilize Service Learning in the classroom as a teaching/learning strategy. Members of recognized student organizations volunteer in the community to put their academic and leadership skills into action.

## **Residential Living and 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 complex, and the campus dining hall. The Residence Hall Council and Residential Living and 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**

College Community Center, Room 140, 307.432.1630

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 may join existing clubs or may choose to create a new organization. Students wishing to develop a new club should visit Campus Living and Learning for current recognition procedures.

Campus Living and Learning 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 Campus Living and Learning. A current list of clubs and teams can be obtained from the office of Campus Living and Learning.

## **Student Identification and Library Cards**

Campus Living and Learning, College Community Center, Room 138, 307.778.1108

LCCC students enrolled in credit classes are eligible and 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 will be validated each semester the student is enrolled in classes.

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 physical education 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 Services Building, Financial Aid Office, 307.778.4396

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 Financial Aid Office.

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**

Arp Building, Room 146, 307.778.1303

The LCCC Children's Discovery Center on the LCCC campus provides high-quality, affordable 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 Children's Discovery Center is to meet the developmental needs of young children. Children who attend the Children's Discovery Center 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 Children's Discovery Center, 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 (NAEYC).

## 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.

## Athletics

The LCCC Rodeo Team is a member of the National Intercollegiate Rodeo Association, and the LCCC Equestrian Show Team is a member of the International Horse Show Association. As a member of the National Junior College Athletic Association (NJCAA), LCCC has teams competing in men's basketball, women's volleyball, men's soccer and women's soccer. For more information, contact the athletics department at 307.778.1323.

## Insurance

The college does not offer health or accident insurance to students. Local insurance agents may be contacted for individual coverage.

## Office of Scholarships and Financial Aid

Student Services Building, 307.778.1215

Students attending LCCC receive nearly \$13 million each year through scholarships, grants, student employment, loans, veterans benefits and agency payments. These funds are provided by the federal and state governments, LCCC, community organizations, and private donors.

The LCCC *Student Financial Aid Guide* contains a detailed description of the various financial aid programs, application deadlines and procedures, census dates, eligibility requirements, satisfactory academic progress standards, a list of student rights and responsibilities, and more. To obtain financial aid information, go to the LCCC website, [lccc.wy.edu](http://lccc.wy.edu).



# Instructional Services

## Degrees and Certificates

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

Associate of Arts Degree (A.A.)

Associate of Science Degree (A.S.)

Associate of Applied Science Degree (A.A.S.)

Certificates of Completion in Career Programs

## **The Associate of Arts Degree (A.A.) and The Associate of Science Degree (A.S.)**

These degrees are recommended to students who anticipate transferring to a four-year educational institution. The Associate of Arts degree is usually the preferable option for those majoring in humanities, social sciences and education areas. The Associate of Science is the preferable option for the sciences, 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 (A.A.S.)**

This degree is designed to prepare students for immediate employment in a skilled or paraprofessional occupation or to upgrade and stabilize current employment.

The A.A.S. degree typically can be transferred into a Bachelor of Applied Science (B.A.S.) degree at some colleges and universities. Courses within the A.A.S. degree programs may be accepted at a four-year college or university if the student is transferring into degrees other than the B.A.S. 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.

## 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 we, as an institution, expect 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's degree will complete an academic evaluation of their learning experience at LCCC.

## Graduation Requirements

### **All Degrees:**

1. Successfully complete a minimum of 64 semester hours with a grade point average of 2.0 or better at course level of 1000 or higher. (ENGL 1001 does not apply.)
2. Complete the general education degree requirements indicated below for the A.A., A.S., or A.A.S. degrees.
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 15 semester hours from Laramie County Community College applied toward graduation.
5. Complete a designated academic evaluation to measure achievement of general education outcomes.
6. Obtain an advisor's signature indicating that program requirements have been met before filing an application for graduation.
7. File a graduation application at the Student Records Office in the Student Services Building. A graduation fee of \$20 to cover application and diploma expenses must accompany the application. A cap and gown fee is required to participate in graduation ceremonies. Students planning to graduate should consult the college 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. The graduation fee will not be required for reapplication.

## General Education

The general education component is defined as a set of knowledge, skills, and behaviors that are universal to all students and graduates of LCCC. The attainment of these skills and behaviors serves as a foundation for lifelong learning and the achievement of personal and professional goals.

### **General Education: Core Abilities for Student Learning**

The general education component of all degrees and programs at Laramie County Community College is based on four primary core abilities, which are outlined below. The faculty members at LCCC, through the coordination of the Student Learning Assessment Committee, have agreed that every graduate of Laramie County Community College should exhibit these four core abilities prior to graduation and employment or matriculation to another institution.

Key courses have been identified as core curriculum courses for the associate degrees offered at LCCC, and these have been correlated to each of the general education student learning core abilities by specific letter designations, as indicated by the parentheses below. Although these courses are identified as core curriculum courses, one or more of the four core abilities are present to some degree in every course offered at LCCC. Therefore, each course a student enrolls in has a role in contributing to and ensuring that student's success in meeting the institution's goals for student learning.

**Learn Responsibly (L)** – Students will learn responsibly by actively expanding their knowledge and skills. This includes:

- Areas other than their major;
- Formulating information needs;
- Wellness and self-care.

**Communicate Effectively (CE)** – Students will communicate through a variety of methods and media. This includes:

- Written communication;
- Oral communication;
- Electronic communication.

**Critically Think (CT)** – Students will effectively utilize problem-solving strategies and creative methods. This includes:

- Demonstrating self-awareness and reflective thinking

**Collaborate (C)** – Students will collaborate and build community with others by interacting in a diverse, complex, and global environment. This includes:

- Displaying good citizenship
- Displaying civility & respect for others

## 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 also with 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.*

GENERAL EDUCATION COMPONENT	ASSOCIATE OF ARTS DEGREE		ASSOCIATE OF SCIENCE DEGREE		ASSOCIATE OF APPLIED SCIENCE DEGREE		Minimum credits required	Minimum credits	
	Core Courses		Core Courses		Core Courses				
<b>Learn Responsibility</b> <i>Students will learn responsibly by actively expanding their knowledge and skills. This includes:</i> <ul style="list-style-type: none"> <li>• Areas other than their major;</li> <li>• Formulating information needs;</li> <li>• Wellness and self-care.</li> </ul>	L1 Computer Literacy See Page 28 for list.	L1 Computer Literacy See Page 28 for list.	L1 Computer Literacy See Page 28 for list.	L1 Computer Literacy See Page 28 for list.	L1 Computer Literacy See Page 28 for list.	L1 Computer Literacy See Page 28 for list.	1 credit	1 credit	
	L2 Physical Education ONE PEAC "activity" course	L2 Physical Education ONE PEAC "activity" course	L2 Physical Education ONE PEAC "activity" course	L2 Physical Education ONE PEAC "activity" course	L2 Physical Education ONE PEAC "activity" course	L2 Physical Education ONE PEAC "activity" course	1 credit	1 credit	
	• Written communication;	• Oral communication;	• Electronic communication.						
<b>Communicate Effectively</b>									
<i>Students will communicate through a variety of methods and media. This includes:</i> <ul style="list-style-type: none"> <li>• Written communication;</li> <li>• Oral communication;</li> <li>• Electronic communication.</li> </ul>	CE1 Written Communication ENGL 1010 and ENGL 1020	CE1 Written Communication ENGL 1010 and ENGL 1020	CE1 Written Communication ENGL 1010 and ENGL 1020	CE1 Written Communication ENGL 1010 and ENGL 1020	CE1 Written Communication ENGL 1010	CE1 Written Communication ENGL 1010	6 credits	3 credits	
	CE2 Oral Communication CO/M 1010 or CO/M 1030	CE2 Oral Communication CO/M 1010 or CO/M 1030	CE2 Oral Communication CO/M 1010 or CO/M 1030	CE2 Oral Communication CO/M 1010 or CO/M 1030	CE2 Oral Communication CO/M 1010 or CO/M 1030	CE2 Oral Communication CO/M 1010 or CO/M 1030	3 credits	3 credits	
<b>Critically Think</b>									
<i>Students will effectively utilize problem-solving strategies and creative methods. This includes:</i> <ul style="list-style-type: none"> <li>• Demonstrating self-awareness and reflective thinking.</li> </ul>	CT1 Quantitative Reasoning ONE MATH course from: MATH 1000 or higher, excluding MATH 1510	CT1 Quantitative Reasoning ONE MATH course from: MATH 1000 or higher, excluding MATH 1510	CT1 Quantitative Reasoning TWO courses from MATH 1400 and higher, excluding MATH 1510, or MATH 1400 or higher, excluding MATH 1510, and Statistics	CT1 Quantitative Reasoning TWO courses from MATH 1400 and higher, excluding MATH 1510, or MATH 1400 or higher, excluding MATH 1510, and Statistics	CT1 Quantitative Reasoning ONE MATH course from MATH 1000 or higher	CT1 Quantitative Reasoning ONE MATH course from MATH 1000 or higher	3 credits	3 credits	
	CT2 Scientific Reasoning ONE physical, biological, or earth lab science course. See Page 28 for list.	CT2 Scientific Reasoning ONE physical, biological, or earth lab science course. See Page 28 for list.	CT2 Scientific Reasoning ONE physical, biological, or earth lab science course. See Page 28 for list.	CT2 Scientific Reasoning ONE physical, biological, or earth lab science course. See Page 28 for list.	CT2 Scientific Reasoning ONE physical, biological, or earth lab science course. See Page 28 for list.	CT2 Scientific/Technical Reasoning ONE physical, biological, or earth lab science or technical course. See Page 28 for list.	CT2 Scientific/Technical Reasoning ONE physical, biological, or earth lab science or technical course. See Page 28 for list.	4 credits	3-4 credits
<b>Collaborate</b>									
<i>Students will collaborate and build community with others by interacting in a diverse, complex, and global environment. This includes:</i> <ul style="list-style-type: none"> <li>• Displaying good citizenship;</li> <li>• Displaying civility and respect for others.</li> </ul>	C1 Wyoming Statutory Requirement (see graduation requirements above) ONE course from POLS 1000, HIST 1211, HIST 1221, HIST 1251, or ECON 1200	C1 Wyoming Statutory Requirement (see graduation requirements above) ONE course from POLS 1000, HIST 1211, HIST 1221, HIST 1251, or ECON 1200	C1 Wyoming Statutory Requirement (see graduation requirements above) ONE course from POLS 1000, HIST 1211, HIST 1221, HIST 1251, or ECON 1200	C1 Wyoming Statutory Requirement (see graduation requirements above) ONE course from POLS 1000, HIST 1211, HIST 1221, HIST 1251, or ECON 1200	C1 Wyoming Statutory Requirement (see graduation requirements above) ONE course from POLS 1000, HIST 1211, HIST 1221, HIST 1251, or ECON 1200	C1 Wyoming Statutory Requirement (see graduation requirements above) ONE course from POLS 1000, HIST 1211, HIST 1221, HIST 1251, or ECON 1200	3 credits	3 credits	
	C2 Social Sciences TWO courses from AGECE 1010, AGECE 1020, AMST, ANTH, CRMJ, ECON, GEOG, HIST, LEGL, POLS, PSYC, SOC	C2 Social Sciences TWO courses from AGECE 1010, AGECE 1020, AMST, ANTH, CRMJ, ECON, GEOG, HIST, LEGL, POLS, PSYC, SOC	C2 Social Sciences ONE course from AGECE 1010, AGECE 1020, AMST, ANTH, CRMJ, ECON, GEOG, HIST, LEGL, POLS, PSYC, SOC	C2 Social Sciences ONE course from AGECE 1010, AGECE 1020, AMST, ANTH, CRMJ, ECON, GEOG, HIST, LEGL, POLS, PSYC, SOC	C2 Social Sciences ONE course from AGECE 1010, AGECE 1020, AMST, ANTH, CRMJ, ECON, GEOG, HIST, LEGL, POLS, PSYC, SOC	C2 Social Sciences or Arts and Humanities ONE course from AGECE 1010, AGECE 1020, AMST, ANTH, CRMJ, ECON, GEOG, HIST, LEGL, POLS, PSYC, SOC	C2 Social Sciences or Arts and Humanities ONE course from AGECE 1010, AGECE 1020, AMST, ANTH, CRMJ, ECON, GEOG, HIST, LEGL, POLS, PSYC, SOC	6 credits	3 credits
	C3 Arts and Humanities TWO courses from two different disciplines in ART, ENGL (excludes ENGL 1010, 1020, 2005, 2030 and BADM 1020), Foreign Language, HUMN, LIBS 2280, MUSC, PHIL, RELI, SPPA, or THEA	C3 Arts and Humanities TWO courses from two different disciplines in ART, ENGL (excludes ENGL 1010, 1020, 2005, 2030 and BADM 1020), Foreign Language, HUMN, LIBS 2280, MUSC, PHIL, RELI, SPPA, or THEA	C3 Arts and Humanities ONE course from ART, ENGL (excludes ENGL 1010, 1020, 2005, 2030, and BADM 1020), Foreign Language, HUMN, LIBS 2280, MMMM, MUSC, PHIL, RELI, SPPA, or THEA	C3 Arts and Humanities ONE course from ART, ENGL (excludes ENGL 1010, 1020, 2005, 2030, and BADM 1020), Foreign Language, HUMN, LIBS 2280, MMMM, MUSC, PHIL, RELI, SPPA, or THEA	C3 Arts and Humanities ONE course from ART, ENGL (excludes ENGL 1010, 1020, 2005, 2030, and BADM 1020), Foreign Language, HUMN, LIBS 2280, MMMM, MUSC, PHIL, RELI, SPPA, or THEA	C3 Arts and Humanities ONE course from ART, ENGL (excludes ENGL 1010, 1020, 2005, 2030, and BADM 1020), Foreign Language, HUMN, LIBS 2280, MMMM, MUSC, PHIL, RELI, SPPA, or THEA	C3 Arts and Humanities ONE course from ART, ENGL (excludes ENGL 1010, 1020, 2005, 2030, and BADM 1020), Foreign Language, HUMN, LIBS 2280, MMMM, MUSC, PHIL, RELI, SPPA, or THEA	6 credits	3 credits

## Area Requirements

The following courses can be used to meet the area requirements for specific degrees.

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.

### Social Sciences

Social sciences study the ways humans exist within economic, political, familial, psychological, geographical, historical, or social structures. This diverse thematic and systematic study of individuals and groups demonstrates the wide range of disciplines and methodologies used to analyze social problems and structures. Such courses also give considerable attention to the development and justification of conclusions and theories within the social disciplines.

The social science graduation requirement may be completed by successfully accumulating the required number of credit hours in the following areas or courses.

- AGEC 1010 – Agriculture Economics I
- AGEC 1020 – Agriculture Economics II
- American Studies
- Anthropology
- Criminal Justice
- Economics
- EDST 2450
- Geography
- History
- Paralegal
- Political Science
- Psychology
- Social Work
- Sociology

### Arts and Humanities

The arts and humanities analyze the ways human beings seek to understand themselves. Students explore questions of individuality, community, knowledge, justice, aesthetic, and ethics. The arts and humanities explore the human condition (the perennial problem of human existence). Through these courses, students engage in meaningful reflection and self-expression. They address complex issues, trace cultural traditions, recognize the viewpoints of others, and function effectively in multicultural communities.

The arts and humanities graduation requirements may be completed by successfully accumulating the required number of credit hours in the following academic areas or courses.

- \* Art
- \*\* English
- Humanities
- Languages (Spanish, French, German, Greek, Japanese, Latin, Russian, American Sign Language)
- LIBS 2280–Literature for Children
- Mass Media/Multimedia (Journalism)
- Music
- Philosophy
- Religious Studies
- Theater

\*ART 1510 does not apply.

\*\*English 1001, 1010, 1020, 2005, 2030, and BADM 1020 do not apply.

### Science

Science involves observing, formulating, and testing natural science concepts and the physical universe. The scientific

process is used to better understand the nature of the universe through the systematic collection, analysis, and interpretation of data. The laboratory component will enhance and reinforce the scientific process.

The physical, biological, or earth lab science (scientific reasoning) graduation requirement may be completed by successfully accumulating the required number of credit hours in the following subject areas or courses:

ASTR	1050– Survey of Astronomy .....	4 credits
AECL	1000– Agroecology .....	4 credits
AECL	2010– The Ecological Web: Soils .....	4 credits
AECL	2025– Ecological Web: Horticultural Science ..	4 credits
BIOL	1000– Principles of Biology .....	4 credits
BIOL	1003– Current Issues in Biology .....	4 credits
BIOL	1010– General Biology .....	4 credits
BIOL	2022– Animal Biology .....	4 credits
BIOL	2023– Biology of Plants and Fungi .....	4 credits
BIOL	2320– Tropical Ecology .....	4 credits
BIOL	2470– Field Methods in the Biological Sciences .....	4 credits
CHEM	1000– Introduction to Chemistry .....	4 credits
CHEM	1020– General Chemistry I .....	5 credits
GEOG	1010– Introduction to Physical Geography .....	4 credits
GEOL	1100– Physical Geology .....	4 credits
GEOL	1200– Historical Geology .....	4 credits
PHYS	1050– Concepts of Physics .....	4 credits
PHYS	1090– The Fundamentals of the Physical Universe .....	4 credits
PHYS	1110– General Physics I .....	4 credits
PHYS	1310– College Physics I .....	4 credits
ZOO	2010– Anatomy and Physiology I .....	4 credits
ZOO	2015– Human Anatomy .....	4 credits

### Technical

Technical courses are those that provide students with practical knowledge and skills, especially of a business, mechanical or scientific nature. Courses in the following career education areas that lead to an Associate of Applied Science degree or certificate qualify as meeting the technical category:

- Accounting
- Automotive Body Repair
- Automotive Technology
- Business Administration
- Business Office Technology
- Computer Information Systems
- Diesel Technology
- Electronics
- Engineering Science
- Engineering Technology
- Equine Studies
- Fire Science
- Health Information Technology
- Health Technology
- Heating, Ventilation, and Air Conditioning
- Integrated Systems Technology
- Medical Coding
- Paralegal
- Wind Energy

### Computer Literacy

Computer literacy enables individuals to use computers, software applications, and other technologies to achieve a wide variety of academic, work-related, and personal goals. Computer literacy includes understanding the underlying concepts of technology and applying problem solving and critical thinking skills to using technology.

The computer literacy requirement may be met by successfully completing one of the following courses. This list is not intended to be a complete list of courses that will fulfill this requirement. The courses listed here are typically the only course or first course in a sequence. Higher-level computer courses may also meet the computer literacy requirement. It is strongly recommended that students contact their advisors for a list of current courses that may fulfill the computer literacy general education elective.\*

ACCT	2110– Microcomputer Accounting I	2 credits
AGRI	1010– Computers: Agriculture	3 credits
CMAP	1610– Windows I	1 credit
CMAP	1615– Operating Systems	3 credits
CMAP	1650– Introduction to Networking	1 credit
CMAP	1700– Word Processing I	1 credit
CMAP	1730– Adobe Acrobat I	1 credit
CMAP	1750– Spreadsheet Applications I	1 credit
CMAP	1800– Database Applications I	1 credit
CMAP	1886– Microsoft Outlook	1 credit
CMAP	1920– Computer Hardware Maintenance	3 credits
CMAP	2471– PC Support Skills	1 credit
CMAP	2630– Presentation Graphics	1 credit
COSC	1010– Introduction to Computer Science	4 credits
COSC	1200– Computer Information Systems	3 credits
DHYG	1685– Computer Applications in Dental Hygiene	1 credit
ENTK	2500– Computer-Aided Drafting I	3 credits
ES	1060– Introduction to Engineering Computing	3 credits
GEOG	1016– Introduction to ArcGIS I	1 credit
GEOG	1100– Introduction to Geographic Information Systems	3 credits
GEOG	1220– Introduction to Geospatial Technologies	3 credits
HIT	1510– Computer Software for Medical Office Professionals	4 credits
INET	1550– Introduction to the Internet	1 credit
INET	1581– Web Page Authoring I	1 credit
ITEC	2360– Teaching with Technology	3 credits
MMMM	1370– Publications Production I	3 credits
MMMM	2222– Desktop Audio/Video Production	3 credits
MMMM	2310– Desktop Publishing	3 credits
MMMM	2325– Computer Graphics	3 credits
MMMM	2326– Interactive Media	3 credits
MMMM	2327– 3D Computer Animation	3 credits
MMMM	2408– Digital Photography	3 credits
MMMM	2410– Introduction to Multimedia	3 credits
MSFT	2578– Networking Essentials	4 credits
POLS	1005– Computer Applications in Political Science	1 credit

\*CMAP 1500 does not apply.

## 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 different 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 49 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.

## Certificates of Completion

The certificate of completion is designed for occupational programs that specifically prepare students for immediate employment. General education courses are not required; however, general education concepts are integrated into certificate courses. Courses taken in the certificate program may apply toward an associate's degree.

Students desiring to further their education are encouraged to submit their certificates, licenses or transcripts to the Student Records Office 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.

## Certificate Requirements

Requirements for the various certificates granted by Laramie County Community College in the career education programs are established by those areas. Students should consult with an advisor regarding appropriate certificate requirements. Students must successfully complete the certificate curriculum with a grade point average of 2.0 or better and must complete the graduation application to receive the certificate.

## Online Degree Programs

All LCCC degrees and certificates are accredited, including online degrees and certificates, through the Higher Learning Commission of the North Central Association of Colleges and Schools. 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.

## Programs

### Career Education

Career education programs of study and training are designed to meet specific occupational requirements. A program of study may require that students take selected academic courses as well. Program completion qualifies students for a certificate and/or an Associate of Applied Science degree, or credit may be transferred to a bachelor's degree in technical studies.

#### Options in Career Education:

1. Upon completion of the basic instructional program specified in the area of interest, a certificate of completion may be awarded.
2. Students together with their advisors will select additional course work in either career education or academic subjects or a combination of the two as determined by individual needs.

3. Cooperative Work Experience courses—students may enroll in course work on a part-time basis working on a job related to the students' areas of interest. Students will receive credit for the supervised on-the-job training as well as the course work.
4. Students may also pursue an Associate of Applied Science degree in their major area of interest. Refer to degree requirements.

### Pathways to Success

This part of LCCC's high school 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.

### 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 the LCCC Career and Technical Building. Call 307.632.8949 for more information.

### General Education Articulation Agreement Between the University of Wyoming and the Wyoming Community Colleges

This articulation agreement applies to graduates receiving an Associate of Arts or an Associate of Science degree from any of the seven Wyoming community colleges. All graduates with an A.A. or A.S. degree complete a minimum of 64 college-level credits with a minimum GPA of 2.0.

All Wyoming community college graduates (A.A. or A.S. degree) who have completed the prescribed 30-credit hour Wyoming Community College Common General Education Core, and *in addition, a second three (3)-credit college-level math course*, will be deemed to have met UW's lower division general education requirements.

All Wyoming community college graduates (A.A. or A.S. degree) who have completed the prescribed 30-credit hour community college core, *but who lack the second three (3) credit college-level math course* will be required to complete the second mathematics course either at the community college or at the University of Wyoming before they will be deemed to have met UW's lower-division general education requirements.

Students should see their academic advisor for additional information.

### University of Wyoming/LCCC Articulation Agreements

The UW/LCCC articulation agreements ensure that the academically successful student who selects and follows an articulated major can transfer to the University of Wyoming and complete the baccalaureate degree within the period

of time that such a degree would normally be completed on the UW campus. Information about these offerings may be obtained from representatives of either institution.

### LCCC Articulation Agreements with Other Transfer Institutions

Articulation agreements are in place with other transfer institutions for specific programs. Students wishing to transfer their programs of study should work closely with their advisors to ensure that courses in their chosen programs are aligned for maximum transferability.

### Lifelong Learning

Rather than enrolling in a complete degree or certificate program, many students prefer to take selected courses that help them pursue individual, personal goals. For some, this means courses that will help them as employees or as business owner/operators. Others simply want to know more about their world, whether it's government, psychology, literature, science, computers, automotive technology, physical fitness or art. Still others are exploring new career or educational directions or want to examine other approaches to living and learning. For all these diverse reasons and many more, 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 that can be used on the job. In addition to learning new skills, Life Enrichment classes give people an opportunity to learn a new hobby, enhance existing skills, and socialize with others who have the same interests. People can learn from a variety of classes including quilting, swimming, rock climbing for kids, computer software programs, and dog training.

The Life Enrichment program serves a diverse array of students from senior citizens who want to learn computer skills to kids ages 5-13 during the S.E.E.K. (Summer Educational Experiences for Kids) program to teachers earning their required CEU credits.

### 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.

The Facilities and Events office can be reached at 307.778.1291 or 307.778.1322.

### 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.

# Programs of Study

The following programs of study lead to an associate's degree or certificate, and faculty advisors are assigned to assist students in the completion of their educational goals.

Accounting.....	33	Exercise Science.....	60
Agriculture.....	34	Physical Education.....	60
Agribusiness Technology.....	34	Fire Science Technology.....	62
Agriculture Production Technology.....	35	General Studies.....	63
Anthropology.....	35	General Studies in Fine Arts and Humanities.....	63
Art.....	36	General Studies in Science/Health Science.....	64
Automotive Body Repair.....	37	General Studies in Social Sciences.....	64
Automotive Technology.....	38	Government Studies.....	65
Biology.....	39	American and Comparative Government.....	65
Preprofessional Option: Prepharmacy.....	39	Public Policy and Administration.....	65
Business Administration.....	40	Health (See Biology or	
Business Management.....	41	General Studies in Science/Health Science)	
Entrepreneurship Business Plan Certificate.....	41	Health Information Technology and Management.....	66
Entrepreneurship Certificate.....	41	Medical Office Essentials Certificate.....	66
Chemistry.....	42	Medical Claims Coding Associate Certificate.....	66
Communication.....	42	Heating, Ventilation, and	
Computer Information Systems.....	43	Air Conditioning/Refrigeration.....	67
Computer Information System Certificates.....	43	History.....	68
Cisco Certified Networking Associate (CCNA).....	43	Religious Studies Option.....	68
Cisco Certified Networking Professional (CCNP).....	43	Homeland Security.....	69
Computer Security.....	43	Human Services.....	70
Computer Support Specialist.....	43	Addictionology Option.....	70
Computer Technician.....	44	Integrated Systems Technology.....	71
Linux Systems.....	44	International Studies.....	71
Microsoft Systems and Networks.....	44	Journalism (See Mass Media)	
Office Application Specialist.....	44	Legal Assistant (See Paralegal)	
Programmer.....	44	Mass Media.....	72
Web Design.....	44	Multimedia Option.....	72
Computer Science.....	45	Mathematics.....	73
Computers and Business Option.....	45	Medicine (See Biology or	
Criminal Justice.....	46	General Studies in Science/Health Science)	
Corrections.....	46	Music.....	73
Law Enforcement.....	46	Nursing.....	74
Prelaw.....	46	Paralegal.....	75
Customer Service.....	47	Paramedics (See Emergency	
Dental Hygiene.....	48	Medical Services—Paramedics)	
Diagnostic Medical Sonography.....	50	Philosophy.....	76
Diesel Technology.....	51	Physical Education (See Exercise Science)	
Economics and Finance.....	52	Physical Therapist Assistant.....	77
Education.....	52	Political Science (See Government Studies)	
Preprofessional Option: Early Childhood Education.....	53	Psychology.....	78
Early Childhood Education.....	53	Public Administration (See Government Studies)	
Emergency Medical Services—Paramedics.....	54	Radiography (X-ray).....	79
Engineering.....	55	Sociology.....	81
Engineering Technology.....	56	Spanish.....	81
Drafting and Design Option.....	56	Speech (See Communication)	
English.....	57	Surgical Technology.....	82
Equine Studies.....	58	Technical Studies.....	83
Equine Science Option.....	58	Wildlife Conservation and Management.....	83
Equine Business Management Option.....	58	Wind Energy.....	84
Equine Training Management Option.....	59		

## 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>Accounting (Associate of Applied Science and Associate of Science) ..... 33</p> <p>Business Management (Associate of Applied Science)..... 41</p> <p>Computer Information Systems (Associate of Applied Science) ..... 43</p> <p>    Cisco Certified Networking Associate (CCNA) (Certificate)..... 43</p> <p>    Computer Support Specialist (Certificate) ..... 43</p> <p>    Computer Technician (Certificate) ..... 44</p> <p>    Linux Systems (Certificate) ..... 44</p> <p>    Microsoft Systems and Networks (Certificate)..... 44</p> <p>    Office Application Specialist (Certificate) ..... 44</p> <p>    Programmer (Certificate)..... 44</p> <p>    Web Design (Certificate) ..... 44</p> <p>Medicine ..... 73</p> <p>Music ..... 73</p> <p>Nursing..... 74</p> <p>Paralegal ..... 75</p> <p>Paramedics ..... 76</p> <p>Philosophy ..... 76</p> <p>Physical Education..... 76</p> <p>Physical Therapist Assistant ..... 77</p> <p>Political Science ..... 78</p> <p>Process Technology..... 78</p> <p>Psychology ..... 79</p> <p>Public Administration..... 79</p> <p>Radiography (X-ray) ..... 80</p> <p>Sociology..... 81</p> <p>Spanish ..... 82</p> <p>Speech..... 82</p> <p>Surgical Technology ..... 82</p> <p>Technical Studies ..... 83</p> <p>Welding Technology ..... 84</p> <p>Wildlife Conservation and Management..... 84</p> <p>Wind Energy..... 85</p>	<p>General Studies (Associate of Arts)..... 63</p> <p>General Studies in Science/Health Science (Associate of Science) ..... 64</p> <p>General Studies in Social Sciences (Associate of Arts) ..... 64</p> <p>Government Studies ..... 65</p> <p>    American and Comparative Government (Associate of Arts)..... 65</p> <p>    Public Policy and Administration (Associate of Arts)..... 65</p> <p>Homeland Security (Associate of Science and Certificate ) ..... 69</p> <p>Psychology (Associate of Arts)..... 79</p>
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# Accounting

## Associate of Science Degree

The accounting curriculum leads to an Associate of Science degree in accounting and 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 for 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.

Students must have at least a 2.5 GPA to transfer to the University of Wyoming's College of Business.

### First Year

#### FALL SEMESTER

ACCT 2010 – Principles of Accounting I	3
BADM 1000 – Introduction to Business	3
COSC 1200 – Computer Information Systems	3
ECON 1200 – Economics, Law, and Government -OR-	
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History	3
ENGL 1010 – English I: Composition	3
MATH 1400 – Pre-Calculus Algebra	4
	<hr/>
	19

#### SPRING SEMESTER

ACCT 2020 – Principles of Accounting II	3
BUSN 2000 – International Business	3
CO/M 1010 – Public Speaking	3
ECON 1010 – Principles of Macroeconomics	3
ENGL 1020 – English II	3
MATH 2350 – Business Calculus I	4
	<hr/>
	19

### Second Year

#### FALL SEMESTER

ECON 1020 – Principles of Microeconomics	3
MGT 2100 – Principles of Management	3
ACCT 2450 – Cost Accounting	3
MATH 2355 – Mathematical Applications for Business	4
STAT 2010 – Statistical Concepts—Business	4
	<hr/>
	17

#### SPRING SEMESTER

IMGT 2400 – Introduction to Information Management (required minimum grade of C in this capstone course)	3
Laboratory Science Elective	4
Arts and Humanities Elective	3
Physical Education Activity	1
Advisor Approved Electives— choose two from the following list:	6
ACCT 2230 – Intermediate Accounting I	
BADM 2010 – Business Law I	
DSCI 2210 – Production and Operations Management	
FIN 2100 – Managerial Finance	
MKT 2100 – Principles of Marketing	
	<hr/>
	17

Total credit hours required ..... 72

## Associate of Applied Science Degree

The Associate of Applied Science degree in accounting is designed to prepare a student for entry-level and supervisory careers in accounting in government or industry. This degree is not designed for transfer to a bachelor of science program.

Courses taken for satisfactory/unsatisfactory (S/U) grade shall not be applied toward degree requirements.

### First Year

#### FALL SEMESTER

BADM 1000 – Introduction to Business	3
ACCT 2010 – Principles of Accounting I	3
ENGL 1010 – English I: Composition	3
Math Elective – MATH 1000 or higher	3-4
COSC 1200 – Computer Information Systems	3
Physical Education Activity	1
	<hr/>
	16-17

#### SPRING SEMESTER

ACCT 2020 – Principles of Accounting II	3
ACCT 2110 – Microcomputer Accounting I	2
ACCT 2120 – Microcomputer Accounting II	2
ECON 1000 – Survey of Economics -OR-	
ECON 1010 – Principles of Macroeconomics	3
CMAP 1750 – Spreadsheet Applications I	1
CMAP 1755 – Spreadsheet Applications II	1
CMAP 1760 – Spreadsheet Applications III	1
MGT 2100 – Principles of Management	3
	<hr/>
	16

### Second Year

#### FALL SEMESTER

ACCT 2450 – Cost Accounting -OR-	
ACCT 2230 – Intermediate Accounting I	3
ACCT 2460 – Payroll Accounting	3
ACCT 2430 – Income Tax	3
FIN 1001 – Personal Financial Planning	1
FIN 1002 – Risk and Credit Management	1
FIN 1003 – Investment/Retirement Planning	1
BADM 1020 – Business Communication	3
	<hr/>
	15

#### SPRING SEMESTER

CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication	3
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government	3
PSYC 1100 – Organizational Human Relations	3
IMGT 2400 – Introduction to Information Management	3
Accounting or Business Elective (advisor approved)	6
	<hr/>
	18

Total credit hours required ..... 65-66

## Agriculture

This program of study leads to an Associate of Science degree and will transfer to four-year institutions. It is recommended that the student also follow the college or university bulletin from the intended transfer institution. The student can major in one of the following areas:

Ag Business	Animal and Veterinarian Science
Ag Communications	Farm and Ranch Management
Ag Education	General Agriculture
Ag Extension	International Ag Economics
Agroecology	Rangeland Ecology and Watershed Management

### First Year

#### FALL SEMESTER

ENGL 1010 – English I: Composition .....	3
MATH 1400 – Pre-Calculus Algebra .....	4
AGEC 1010 – Agriculture Economics I .....	3
ANSC 1010 – Livestock Production .....	4
AGRI 1010 – Computers: Agriculture .....	3
Physical Education Activity .....	1
	<u>18</u>

#### SPRING SEMESTER

ENGL 1020 – English II .....	3
BIOL 1010 – General Biology .....	4
AGEC 1020 – Agriculture Economics II .....	3
Physical Education Activity .....	1
Agriculture Elective .....	6
	<u>17</u>

### Second Year

#### FALL SEMESTER

STAT 2010 – Statistical Concepts-Business -OR-	
STAT 2070 – Introductory Statistics for the Social Sciences	
-OR-	
MATH 2350 – Business Calculus I .....	4
Arts and Humanities Elective .....	3
Anthropology/Geography/History Elective .....	3
Agriculture Electives .....	6
	<u>16</u>

#### SPRING SEMESTER

AECL 1000 – Agroecology .....	4
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government .....	3
CO/M 1010 – Public Speaking .....	3
AGEC 2395 – Capstone Course for Agriculture Majors .....	3
Agriculture Electives .....	5
	<u>18</u>

Total credit hours required ..... 69

## Agribusiness Technology

This program of study leads to an Associate of Applied Science degree. Agribusiness includes all the agriculture-related occupations other than production agriculture and offers the widest range of employment possibilities. Students have a wide variety of electives to choose from to help develop an educational program tailored to their specific career objectives.

Student background and experience will be evaluated to determine the appropriate courses in order to customize the program, which should include an internship or on-the-job training experience. LCCC's courses offer a wide range of training and educational opportunities.

### First Year

#### FALL SEMESTER

ANSC 1010 – Livestock Production .....	4
ENGL 1010 – English I: Composition .....	3
AGEC 1010 – Agriculture Economics I .....	3
AGRI 1010 – Computers: Agriculture .....	3
AECL 2010 – The Ecological Web: Soils .....	4
Physical Education Activity .....	1
	<u>18</u>

#### SPRING SEMESTER

AGEC 1020 – Agriculture Economics II .....	3
MATH 1510 – Technical Mathematics I .....	3
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government .....	3
CO/M 1010 – Public Speaking .....	3
Animal Science or Agriculture Elective .....	3
Social Science Elective .....	3
	<u>18</u>

### Second Year

#### FALL SEMESTER

AGEC 2010 – Farm-Ranch Business Records .....	3
AGEC 2400 – Farm Credit and Finance .....	3
Accounting Elective .....	3
Agriculture Electives .....	4
Arts and Humanities Elective .....	3
	<u>16</u>

#### SPRING SEMESTER

AGEC 2395 – Capstone Course for Agriculture Majors .....	3
AGEC 2020 – Farm-Ranch Business Management .....	4
AECL 1000 – Agroecology .....	4
AGEC 2500 – Agricultural Trade Policy .....	3
Agriculture Electives .....	3-4
	<u>17-18</u>

Total credit hours required ..... 69-70

## Agriculture Production Technology

This course of study is designed for the student who wants to return to or become employable on a farm or ranch. It will prepare the student for employment in the following areas: farm or ranch foreman or manager, herdsman, feedlot manager, or a job with an agriculture-related industry.

The student's background and experience will be evaluated to determine the exact courses that should be pursued in the development of a personal program for an Associate of Applied Science degree.

### First Year

#### FALL SEMESTER

ANSC 1010 – Livestock Production.....	4
AGEC 1010 – Agriculture Economics I.....	3
ENGL 1010 – English I: Composition .....	3
ANSC 1200 – Livestock Fitting and Showing.....	2
AGRI 1010 – Computers: Agriculture.....	3
	<hr/> 15

#### SPRING SEMESTER

Agriculture Electives.....	6
MATH 1000 – Problem Solving (or higher).....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
Physical Education Activity.....	1
	<hr/> 16

### Second Year

#### FALL SEMESTER

AECL 2010 – The Ecological Web: Soils.....	4
AGEC 2400 – Farm Credit and Finance .....	3
ANSC 1210 – Livestock Judging I.....	2
ANSC 2320 – Livestock Health and Management.....	3
AGEC 2010 – Farm and Ranch Business Records .....	3
RGMG 2000 – Principles of Range Management.....	3
	<hr/> 18

#### SPRING SEMESTER

AGEC 2395 – Capstone Course for Agriculture Majors.....	3
AGEC 2020 – Farm-Ranch Business Management .....	4
AGEC 2500 – Agricultural Trade Policy.....	3
AECL 1000 – Agroecology .....	4
ANSC 2020 – Feeds and Feeding.....	4
	<hr/> 18
Total credit hours required.....	67

## Anthropology

The Associate of Arts degree in anthropology is designed primarily for the student who plans to transfer to a four-year institution and pursue a Bachelor of Arts degree in anthropology. The program is designed around the requirements set by the University of Wyoming for a four-year degree in anthropology. Also, the program can help prepare the student in studies other than anthropology, including prelaw, premedicine, pre dentistry, library paraprofessional, administration of justice, and aging and human development.

A minimum of 64 credit hours is required for an Associate of Arts degree. The student should consult with an academic advisor to ensure that elective courses selected and courses in humanities, fine arts, and any of the sciences are appropriate and transferable. A foreign language is not required for the A.A. in anthropology, but anthropology majors should be aware that most four-year colleges, including the University of Wyoming, require at least eight hours of a foreign language for the B.A. degree.

#### GENERAL EDUCATION COURSES (31-33 CREDIT HOURS)

POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3
Arts and Humanities Electives (two courses from two different disciplines) .....	6
MATH 1000 – Problem Solving (or higher, excluding MATH 1510) .....	3
Lab Science (Physics, Biology, Chemistry, or Earth Science) .....	4
Computer Literacy Elective .....	1-3
Physical Education Activity .....	1
STAT 2070 – Introductory Statistics for the Social Sciences.....	4

#### ELECTIVES

Minimum of 17 hours.....	17
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#### MAJOR CORE REQUIREMENTS

ANTH 1100 – Introduction to Biological Anthropology.....	3
ANTH 1200 – Introduction to Cultural Anthropology.....	3
ANTH 1300 – Introduction to Archaeology.....	3
ANTH 2210 – North American Indians.....	3
ANTH 2395 – Capstone Course for Anthropology Majors .	1
Social Science Elective .....	3
Total credit hours required.....	64

## Art

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 programs such as web page design, multimedia, and computer graphics.

### PROGRAM REQUIREMENTS

ART	1050 – Beginning Drawing .....	3
ART	1060 – Drawing II .....	3
ART	1110 – Foundation: Two Dimensional (Offered fall, even years) .....	3
ART	1120 – Foundation: Three Dimensional (Offered spring, odd years) .....	3
ART	2010 – Art History I (Offered fall) .....	3
ART	2020 – Art History II (Offered spring) .....	3
ART	2210 – Beginning Painting .....	3
ART	2220 – Painting II .....	3
ART	2310 – Sculpture I .....	3
ART	2410 – Ceramics I .....	3
ART	2420 – Ceramics II .....	3
		<hr/>
		33

### COLLEGE REQUIREMENTS

CO/M	1010 – Public Speaking -OR-	
CO/M	1030 – Interpersonal Communication .....	3
ENGL	1010 – English I: Composition .....	3
ENGL	1020 – English II .....	3
MATH	1000 – Problem Solving -OR-	
MATH	1400 – Pre-Calculus Algebra .....	3-4
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History -OR-	
ECON	1200 – Economics, Law, and Government .....	3
	Humanities, Music, Theater Elective .....	6
	Physical Education Activity .....	1
	Lab Science .....	4
	Computer Literacy Elective .....	1
	Social Science Electives .....	6
		<hr/>
		33-34

Total credit hours required ..... 66-67

Studio courses are now listed as levels I or II. Level II sections may be taken twice and will transfer as separate courses.

## Automotive Body Repair

The automotive body repair program is designed to prepare the student for employment in the automotive repair business as well as to meet the needs of those who want to upgrade their skills or meet some personal objectives in auto body repair. The program leads to a nine-month certificate or an Associate of Applied Science degree.

The nine-month program is designed for full-time students, and the courses are offered in a sequence of blocks. Each block is three weeks in length. Classes are held from 9 a.m. to 3:30 p.m. Monday through Friday. The automotive body repair courses are designed to prepare students for the ASE certification exam.

### Nine-Month Certificate

#### FALL SEMESTER

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 .....	3
BADM 1021 – Customer Service I .....	1
MATH 1510 – Technical Mathematics I .....	3
	<hr/> 19

#### 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 .....	3
MGT 1010 – Employment Orientation I .....	1
Computer Literacy Elective .....	1-3
	<hr/> 17-19

## Associate of Applied Science Degree

To earn an Associate of Applied Science degree in automotive body repair, students need to complete the following program of study. The automotive body repair program is designed to prepare the student for employment in the automotive repair business as well as to meet the needs of those who want to upgrade their skills or meet some personal objectives in auto body repair. The automotive body repair courses are designed to prepare students for the ASE certification exam.

### First Year

#### FALL SEMESTER

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 .....	3
BADM 1021 – Customer Service I .....	1
MATH 1510 – Technical Mathematics I .....	3
	<hr/> 19

#### 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 .....	3
MGT 1010 – Employment Orientation I .....	1
Computer Literacy Elective .....	1-3
	<hr/> 17-19

### Second Year

#### FALL SEMESTER

Automotive Technology Elective .....	3
AUBR 1570 – Auto Body Repair III .....	3
ENGL 1010 – English I: Composition .....	3
CO/M 1030 – Interpersonal Communication .....	3
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government .....	3
Physical Education Activity .....	1
	<hr/> 16

#### SPRING SEMESTER

AUBR 1580 – Auto Body Repair IV .....	3
Auto Body Repair Elective (AUBR 1820 -OR- AUBR 1945) ....	3
ENTK 1080 – Principles of Technology -OR-	
MGT 1000 – Introduction to Supervision .....	3-4
ECON 1000 – Survey of Economics .....	3
	<hr/> 12-13

Total credit hours required.....64-67

## Automotive Technology

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 some personal objective of learning about automotive technology.

The nine-month program is designed for full-time students, and the 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. Classes are held from 9 a.m. to 3:30 p.m. Monday through Friday. The automotive technology courses are designed to prepare students for the ASE certification exam.

### Nine-Month Certificate

#### FALL SEMESTER

AUTO 1510 – Engine System Fundamentals.....	4
AUTO 1600 – Fuel Systems I.....	3
AUTO 1765 – Automotive Electrical .....	4
AUTO 2560 – Automotive Ignition Systems .....	3
MATH 1510 – Technical Mathematics I .....	3
BADM 1021 – Customer Service I.....	1
	<hr/> 18

#### 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 – Automotive Alignment and Suspension.....	4
Computer Literacy Elective.....	1-3
MGT 1010 – Employment Orientation I.....	1
	<hr/> 19-21

## Associate of Applied Science Degree

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 some personal objective of learning about automotive technology. The automotive technology courses are designed to prepare students for the ASE certification exam.

### First Year

#### FALL SEMESTER

AUTO 1510 – Engine System Fundamentals.....	4
AUTO 1600 – Fuel Systems I.....	3
AUTO 1765 – Automotive Electrical .....	4
AUTO 2560 – Automotive Ignition Systems .....	3
BADM 1021 – Customer Service I.....	1
MATH 1510 – Technical Mathematics I .....	3
	<hr/> 18

#### 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 – Automotive Alignment and Suspension.....	4
Computer Literacy Elective.....	1-3
MGT 1010 – Employment Orientation I.....	1
	<hr/> 19-21

### Second Year

#### FALL SEMESTER

Automotive Technology Elective .....	3
ENGL 1010 – English I: Composition .....	3
CO/M 1030 – Interpersonal Communication .....	3
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
Automotive Body Repair Elective.....	3
Physical Education Activity.....	1
	<hr/> 16

#### SPRING SEMESTER

ENTK 1080 – Principles of Technology -OR-	
MGT 1000 – Introduction to Supervision.....	3-4
ECON 1000 – Survey of Economics .....	3
Diesel Technology Elective.....	3
Electives (approved by advisor).....	3-5
	<hr/> 12-15

Total credit hours required.....65-70

## Biology

Biology is a dynamic and rapidly changing field. Recent advancements in molecular and cellular biology have led to expanded employment opportunities for biological and life scientists. Students planning careers in biology, biochemistry, botany, forestry, microbiology, or zoology should complete this curriculum.

The successful completion of this program leads to an Associate of Science degree with anticipated transfer to a four-year program. The program plan provides flexibility for transfer. Students interested in the following professional fields may choose to follow the biology curriculum before transferring into medical-related professional programs such as dentistry, medicine, physical therapy, or veterinary medicine.

Please note: Students are strongly encouraged to meet with an advisor to determine courses that will transfer to the four-year college/program of their choice.

### GENERAL EDUCATION CORE (35-38 total credit hours)

#### Communication and Information Literacy (9 credits)

ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
CO/M 1010 – Public Speaking .....	3

#### Mathematics and Quantitative Reasoning (9-12 credit hours)

MATH 1400 – Pre-Calculus Algebra (4 credits) -AND-	
MATH 1405 – Pre-Calculus Trigonometry (3 credits) -OR-	
MATH 1450 – Pre-Calculus Algebra/Trigonometry	
(5 credits) .....	5-7
MATH 2200 – Calculus I (5 credits) -OR-	
STAT 2050 – Fundamentals of Statistics (4 credits) .....	4-5

#### Cultural, Historical, Political, and Social Development (9 credit hours)

POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government .....	3
Social Science Elective Recommendations:	
ANTH 1100 – Introduction to Biological Anthropology -OR-	
PSYC 1000 – General Psychology .....	3
Arts and Humanities Elective .....	3

#### Computer Literacy (3 credit hours) .....

3	
<b>Scientific and Technical Processes (4 credit hours)</b>	
Lab science (physical, biological, or earth lab science)	
BIOL 1010 – General Biology .....	4

#### Physical Wellness (1 credit hour).....

### PROGRAM REQUIREMENTS (21 total credit hours)

BIOL 2022 – Animal Biology .....	4
BIOL 2023 – Biology of Plants and Fungi .....	4
CHEM 1020 – General Chemistry I.....	5
CHEM 1030 – General Chemistry II.....	4
MICR 2210 – General Microbiology.....	4

### ELECTIVES (Minimum of 8 credit hours)

Recommendations:	
BIOL 1390 – Scientific Research I .....	4
BIOL 2320 – Tropical Ecology .....	4
BIOL 2390 – Scientific Research II .....	4
BIOL 2470 – Field Methods in the Biological Sciences....	4
CHEM 2320 – Organic Chemistry I -AND-	
CHEM 2325 – Organic Chemistry Lab.....	4
CHEM 2340 – Organic Chemistry II -AND-	
CHEM 2345 – Organic Chemistry II Lab.....	4
MATH 2200 – Calculus I.....	4
PHYS 1110 – General Physics I.....	4
PHYS 1120 – General Physics II .....	4
STAT 2050 – Fundamentals of Statistics .....	4

Total minimum credit hours required ..... 67

## Preprofessional Option: Prepharmacy

The following Associate of Science degree option is designed for students who are interested in the profession of pharmacy. Students are urged to study carefully the specific requirements of the institutions to which they plan to transfer. A written curriculum plan must be discussed in detail with an advisor. Based on student transfer needs, course substitutions are possible; however, the Associate of Science degree requirements must be met.

### First Year

#### FALL SEMESTER

BIOL 1010 – General Biology .....	4
CHEM 1020 – General Chemistry I.....	5
ENGL 1010 – English I: Composition .....	3
MATH 1450 – Pre-Calculus Algebra/Trigonometry .....	5
Physical Education Activity.....	1
	<hr/> 18

#### SPRING SEMESTER

BIOL 2022 – Animal Biology .....	4
CHEM 1030 – General Chemistry II.....	4
ZOO 2010 – Anatomy and Physiology I* -OR-.....	5
ZOO 2015 – Human Anatomy**.....	4
MATH 2200 – Calculus I.....	5
	<hr/> 17-18

### Second year

#### FALL SEMESTER

CHEM 2320 – Organic Chemistry I.....	3
CHEM 2325 – Organic Chemistry Lab I.....	1
ENGL 1020 – English II .....	3
ZOO 2020 – Anatomy and Physiology II* -OR-.....	5
ZOO 2025 – Human Physiology .....	4
ANTH 1100 – Introduction to Biological Anthropology -OR-	
ANTH 1200 – Introduction to Cultural Anthropology -OR- .	3
POLS 1000 – American or Wyoming Government -OR-	
HIST 1211 – U.S. to 1685 -OR-	
HIST 1221 – U.S. from 1685 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
	<hr/> 17-18

#### SPRING SEMESTER

CHEM 2340 – Organic Chemistry II.....	3
CHEM 2345 – Organic Chemistry Lab II.....	1
MICR 2240 – Medical Microbiology.....	4
PHIL 1000 – Introduction to Philosophy.....	3
CO/M 1010 – Public Speaking .....	3
STAT 2050 – Fundamentals of Statistics .....	4
	<hr/> 18

Total credit hours required..... 70-72

## Business Administration

The business administration major is designed for students who wish to prepare for a wide range of career options in business, industry, or government and for employees contemplating advancement to positions requiring some knowledge of organization and management. The curriculum as shown will lead to an Associate of Science degree in business administration, and courses transfer to four-year institutions, especially the University of Wyoming, for the Bachelor of Science degree.

Courses taken for a satisfactory/unsatisfactory (S/U) grade shall not be applied toward degree requirements.

Students must have at least a 2.5 GPA to transfer to the University of Wyoming's College of Business.

### First Year

#### FALL SEMESTER

ACCT	2010 – Principles of Accounting I .....	3
BADM	1000 – Introduction to Business .....	3
COSC	1200 – Computer Information Systems .....	3
ECON	1200 – Economics, Law, and Government -OR-	
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History .....	3
ENGL	1010 – English I: Composition .....	3
MATH	1400 – Pre-Calculus Algebra .....	4
		<hr/> 19

#### SPRING SEMESTER

ACCT	2020 – Principles of Accounting II .....	3
BUSN	2000 – International Business .....	3
CO/M	1010 – Public Speaking .....	3
ECON	1010 – Principles of Macroeconomics .....	3
ENGL	1020 – English II .....	3
MATH	2350 – Business Calculus I .....	4
		<hr/> 19

### Second Year

#### FALL SEMESTER

ECON	1020 – Principles of Microeconomics .....	3
MGT	2100 – Principles of Management .....	3
MKT	2100 – Principles of Marketing .....	3
MATH	2355 – Mathematical Applications for Business .....	4
STAT	2010 – Statistical Concepts-Business .....	4
		<hr/> 17

#### SPRING SEMESTER

IMGT	2400 – Introduction to Information Management (required minimum grade of "C" in this capstone course) .....	3
	Arts and Humanities Elective .....	3
	Laboratory Science Elective .....	4
	Physical Education Activity .....	1
	Advisor-Approved Electives— choose two from the following: .....	6
ACCT	2450 – Cost Accounting	
BADM	2010 – Business Law	
DSCI	2210 – Production and Operations Management	
FIN	2100 – Managerial Finance	
		<hr/> 17

Total credit hours required..... 72



## Business Management

The business management program is designed to prepare students for supervisory and managerial careers in service-oriented businesses, government, and in technical industries. These two-year occupational programs combine academic study with work-related experience and lead to the Associate of Applied Science degree in business management. Courses taken for a satisfactory/unsatisfactory (S/U) grade shall not be applied toward degree requirements.

### GENERAL EDUCATION CORE

#### Written Communication

ENGL 1010 – English I: Composition ..... 3

#### Oral Communication

CO/M 1010 – Public Speaking -OR-  
CO/M 1030 – Interpersonal Communication ..... 3

#### Computer Literacy

COSC 1200 – Computer Information Systems ..... 3

#### Quantitative Reasoning

MATH 1000 – Problem Solving -OR-  
MATH 1400 – Pre-Calculus Algebra ..... 3-4

#### Scientific/Technical Reasoning

ACCT 2010 – Principles of Accounting I ..... 3

#### Social Sciences

ECON 1000 – Survey of Economics ..... 3

#### Physical Education

Any PEAC activity course ..... 1

#### Wyoming Statutory Requirement

POLS 1000 – American and Wyoming Government -OR-  
HIST 1211 – U.S. to 1865 -OR-  
HIST 1221 – U.S. from 1865 -OR-  
HIST 1251 – Wyoming History -OR-  
ECON 1200 – Economics, Law, and Government ..... 3  
Total general education core ..... 22-23

### CORE REQUIREMENTS

BADM 1000 – Introduction to Business ..... 3  
BADM 1020 – Business Communication ..... 3  
FIN 1001 – Personal Financial Planning ..... 1  
FIN 1002 – Risk and Credit Management ..... 1  
FIN 1003 – Investment/Retirement Planning ..... 1  
BADM 2010 – Business Law I ..... 3  
BUSN 2000 – International Business ..... 3  
IMGT 2400 – Introduction to Information Management .. 3  
MKT 2100 – Principles of Marketing ..... 3  
PSYC 1100 – Organizational Human Relations ..... 3  
MKT 1000 – Sales -OR-  
MKT 1300 – Advertising ..... 3  
MGT 2100 – Principles of Management ..... 3  
ACCT elective (advisor approved) ..... 2-3  
MGT 1000 – Supervision -OR-  
MGT 1200 – Human Resources Management ..... 3  
Electives (advisor-approved elective—Accounting,  
Business Administration, Computer Applications,  
Computer Science, Economics, Entrepreneurship,  
Internet Technology, Management, Marketing) ..... 6-7  
Total core requirements ..... 41-43  
Total minimum credit hours required ..... 64

## Entrepreneurship Business Plan Certificate

The Entrepreneurship Business Plan Certificate program is designed to be “added” on to any career or occupational degree for students who want focused education in small business creation or the existing business owner who needs to develop new growth strategies or a business plan.

### CERTIFICATE COURSEWORK

ENTR 1500 – Successful Entrepreneurship ..... 2  
ENTR 1510 – Analyzing Business Opportunities ..... 2  
ENTR 1520 – Creating a Business Plan ..... 2  
Total credit hours required ..... 6

## Entrepreneurship Certificate

The Entrepreneurship Certificate program is designed as a focused study in small business creation and management for the student or existing business owner.

### CERTIFICATE COURSEWORK

ENTR 1500 – Successful Entrepreneurship ..... 2  
ENTR 1510 – Analyzing Business Opportunities ..... 2  
ENTR 1520 – Creating a Business Plan ..... 2  
BADM 2010 – Business Law I ..... 3  
MGT 2460 – Topics in Business and Management ..... 2  
MKT 2100 – Principles of Marketing ..... 3  
ENTR 2550 – Social and Internet  
Technologies for Business ..... 2  
ENTR 1550 – Creativity: The Business Tool ..... 2  
ENTR 2540 – Small Business Financial Management ..... 2  
ECON 1000 – Survey of Economics ..... 3  
ACCT 2460 – Payroll Accounting ..... 3  
MKT 1000 – Sales ..... 3  
Elective in area of business interest ..... 3  
Total credit hours required ..... 32

## Chemistry

Chemists work for a variety of manufacturing and non-manufacturing industries. Almost two-thirds of all chemists work for manufacturing firms—about one-half of these are in the chemical manufacturing industry; the rest are employed throughout other manufacturing industries such as textiles, paper, petroleum, electronics, and food. Chemists also work for state and local governments in health and agriculture and for federal agencies, chiefly the Departments of Defense, Health and Human Resources, and Agriculture. Chemists also hold teaching and/or research positions in colleges, universities, and high schools.

Students planning careers as chemists should enjoy studying science and mathematics and should like working with their hands, building scientific apparatus, and performing experiments. Perseverance and ability to concentrate on detail and to work independently are essential. Other assets include an inquisitive mind and imagination.

Completion of the following curriculum will qualify the student for the Associate of Science degree.

Those students unprepared to begin the calculus sequence upon entry at LCCC will determine their course of study in consultation with an advisor.

### First Year

#### FALL SEMESTER

CHEM	1020 – General Chemistry I	4
MATH	1450 – Pre-Calculus Algebra/Trigonometry	5
ENGL	1010 – English I: Composition	3
ES	1060 – Introduction to Engineering Computing	3
		<u>15</u>

#### SPRING SEMESTER

CHEM	1030 – General Chemistry II	4
MATH	2200 – Calculus I	5
ENGL	1020 – English II	3
BIOL	1010 – General Biology	4
	Physical Education Activity	1
		<u>17</u>

### Second Year

#### FALL SEMESTER

CHEM	2320 – Organic Chemistry I	3
CHEM	2325 – Organic Chemistry Lab I	1
MATH	2205 – Calculus II	5
PHYS	1310 – College Physics I	4
CO/M	1010 – Public Speaking	3
HIST	1110 – Western Civilization I -OR-	
ANTH	1200 – Introduction to Cultural Anthropology	3
		<u>19</u>

#### SPRING SEMESTER

CHEM	2340 – Organic Chemistry II	3
CHEM	2345 – Organic Chemistry Lab II	1
MATH	2210 – Calculus III	5
PHYS	1320 – College Physics II	4
PHIL	1000 – Introduction to Philosophy -OR-	
MUSC	1000 – Introduction to Music	3
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History -OR-	
ECON	1200 – Economics, Law, and Government	3
		<u>19</u>

Total credit hours required..... 70

## Communication

The communication program of study prepares students to reach their potential as citizens, scholars, and professionals through the development of communication competence at both the theoretical and applied levels. The focus is on how people create messages to generate meanings within and across various contexts, cultures, and channels of communication. Debate and forensics are integral applied skills offered in the program. Courses are designed for student transfer to four-year institutions.

Nonspeech majors may wish to study in the communication area for self-improvement or for theoretical familiarity.

### PROGRAM REQUIREMENTS

CO/M	1010 – Public Speaking	3
CO/M	1030 – Interpersonal Communication	3
CO/M	1040 – Introduction to Human Communication (Offered spring, even years)	3
CO/M	2060 – Forensics Practicum	3
CO/M	2120 – Small Group Communication (Offered fall, even years)	3
		<u>15</u>

### COLLEGE REQUIREMENTS

	Art, Music, Theater Elective	3
ENGL	1010 – English I: Composition	3
ENGL	1020 – English II	3
ENGL	2030 – Critical Reading and Writing -OR-	
BADM	1020 – Business Communication	3
	Sophomore Level Literature	3
HUMN	1010 – Introductory Humanities I	3
HUMN	1020 – Introductory Humanities II	3
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History -OR-	
ECON	1200 – Economics, Law, and Government	3
MMMM	1000 – Introduction to Mass Media	3
	History Elective	3
MATH	1000 – Problem Solving -OR-	
MATH	1400 – Pre-Calculus Algebra	3-4
PHIL	2301 – Ethics	3
	Physical Education Activity	1
	Computer Literacy Elective	1
	Lab Science	4
PSYC	1000 – General Psychology	3
SOC	1000 – Sociological Principles	3
		<u>48-49</u>

Total credit hours required..... 64

## Computer Information Systems

The computer information systems program is specifically designed to prepare students for entry-level positions in fields related to Information Technology. The options listed below offer flexibility in meeting students' career needs. These courses of study lead to the Associate of Applied Science degree in Computer Information Systems.

Various certificates are also offered.

### Associate of Applied Science

#### General Education Courses (20 credit hours)

MATH	1400 – Pre-Calculus Algebra	4
ENGL	1010 – English I: Composition	3
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History -OR-	
ECON	1200 – Economics, Law, and Government	3
CO/M	1010 – Public Speaking	3
	Physical Education Activity	1
ECON	1000 – Survey of Economics (or higher)	3
COSC	1200 – Computer Information Systems	3

#### PROGRAM REQUIREMENTS

##### Core Courses (10 credit hours)

BADM	1000 – Introduction to Business	3
COSC	1010 – Introduction to Computer Science I	4
IMGT	2400 – Introduction to Information Management (taken in the student's final semester)	3

##### Areas of Specialization (34 credit hours)

**Students must select courses from at least two of the following areas, for a minimum of 34 additional credit hours. All courses must be approved by a program advisor. (Certificate programs follow this list.)**

##### Business

Advisor-approved maximum of 6 credit hours in BADM, BUSN, MGT, ACCT

##### Cisco Networking

Advisor-approved courses in the Cisco Networking Certificates

##### Computer Security

Advisor-approved courses in the Computer Security Certificate

##### Computer Support Specialist

Advisor-approved courses in the Computer Support Specialist Certificate

##### Computer Technician

Advisor-approved courses in the Computer Technician Certificate

##### Linux Systems

Advisor-approved courses in the Linux Systems Certificate

##### Microsoft

Advisor-approved courses with an MSFT prefix.

##### Office Application Specialist

Advisor-approved courses in the Office Application Specialist Certificate

##### Programmer

Advisor-approved courses in the Programmer Certificate

##### Web Design

Advisor-approved courses in the Web Design Certificate

## Computer Information System Certificates

Please note that courses within each certificate may have prerequisites. Be sure to check the course listings for these course prerequisites. All certificates can be applied to the Computer Information Systems Associate of Applied Science degree.

### Cisco Certified Networking Associate (CCNA) Certificate

The Cisco Certified Networking Associate certificate 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.

CMAP	1615 – Operating Systems	3
CMAP	1920 – Computer Hardware Maintenance	3
COSC	1010 – Introduction to Computer Science I	4
COSC	1200 – Computer Information Systems	3
CSCO	2000 – Cisco: Internetworking I	3
CSCO	2010 – Cisco: Advanced Internetworking I	3
CSCO	2020 – Cisco: Advanced Internetworking II	3
CSCO	2025 – Cisco: Advanced Internetworking III	3
		<u>25</u>

### Cisco Certified Networking Professional (CCNP) Certificate

The Cisco Certified Networking Professional certificate is designed to provide students with the necessary advanced skills in Cisco Networking Technology and to prepare the student to take the Cisco certification for the CCNP.

	Completion of the CCNA certificate courses (see above)	25
CSCO	2050 – CCNP I: Advanced Router Configuration	3
CSCO	2060 – CCNP II: Building Remote Access Networks	3
CSCO	2070 – CCNP III: Multi-Layer Switched Networks	3
CSCO	2080 – CCNP IV: Internetwork Troubleshooting	3
		<u>37</u>

### Computer Security Certificate

The Computer Security certificate prepares students for entry-level employment related to computer security.

CMAP	1615 – Operating Systems	3
CMAP	1920 – Computer Hardware Maintenance	3
COSC	1200 – Computer Information Systems	3
CMAP	1650 – Introduction to Networking	1
MSFT	2578 – Networking Essentials -OR-	
CSCO	2000 – Cisco: Internetworking I	3-4
CSEC	1500 – Network Security Fundamentals	3
CSEC	1510 – Network Defense Principles	3
CSEC	1520 – Network Attack Principles	3
CSEC	1530 – Computer Forensics	3
		<u>25-26</u>

### Computer Support Specialist Certificate

The Computer Support Specialist certificate prepares students for entry-level positions at computer help desks and call centers. Students are prepared for industry certifications for Help Desk Analyst, Microsoft Office Specialist, and the CompTIA A+ Certification Exam.

COSC	1200 – Computer Information Systems	3
CMAP	1610 – Windows I	1
CMAP	1650 – Introduction to Networking	1
CMAP	1700 – Word Processing I: Word	1
CMAP	1705 – Word Processing II: Word	1
CMAP	1710 – Word Processing III: Word	1
INET	1550 – Introduction to the Internet	1
CMAP	2630 – Presentation Graphics: Microsoft PowerPoint	1

CMAP 1615 – Operating Systems .....	3
CMAP 1920 – Computer Hardware Maintenance .....	3
CMAP 1750 – Spreadsheet Applications I: Excel .....	1
CMAP 1755 – Spreadsheet Applications II: Excel .....	1
CMAP 1760 – Spreadsheet Applications III: Excel .....	1
CMAP 1800 – Database Applications I: Access .....	1
CMAP 1805 – Database Applications II: Access .....	1
CMAP 1810 – Database Applications III: Access .....	1
CMAP 1886 – Microsoft Outlook .....	1
CMAP 2471 – PC Support Skills .....	1
CMAP 2472 – Data Protection and Recovery I .....	1
CMAP 2473 – Data Protection and Recovery II .....	1
	<hr/>
	26

### Computer Technician Certificate

The Computer Technician certificate prepares students for entry-level positions as computer services technicians. Students are prepared to take the CompTIA A+ Certification Exam.

CMAP 1610 – Windows I .....	1
CMAP 1650 – Introduction to Networking .....	1
INET 1550 – Introduction to the Internet .....	1
COSC 1200 – Computer Information Systems .....	3
CMAP 1615 – Operating Systems .....	3
CMAP 1920 – Computer Hardware Maintenance .....	3
CMAP or COSC Electives .....	4
	<hr/>
	16

### Linux Systems Certificate

The Linux Systems certificate provides students with a foundation of Linux systems and networks and prepares students for entry-level positions in systems and network administration. Students are prepared for the CompTIA Linux+ and Linux Professional Institute (LPI) certification exams.

COSC 1200 – Computer Information Systems .....	3
CMAP 1920 – Computer Hardware Maintenance .....	3
CMAP 1615 – Operating Systems .....	3
COSC 1010 – Introduction to Computer Science I .....	4
MSFT 2578 – Networking Essentials .....	4
LINX 2500 – Linux Administration I .....	4
LINX 2510 – Linux Administration II .....	4
LINX Electives .....	4

### Microsoft Systems and Networks Certificate

The Microsoft Systems and Networks certificate program provides in-depth study of the design and implementation of Microsoft systems and networks. This program provides a solid foundation for learners who plan careers in systems/network administration, engineering, analysis, and management. Learners gain the working knowledge, skills, and experience needed to compete for enterprise-level systems and network engineering positions. By completing this certificate program, learners prepare for related industry certifications including Microsoft Certified Technology Specialist and Microsoft Certified IT Professional.

#### FIRST SEMESTER

CMAP 1615 – Operating Systems .....	3
MSFT 2578 – Networking Essentials .....	4
MSFT 2600 – Implementing Microsoft Windows Desktop Environments .....	4
MSFT 2700 – Managing and Maintaining Microsoft Servers .....	4
	<hr/>
	15

#### SECOND SEMESTER

LINX 2500 – Linux Administration I .....	4
MSFT 2710 – Microsoft Active Directory .....	4
MSFT 2720 – Microsoft Network Infrastructure .....	4
MSFT 2730 – Microsoft Application Servers -OR- MSFT Elective .....	4
	<hr/>
	16
Total credit hours .....	31

### Office Application Specialist Certificate

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

CMAP 1500 – Computer Keyboarding (or demonstrate keyboarding at 25 wpm) .....	1
COSC 1200 – Computer Information Systems .....	3
CMAP 1610 – Windows I .....	1
CMAP 1650 – Introduction to Networking .....	1
CMAP 1700 – Word Processing I: Word .....	1
CMAP 1705 – Word Processing II: Word .....	1
CMAP 1710 – Word Processing III: Word .....	1
INET 1550 – Introduction to the Internet .....	1
CMAP 2630 – Presentation Graphics: Microsoft PowerPoint .....	1
CMAP 1750 – Spreadsheet Applications I: Excel .....	1
CMAP 1755 – Spreadsheet Applications II: Excel .....	1
CMAP 1800 – Database Applications I: Access .....	1
CMAP 1805 – Database Applications II: Access .....	1
CMAP 1886 – Microsoft Outlook .....	1
INET 1581 – Web Page Authoring I .....	1
ACCT 2010 – Principles of Accounting I .....	3
BADM 1020 – Business Communication .....	3
BOTK 2750 – Records and Information Management .....	3
	<hr/>
	26

### Programmer Certificate

The Programmer certificate is designed to provide students with the necessary skills for employment as an entry-level programmer. The programming courses must be advisor-approved.

COSC 1200 – Computer Information Systems .....	3
COSC 1010 – Introduction to Computer Science I .....	4
INET 1581 – Web Page Authoring I .....	1
INET 1582 – Web Page Authoring II .....	1
INET 1583 – Web Page Authoring III .....	1
Programming courses with prefix of CMAP or COSC .....	12
	<hr/>
	22

### Web Design Certificate

The Web Design certificate is designed to provide students with the necessary skills for employment as an entry-level web designer. The INET and MMMM courses must be advisor-approved.

COSC 1200 – Computer Information Systems .....	3
INET 1581 – Web Page Authoring I .....	1
INET 1582 – Web Page Authoring II .....	1
INET 1583 – Web Page Authoring III .....	1
INET 1640 – Web Development Tools: .....	3
INET 2020 – Designing E-Commerce Web Sites -OR- INET 2620 – Designing Effective Web Sites .....	3
Web Design (INET) and Multimedia (MMMM) courses .....	6
	<hr/>
	18

## Computer Science

Computer science is the study of computer hardware, software, and system architecture. It offers the student experience in creating computer programs; selecting appropriate languages and data structures; identifying capabilities and limitations of computer systems; and designing new languages, operating systems, and hardware components.

This program leads to an Associate of Science degree and is designed to satisfy the first two years of a Bachelor of Science in computer science at the University of Wyoming.

### First Year

#### FALL SEMESTER

COSC 1010 – Introduction to Computer Science I.....	4
COSC 1200 – Computer Information Systems .....	3
ENGL 1010 – English I: Composition .....	3
MATH 2200 – Calculus I.....	5
Physical Education Activity.....	1
	<u>16</u>

#### SPRING SEMESTER

COSC 1030 – Computer Science I .....	4
MATH 2205 – Calculus II.....	5
ENGL 1020 – English II .....	3
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
	<u>15</u>

### Second Year

#### FALL SEMESTER

COSC 2030 – Computer Science II .....	4
MATH 2210 – Calculus III .....	5
Lab Science Elective (BIOL 1010, CHEM 1020, or PHYS 1310).....	4
Foreign Language I .....	4
	<u>17</u>

#### SPRING SEMESTER

CO/M 1010 – Public Speaking .....	3
Lab Science Elective (continuation of Biology, Chemistry, or Physics).....	4
Foreign Language II .....	4
ECON 1010 – Principles of Macroeconomics .....	3
CMAP Programming Elective (advisor approved).....	3
	<u>17</u>
Total credit hours required.....	65

## Computers and Business Option

An understanding of business fundamentals is essential for students planning a career in applied computer science in a business environment. This program of study provides a foundation in computer science, business, and information management. It includes courses in accounting, management, marketing, database fundamentals, and design and implementation of software systems.

This program leads to an Associate of Science degree and is designed to satisfy the first two years of a Bachelor of Science in Computer Science degree at the University of Wyoming.

### First Year

#### FALL SEMESTER

COSC 1010 – Introduction to Computer Science I.....	4
COSC 1200 – Computer Information Systems .....	3
ENGL 1010 – English I: Composition .....	3
MATH 2200 – Calculus I -OR-	
MATH 2350 – Business Calculus I.....	4-5
Physical Education Activity.....	1
	<u>15-16</u>

#### SPRING SEMESTER

BADM 1000 – Introduction to Business .....	3
COSC 1030 – Computer Science I .....	4
ENGL 1020 – English II .....	3
MATH 2205 – Calculus II -OR-	
MATH 2355 – Mathematical Applications for Business.....	4-5
Humanities Elective .....	3
	<u>17-18</u>

### Second Year

#### FALL SEMESTER

ACCT 2010 – Principles of Accounting I .....	3
COSC 2030 – Computer Science II .....	4
ECON 1010 – Principles of Macroeconomics .....	3
Lab Science Elective (BIOL 1010, CHEM 1020, or PHYS 1310).....	4
STAT 2010 – Statistical Concepts–Business .....	4
	<u>18</u>

#### SPRING SEMESTER

ACCT 2020 – Principles of Accounting II .....	3
CO/M 1010 – Public Speaking .....	3
ECON 1200 – Economics, Law, and Government -OR-	
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History .....	3
IMGT 2400 – Introduction to Information Management ..	3
Lab Science Elective (continuation of BIOL, CHEM, or PHYS).....	4
	<u>16</u>
Total credit hours required.....	66-68

## Criminal Justice

The three Associate of Arts degree majors—law enforcement, corrections, and prelaw—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.

Students are urged to obtain specific information regarding the requirements and recommendations of the institution to which they plan to transfer if they will be seeking a bachelor's degree.

For degree requirements, refer to [Page 28](#).

A minimum of 64 credit hours is required for each of these three specialties, including the courses listed below.

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 for 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.

First-year courses for law enforcement, corrections, and prelaw include:

### First Year

CRMJ 2120 – Introduction to Criminal Justice .....	3
CRMJ 2210 – Criminal Law I.....	3
CRMJ 2350 – Introduction to Corrections .....	3
POLS 1000 – American and Wyoming Government .....	3
COSC 1200 – Computer Information Systems .....	3
ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
CO/M 1030 – Interpersonal Communication .....	3
MATH 1000 – Problem Solving -OR-	
MATH 1400 – Pre-Calculus Algebra.....	3-4
SOC 1000 – Sociological Principles.....	3
Physical Education Activity .....	1
	<u>31-32</u>

### Corrections

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.

### Second Year

CRMJ 2220 – Criminal Law II.....	3
CRMJ 2420 – Juvenile Justice.....	3
PSYC 2210 – Drugs and Behavior .....	3
CRMJ 2400/SOC 2400 – Criminology.....	3
CRMJ 2380 – Probation and Parole .....	3
CRMJ 2370 – Correctional Institutions.....	3
Elective .....	3
PSYC 1000 – General Psychology .....	3
Arts and Humanities* (Language preferred) .....	6-7
Lab Science (Physical, Biological, or Earth).....	4
	<u>34-35</u>

Program Total .....65-67

\*Must be in two different disciplines.

## Law Enforcement

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.

### Second Year

CRMJ 2220 – Criminal Law II.....	3
CRMJ 2400/SOC 2400 – Criminology.....	3
CRMJ 1310 – Criminal Investigation I.....	3
CRMJ 1320 – Criminal Investigation II.....	3
CRMJ 2420 – Juvenile Justice.....	3
PSYC 2210 – Drugs and Behavior .....	3
PSYC 1000 – General Psychology .....	3
Lab Science (Physical, Biological, or Earth).....	4
Arts and Humanities* (Language preferred) .....	6-7
CRMJ 1510 – Police Science I.....	3
	<u>34-35</u>

Program Total .....65-67

\*Must be in two different disciplines.

### Prelaw

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.

### Second Year

CRMJ 2220 – Criminal Law II.....	3
CRMJ 2420 – Juvenile Justice.....	3
PSYC 2210 – Drugs and Behavior .....	3
CRMJ 2400/SOC 2400 – Criminology.....	3
CRMJ 2380 – Probation and Parole .....	3
Elective .....	3
PSYC 1000 – General Psychology .....	3
Arts and Humanities* (Language preferred) .....	6-7
Lab Science (Physical, Biological or Earth).....	4
	<u>31-32</u>

Program Total ..... 64

\*Must be in two different disciplines.

## Customer Service

The customer service certificate program curriculum is designed to provide a student with basic skills in communication and business. Upon completion of the program, a graduate may find employment as a customer service representative with a profit-making organization or a similar career with an organization that serves the public.

### *Nine-Month Certificate*

#### **FIRST SEMESTER**

BADM	1021 – Customer Service I.....	1
ENGL	0700 – Fundamentals of English.....	3
INET	1550 – Introduction to the Internet.....	1
MGT	1010 – Employment Orientation I.....	1
BADM	1000 – Introduction to Business.....	3
CMAP	1500 – Computer Keyboarding*.....	1
CMAP	1610 – Windows I.....	1
CO/M	1030 – Interpersonal Communication -OR-	
CO/M	1010 – Public Speaking.....	3
	Advisor-Approved Electives.....	3
		<u>17</u>

#### **SECOND SEMESTER**

BADM	1022 – Customer Service II.....	1
BADM	1020 – Business Communication.....	3
MKT	1000 – Sales -OR-	
MGT	1000 – Introduction to Supervision.....	3
COSC	1200 – Computer Information Systems.....	3
	Advisor-Approved Electives.....	7
		<u>17</u>

Total credit hours required..... 34

\* If a student has keyboarding skills at 25 words a minute, another approved elective will be substituted for this elective.

# Dental Hygiene

The dental hygienist is a preventive oral care professional licensed to provide educational, clinical, and therapeutic dental hygiene services to the public.

This unique 16-month program combines academic study with supervised clinical experience. Graduates of the program receive the 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 LCCC dental hygiene program is accredited by the Commission on Dental Accreditation. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at 312.440.4653 or at 211 East Chicago Avenue, Chicago, Illinois 60611.

The dental hygiene program is a vigorous study of advanced science classes offered in an accelerated format. General education and basic science courses are essential to prepare students to succeed. Therefore, applicants are required to complete pre-dental hygiene course requirements. Each prerequisite course must be completed with a grade of "C" or higher. Completion of the prerequisite coursework does not guarantee admission into the dental hygiene program. Additionally, LCCC's academic skills assessment and placement policy apply.

## PREREQUISITE COURSES

ENGL	1010 – English I: Composition .....	3
MATH	1000 – Problem Solving (or higher).....	3
SOC	1000 – Sociological Principles <sup>1</sup> .....	3
PSYC	1000 – General Psychology.....	3
CO/M	1010 – Public Speaking <sup>2</sup> .....	3
CHEM	1000 – Introductory Chemistry.....	4
EITHER:		
ZOO	2010 – Anatomy and Physiology I* -AND- .....	4-5
ZOO	2020 – Anatomy and Physiology II* .....	4-5
OR:		
ZOO	2015 – Human Anatomy* -AND- .....	4
ZOO	2025 – Human Physiology* (Students must complete one 8-credit sequence. Taking one course from each sequence will NOT fulfill this requirement).....	4
MOLB	2220 – Pathogenic Microbiology* -OR-	
MICR	2240 – Medical Microbiology*.....	4
HOEC	1140 – Nutrition .....	2
Physical Education Activity.....		
1		
POLS	1000 – American and Wyoming Government (optional prerequisite, required program course)**	

<sup>1</sup>May substitute ANTH 1200 – Cultural Anthropology

<sup>2</sup>May substitute CO/M 1030 – Interpersonal Communication

<sup>3</sup>Please see advisor

\* Must be five 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. It is highly recommended that the student complete this course prior to beginning the dental hygiene program<sup>3</sup>.**

## 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. Selection of new students is based on a student's grade point average, prerequisites completed, the date of receipt of application, and other criteria as noted on the program application materials.

Dental health professionals may be exposed to contagious diseases, therefore, strict compliance with Centers of 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. Documentation of beginning the Hepatitis B vaccine series is required by November 15. Students should contact a health care provider for information about this vaccine and other immunization requirements.

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.

Applicants must obtain an information packet that outlines the dental hygiene academic calendar, program costs, Health Care Provider CPR requirement, blood borne pathogens, immunization, criminal background check and chemical impairment policies, and estimated student expenses that are specific to the Dental Hygiene Program. These packets can be obtained from the Dental Hygiene Director, the Dental Hygiene Office, the dental hygiene homepage at [lccc.wy.edu](http://lccc.wy.edu) or from the LCCC Admissions Office. It is the applicant's responsibility to seek current information and to see that her/his file is complete.

## TERM I

DHYG	1110 – Dental Biology .....	3
DHYG	1150 – Preventive Dentistry .....	3
DHYG	1410 – Dental Hygiene Principles .....	6
DHYG	2450 – Dental Radiology.....	3
DHYG	1685 – Computer Applications in Dental Hygiene.....	1
		<hr/>
		16

## TERM 2

DHYG	1200 – Pharmacology.....	2
DHYG	1310 – Periodontology I.....	1
DHYG	1420 – Dental Hygiene Seminar I.....	3
DHYG	1425 – Dental Hygiene Clinic I.....	3
DHYG	2400 – Head, Neck and Oral Anatomy.....	2
DHYG	2460 – Dental Materials .....	3
		<hr/>
		14

## TERM 3

DHYG	2200 – General and Oral Pathology.....	3
DHYG	2250 – Pain Management .....	2.5
DHYG	2330 – Periodontology II.....	3
DHYG	2430 – Dental Hygiene Seminar II.....	2
DHYG	2435 – Dental Hygiene Clinic II.....	5
DHYG	2451 – Dental Radiology Interpretation.....	1
		<hr/>
		16.5

## TERM 4

DHYG	2260 – Dental Public Health .....	3
DHYG	2410 – Ethics, Law and Practice Management .....	3
DHYG	2440 – Dental Hygiene Seminar III.....	2
DHYG	2445 – Dental Hygiene Clinic III .....	5
POLS	1000 – American and Wyoming Government* -OR-	
HIST	1211 – U.S. to 1865* -OR-	
HIST	1221 – U.S. from 1865* -OR-	
HIST	1251 – Wyoming History* -OR-	
ECON	1200 – Economics, Law, and Government* .....	3
		<hr/>
		16

Total credit hours required..... 96.5-98.5

\*\* Students who have not completed POLS 1000 prior to starting the program are required to complete the course or its equivalent no later than the end of Term 4 in order to graduate.



## Developmental Studies

Developmental studies courses are designed to provide basic skills in reading, writing, and computation for personal benefit, employability, and/or transition to higher level courses. The courses are presented in a manner so as to develop student self-confidence and self-esteem. Most developmental studies credits do not transfer to four-year institutions. Individual program suggestions may or may not include developmental studies credits.

DVST	0890 – Basic Skills Development.....	3
DVST	0898 – Developmental Mathematics I .....	2
DVST	0899 – Developmental Mathematics II .....	2

## Diagnostic Medical Sonography

Diagnostic Medical Sonography (DMS) is a diagnostic procedure that uses high frequency sound waves to create detailed images of the human body. Sonographers use state-of-the-art technology to scan patients and obtain images of the abdomen, heart, blood vessels, and fetus to aid in the diagnosis of a disease. Sonography is a profession that requires a high degree of independence, judgment, knowledge, maturity, and stamina.

The diagnostic medical sonographer is a skilled person qualified academically and clinically to perform ultrasound exams while working closely with a qualified physician. To create an ultrasound image, the sonographer must have an in-depth knowledge of physics, disease processes, human anatomy, and sonographic technique. Physicians depend on the sonographer's knowledge to evaluate normal and abnormal body parts.

This program leads to an Associate of Applied Science degree in diagnostic medical sonography and is an intensive, six-semester program designed for individuals new to patient care. The last three semesters of the program are primarily clinical experience, and students may be placed in various hospitals and/or clinics in Wyoming and the surrounding region. The program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDSM).

The program has limited enrollments and admits one class each summer. Prerequisite courses listed below must be completed or in progress prior to application for program admission. Prospective students interested in the program may contact the program director for details about the program admission process and timeline. Additional information also is available on the program website at [lccc.wy.edu/programs/sonography](http://lccc.wy.edu/programs/sonography).

### DRUG SCREENING AND CRIMINAL BACKGROUND CHECKS

At their discretion, clinical sites may 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.) 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.

### PROGRAM PREREQUISITES:

EITHER\*\*

ZOO 2010 – Anatomy and Physiology I* -AND-	4-5
ZOO 2020 – Anatomy and Physiology II*	4-5
-OR-	
ZOO 2015 – Human Anatomy* -AND-	4
ZOO 2025 – Human Physiology*	4
MATH 1400 – Pre-Calculus Algebra (College Algebra)	4
ENGL 1010 – English I: Composition	3
PSYC 1000 – General Psychology	3
PHYS 1050 – Concepts of Physics	4
CO/M 1030 – Interpersonal Communication -OR-	
CO/M 1010 – Public Speaking	3
HLTK 1200 – Medical Terminology	2
Total prerequisite credit hours	27-29

Note: A 3.0 prerequisite courses GPA is required.

\* Must be completed within the past five years unless currently working as a healthcare professional.

\*\* Students must complete one 8-10-credit sequence. Taking one course from each sequence will NOT fulfill this requirement.

### SUMMER I

IMAG 2205 – Introduction to Diagnostic Medical Sonography	3
IMAG 2212 – Cross-Sectional Anatomy	3
Physical Education Activity	1
	<u>7</u>

### FALL I

RDTK 1520 – Radiographic Patient Skills	1
HLTK 2300 – Health Care Ethics	3
IMAG 2210 – Ultrasound Physics I	2
IMAG 2220 – OB/GYN Sonography I	3
IMAG 2215 – Abdominal Sonography I	4
	<u>13</u>

### SPRING I

IMAG 2250 – OB/GYN Sonography II	3
IMAG 2240 – Ultrasound Physics II	2
IMAG 2245 – Abdominal Sonography II/Small Parts	3
IMAG 2252 – Introduction to Vascular Sonography	3
CMAP 1610 – Windows I -OR-	
CMAP 1685 – Using Computers in: Radiography -OR-	
Computer Literacy Elective	1
	<u>12</u>

### SUMMER II

IMAG 2254 – DMS Beginning Clinical Experience	6
	<u>6</u>

### FALL II

IMAG 2255 – Sonography Clinical Experience I	11
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government	3
IMAG 2265 – Registry Review I	1
	<u>15</u>

### SPRING II

IMAG 2260 – Sonography Clinical Experience II	13
IMAG 2270 – Registry Review II	1
	<u>14</u>

Total program credit hours..... 67

Total credit hours for A.A.S. degree ..... 94-96

## Diesel Technology

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

The nine-month program is designed for full-time students, and the 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. Classes are held from 9 a.m. to 3:30 p.m. Monday through Friday. The diesel technology courses are designed to prepare students for the ASE certification exam.

### Nine-Month Certificate

#### FALL SEMESTER

DESL 1540 – Diesel Electrical .....	5
DESL 1610 – Engine Rebuilding I .....	5
DESL 1650 – Diesel Fuel Systems and Tuning I .....	5
BADM 1021 – Customer Service I .....	1
MATH 1510 – Technical Mathematics I .....	3
	<hr/> 19

#### SPRING SEMESTER

DESL 1700 – Diesel Drivetrain .....	5
DESL 1755 – Heating, Air Conditioning and Refrigeration .....	5
DESL 2950 – Air Brake, Suspension and Steering .....	5
Computer Literacy Elective .....	1-3
MGT 1010 – Employment Orientation I .....	1
	<hr/> 17-19

Total credit hours required..... 36-38

## Associate of Applied Science Degree

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 or meet some personal objective of learning about diesel technology. The diesel technology courses are designed to prepare students for the ASE certification exam.

### First Year

#### FALL SEMESTER

DESL 1540 – Diesel Electrical .....	5
DESL 1610 – Engine Rebuilding I .....	5
DESL 1650 – Diesel Fuel Systems and Tuning I .....	5
BADM 1021 – Customer Service I .....	1
MATH 1510 – Technical Mathematics I .....	3
	<hr/> 19

#### SPRING SEMESTER

DESL 1700 – Diesel Drivetrain .....	5
DESL 1755 – Heating, Air Conditioning and Refrigeration .....	5
DESL 2950 – Air Brake, Suspension and Steering .....	5
Computer Literacy Elective .....	1-3
MGT 1010 – Employment Orientation I .....	1
	<hr/> 17-19

### Second Year

#### FALL SEMESTER

Automotive Technology Elective .....	3
Automotive Body Repair Elective .....	3
ENGL 1010 – English I: Composition .....	3
CO/M 1030 – Interpersonal Communication .....	3
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government .....	3
Physical Education Activity .....	1
	<hr/> 16

#### SPRING SEMESTER

MGT 1000 – Introduction to Supervision -OR-	
ENTK 1080 – Principles of Technology .....	3-4
ECON 1000 – Survey of Economics .....	3
Electives (approved by advisor) .....	4-6
	<hr/> 10-13

Total credit hours required..... 64=2-67

## Economics and Finance

This program leads to the Associate of Science degree. The course work provides a sound investment into students' futures in fields such as business, banking, investments, insurance, or real estate. This degree offers all of the necessary course work for a solid foundation in economics and finance to transfer to a four-year college, allowing students to pursue a Bachelor's degree in economics, finance, or a dual major in both. Students must have at least a 2.5 GPA to transfer to the University of Wyoming's College of Business.

### First Year

#### FALL SEMESTER

BADM 1000 – Introduction to Business .....	3
COSC 1200 – Computer Information Systems .....	3
ECON 1200 – Economics, Law, and Government -OR-	
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History .....	3
ENGL 1010 – English I: Composition .....	3
MATH 1400 – Pre-Calculus Algebra .....	4
Arts and Humanities Elective .....	3
	<hr/> 19

#### SPRING SEMESTER

ACCT 2010 – Principles of Accounting I .....	3
CO/M 1010 – Public Speaking .....	3
ECON 1010 – Principles of Macroeconomics .....	3
ENGL 1020 – English II .....	3
MATH 2200 – Calculus I -OR-	
MATH 2350 – Business Calculus I .....	4
	<hr/> 16

### Second Year

#### FALL SEMESTER

ACCT 2020 – Principles of Accounting II .....	3
ECON 1020 – Principles of Microeconomics .....	3
MATH 2205 – Calculus II -OR-	
MATH 2355 – Mathematical Applications for Business .....	4
STAT 2010 – Statistical Concepts-Business .....	4
Physical Education Activity .....	1
Lab Science .....	4
	<hr/> 19

#### SPRING SEMESTER

FIN 2100 – Managerial Finance .....	3
IMGT 2400 – Introduction to Information Management* .....	3
Advisor-Approved Electives (choose three from the following:) .....	9
BADM 2010 – Business Law I	
DSCI 2210 – Production and Operations Management	
ECON 2100 – Money and Banking	
MGT 2100 – Principles of Management	
MKT 2100 – Principles of Marketing	
	<hr/> 15

Total credit hours required ..... 69

\*Required minimum grade of C in this capstone course.

## Education

### Associate of Arts

This major is designed to provide orientation and background for the student anticipating a teaching career in elementary or secondary education. Students are urged to obtain information regarding the requirements and recommendations of the institution to which they plan to transfer and the assistance of an LCCC education advisor.

Completion of the following program leads to an Associate of Arts degree.

#### GENERAL EDUCATION CORE

##### Communication and Information Literacy

ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3

##### Mathematics and Quantitative Reasoning

MATH 1000 – Problem Solving (or higher, excluding MATH 1510; please see advisor) .....	3-4
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##### Cultural, Historical, Political, and Social Development

POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government .....	3
Social Science (see Page 28) .....	6
Art, Humanities, Music, Foreign Language or Theater (two courses from two different disciplines) .....	6

Scientific and Technical Processes ..... 4

##### Computer Literacy

ITEC 2360 – Teaching with Technology .....	3
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Physical Wellness (physical education activity) ..... 1  
35-36

GENERAL COLLEGE ELECTIVES ..... 14-15

Must include HLED 1221 – Standard First Aid and Safety .... 2

#### MAJOR CORE COURSES

EDFD 1010 – Introduction to Teaching (R) .....	2
EDFD 2020 – Foundations of Education (P)(R) .....	3
EDST 2450 – Human Life Span Development (P)(R) .....	3
EDFD 2100 – Educational Psychology (P)(R)** .....	3
EDUC 2100 – Public School Practicum (P)(R) .....	3

Total credit hours required ..... 64

Please note: Students are strongly encouraged to meet with an advisor to determine courses that will transfer to the four-year college of their choice.

## Preprofessional Option: Early Childhood Education

### Associate of Arts

This option is designed for the student anticipating a career working with young children. Students are urged to obtain information regarding the requirements and recommendations of the institution to which they plan to transfer and the assistance of an LCCC education advisor.

Completion of the following program, in addition to the General Education Core courses, leads to an Associate of Arts degree. A minimum of 64 credit hours is required for the degree.

#### GENERAL EDUCATION CORE

##### Communication and Information Literacy

ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3

##### Mathematics and Quantitative Reasoning

MATH 1000 – Problem Solving (or higher, excluding MATH 1510) .....	3-4
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##### Cultural, Historical, Political, and Social Development

POLS 1000- American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government .....	3
Social Science (see Page 28) .....	6
Art, Humanities, Music, Foreign Language or Theater (two courses from two different disciplines) .....	6

##### Scientific and Technical Processes .....

##### Computer Literacy

ITEC 2360 – Teaching with Technology .....	3
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##### Physical Wellness (physical education activity) .....

#### GENERAL COLLEGE ELECTIVES .....

Must include HLED 1221 – Standard First Aid and Safety .... 2

#### MAJOR CORE COURSES

EDEC 1020 – Introduction to Early Childhood Education	3
PSYC 2300 – Child Psychology .....	3
EDEC 1100 – Observation and Guidance of Young Children/Lab .....	3
EDEC 2200 – Early Childhood Practicum .....	3-5
HOEC 1140 – Nutrition .....	2
EDEC 1300 – Curriculum Planning and Review for Young Children/Lab .....	3
FCSC 2122 – Child Growth and Development/Lab .....	1
Total credit hours required .....	69-72

#### CODES:

(P) A prerequisite is required for this course. Refer to the specific course description in back pages of this catalog.

(R) This course is required to complete LCCC program requirements in education for the Associate of Arts degree.

\*\* It is recommended that this course be taken after math and science requirements are completed.

## Early Childhood Education

### Associate of Applied Science

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. Opportunities to apply this knowledge in practical experiences are incorporated into the curriculum. Curriculum topics include, but are not limited to, developmental ages and stages, health and safety, curriculum planning and assessment. These courses are 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. Students seeking courses to assist in their completion of the Child Development Associate (CDA) credential should consult with an early childhood advisor.

Completion of the following program, in addition to the General Education core courses, leads to an Associate of Applied Science degree. A minimum of 64 credit hours is required for the degree.

#### GENERAL EDUCATION CORE

##### Communication and Information Literacy

ENGL 1010 – English I: Composition .....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3
Mathematics and Quantitative Reasoning	
MATH 1000 – Problem Solving (or higher) .....	3-4

##### Cultural, Historical, Political, and Social Development

POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government .....	3
PSYC 1000 – General Psychology .....	3

##### Scientific and Technical Processes

Lab Science (physical, biological, or Earth lab science or technical course) .....	4
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##### Computer Literacy .....

##### Physical Wellness (physical education activity) .....

#### GENERAL COLLEGE ELECTIVES (Electives should be selected in consultation with an early childhood advisor. Some recommended selections are below.)

MUSC 1000 – Introduction to Music -OR-	
MUSC 2018 – Music for Elementary Classroom Teachers ..	3
HLED 1221 – Standard First Aid and Safety .....	2
SOC 1000 – Sociological Principles .....	3
EDEC 1200 – Administration in Early Childhood Programs .....	3
EDFD 2330 – Child Abuse and Neglect .....	2

#### MAJOR CORE COURSES

EDEC 1020 – Introduction to Early Childhood Education	3
PSYC 2300 – Child Psychology .....	3
FCSC 2122 – Child Growth and Development/Lab .....	1
EDEC 1030 – Infant and Toddler Care/Lab .....	3
EDEC 1100 – Observation and Guidance of Young Children/Lab .....	3
EDEC 1300 – Curriculum Planning and Review for Young Children/Lab .....	3
LIBS 2280 – Literature for Children .....	3
HOEC 1140 – Nutrition .....	2
EDEC 2200 – Early Childhood Practicum .....	3-5

## Emergency Medical Services— Paramedics

The Emergency Medical Services—Paramedics certificate 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 48-credit-hour certificate 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.

### Certificate

#### PREREQUISITES:

EMT Basic or Intermediate Status  
Completion of or currently enrolled in ENGL 1010  
Completion of MATH 0920 (or equivalent placement test score)

#### CORE COURSES

EMGT 2500 – Paramedic Preparatory.....	7
EMGT 2510 – Paramedic Airway and Ventilation .....	2
EMGT 2520 – Paramedic Patient/ Management Assessment.....	4
EMGT 2530 – Paramedic Trauma.....	3
EMGT 2540 – Paramedic Medical.....	5
EMGT 2550 – Paramedic Cardiology.....	5
EMGT 2560 – Paramedic Special Considerations .....	2
EMGT 2580 – Paramedic Operations .....	2
EMGT 2590 – Paramedic Human Systems and Immunization .....	2
EMGT 2600 – Paramedic Clinical.....	3
EMGT 2620 – Paramedic Vehicular I.....	7
EMGT 2630 – Paramedic Vehicular II.....	6
Total credit hours required.....	48

## Associate of Applied Science Degree

The A.A.S. degree in Emergency Medical Services—Paramedics prepares competent, entry-level paramedics for work in various emergency services fields. The program is limited to 12 students. Prospective students must pass a written exam, practical exam, and interview prior to being accepted into the program. All other LCCC application processes also must 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 employed in the EMS field for at least one year.

#### COLLEGE REQUIREMENTS (25-29 hours)

CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3
ENGL 1010 – English I: Composition .....	3
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
MATH 1000 – Problem Solving (or higher, excluding MATH 1510) .....	3
EITHER:*	
ZOO 2010 – Anatomy and Physiology I -AND- .....	4-5
ZOO 2020 – Anatomy and Physiology II .....	4-5
OR:	
ZOO 2015 – Human Anatomy .....	4
ZOO 2025 – Human Physiology .....	4
Social Science or Arts and Humanities Elective .....	3
Physical Education Activity .....	1
Computer Literacy Elective.....	1-3
	<u>25-29</u>

\* Students must complete one 8-10-credit sequence. Taking one course from each sequence will NOT fulfill this requirement.

#### PROGRAM REQUIREMENTS (59 hours)

EMT 1500 – EMT-Basic .....	6
HLTK 1200 – Medical Terminology.....	2
HLTK 2300 – Health Care Ethics.....	3
EMGT 2500 – Paramedic Preparatory.....	7
EMGT 2510 – Paramedic Airway and Ventilation .....	2
EMGT 2520 – Paramedic Patient/ Management Assessment.....	4
EMGT 2530 – Paramedic Trauma.....	3
EMGT 2540 – Paramedic Medical.....	5
EMGT 2550 – Paramedic Cardiology.....	5
EMGT 2560 – Paramedic Special Considerations .....	2
EMGT 2580 – Paramedic Operations .....	2
EMGT 2590 – Paramedic Human Systems and Immunizations.....	2
EMGT 2600 – Paramedic Clinical.....	3
EMGT 2620 – Paramedic Vehicular I.....	7
EMGT 2630 – Paramedic Vehicular II.....	6
Total credit hours required.....	84-86

# Engineering

Engineering is an exacting applied science requiring a broad background of analytical skills. Many types of engineering require specialization at the junior and senior levels. This program of study gives entering students a general, transferable background in mathematics and engineering science necessary for later specialization.

The engineering program is designed to provide the first two years of a four-year engineering program. After completion of the first two years, students may transfer to a four-year institution and complete the requirements for the Bachelor of Science degree in the field of engineering.

All courses listed below containing an "ES" prefix transfer to the University of Wyoming. Students planning to transfer to out-of-state, four-year institutions are encouraged to contact such institutions about the transferability of LCCC courses. Many of the second-year engineering courses are offered infrequently.

When the second-year engineering courses are not offered, the first-year courses and general education courses from the second year are recommended. Contact the engineering advisor for additional information.

## First Year

MATH	2200 – Calculus I.....	5
CHEM	1020 – General Chemistry I.....	5
ES	1060 – Introduction to Engineering Computing .....	3
ENGL	1010 – English I: Composition .....	3
MATH	2205 – Calculus II.....	5
PHYS	1310 – College Physics I.....	4
ES	2110 – Statics++.....	3
CHEM	1030 – General Chemistry II* -OR-	
GEOL	1100 – Physical Geology* .....	4
	Physical Education Activity.....	1

## Second Year

MATH	2210 – Calculus III .....	5
ENGL	1020 – English II .....	3
PHYS	1320 – College Physics II* .....	4
ES	2120 – Dynamics++.....	3
	Social Science Elective .....	3
MATH	2310 – Applied Differential Equations.....	3
CO/M	1010 – Public Speaking .....	3
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History -OR-	
ECON	1200 – Economics, Law, and Government.....	3
	Arts and Humanities Elective .....	3
ES	2310 – Thermodynamics++ .....	3
ES	2330 – Fluid Dynamics++ -OR-	
ES	2410 – Mechanics of Materials*++ -OR-	
ES	2210 – Electric Circuit Analysis*++ .....	3-4
	Total credit hours required.....	69-70

\*Not required in some engineering fields. Please check with advisor.

++These courses may be taken at the University of Wyoming and transferred back for the AS degree.

## Engineering Technology

The engineering technology certificate program is designed to provide students with the necessary skills in drafting technologies and to prepare them for entry-level positions.

### Certificate Program

#### FALL SEMESTER

ENTK 1515 – Technical Drafting.....	3
ENTK 1560 – Freehand Sketching, Inking, and Rendering	3
ENTK 1740 – Architectural Building Information Modeling (BIM) Design I.....	3
ENTK 2500 – Computer-Aided Drafting I.....	3
ENTK 2580 – MicroStation I.....	3
GEOG 1016 – Introduction to ArcGIS I.....	1
	<hr/> 16

#### SPRING SEMESTER

ENTK 2505 – Computer-Aided Drafting II.....	3
ENTK 2540 – Architectural Building Information Modeling (BIM) Design II.....	3
ENTK 2510 – Computer-Aided Drafting III.....	3
ENTK 2520 – Advanced Mechanical Drafting.....	3
ENTK 2550 – Civil Drafting Technology.....	3
ENTK 2555 – Manufacturing and Design I.....	3
	<hr/> 18

## Associate of Applied Science

### Drafting and Design Option

The engineering technology program is designed to prepare students for entry-level positions as a technician in drafting and design. The drafting and design option leads to an Associate of Applied Science degree in engineering technology.

#### First Year

##### FALL SEMESTER

ENTK 1515 – Technical Drafting.....	3
ENTK 1560 – Freehand Sketching, Inking, and Rendering	3
ENTK 1740 – Architectural Building Information Modeling (BIM) Design I.....	3
ENTK 2500 – Computer-Aided Drafting I.....	3
ENTK 2580 – MicroStation I.....	3
GEOG 1016 – Introduction to ArcGIS I.....	1
	<hr/> 16

##### SPRING SEMESTER

ENTK 2505 – Computer-Aided Drafting II.....	3
ENTK 2540 – Architectural Building Information Modeling (BIM) Design II.....	3
ENTK 2510 – Computer-Aided Drafting III.....	3
ENTK 2520 – Advanced Mechanical Drafting.....	3
ENTK 2550 – Civil Drafting Technology.....	3
ENTK 2555 – Manufacturing and Design I.....	3
	<hr/> 18

#### Second Year

##### FALL SEMESTER

MATH 1400 – Pre-Calculus Algebra.....	4
ENGL 1010 – English I: Composition.....	3
CO/M 1030 – Interpersonal Communication.....	3
MGT 1010 – Employment Orientation I.....	1
COSC 1200 – Computer Information Systems.....	3
Physical Education Activity.....	1
	<hr/> 15

##### SPRING SEMESTER

MATH 1405 – Pre-Calculus Trigonometry -OR- Engineering-approved Elective.....	3
Advisor-approved Elective.....	3
MGT 2100 – Principles of Management -OR- ENTK 1080 – Principles of Technology.....	3-4
POLS 1000 – American and Wyoming Government -OR- HIST 1211 – U.S. to 1865 -OR- HIST 1221 – U.S. from 1865 -OR- HIST 1251 – Wyoming History -OR- ECON 1200 – Economics, Law, and Government.....	3
CMAP 1750 – Spreadsheet Applications I:.....	1
Social Science Elective.....	3
	<hr/> 16-17

Total credit hours required.....65-66



# English

Mastery of the English language is essential for success in all fields of study. The major in English encourages students to develop and enrich reading, writing, and critical thinking skills by completing a broad base of liberal arts courses along with essential courses in writing and literature. The major leads to an Associate of Arts degree and applies towards various bachelor-degree programs including administration, communications, English, journalism, prelaw, and pre-medicine.

ENGL 1010 and ENGL 1020 do not count in the total required credits for a major in English at most schools.

NOTE: Students who wish to be certified for public school teaching also should consult the requirements for a secondary education major.

Non-English majors study in the English area for aesthetic reasons and for improvement of reading and writing skills.

## GENERAL EDUCATION REQUIREMENTS

Computer Literacy Elective (One MMMM, CMAP [except CMAP 1500] or COSC course, but others apply [see catalog]) .....	1
Physical Education Activity (PEAC 1295 is recommended for students who plan to transfer to the University of Wyoming) .....	1
ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3
MATH 1000 – Problem Solving -OR-	
MATH 1400 – Pre-Calculus Algebra .....	3-4
Physical, Biological, or Earth Lab Science .....	4
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government .....	3
Social Science Electives (Two courses from AMST, ANTH, CRMJ, GEOG, HIST, LEGL, POLS, PSYC, SOC) .....	6
HUMN 1010 – Introductory Humanities I .....	3
PHIL 1000 – Introduction to Philosophy .....	3
Total college requirements	33-34

## ENGLISH MAJOR REQUIREMENTS

Fine Arts and Humanities Elective (One ART, MUSC, or THEA course) -AND- and any other HUMN course).....	6
English Electives (Any 2000-level ENGL or LIBS course).....	12
Foreign Language (Two consecutive courses recommended) .....	8
Open Electives (a third-semester of foreign language is recommended for students transferring to the University of Wyoming) .....	6-7
Total major requirements	32-33
Total credit hours required .....	65-67

## Equine Studies

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.

### Equine Science Option

The Associate of Science degree in equine science is designed for those students who plan to transfer to a university or a four-year college to pursue a Bachelor of Science degree in animal/equine science. Admission to the equine science program is competitive. Please contact the equine studies department or the LCCC Admissions Office for procedures and deadlines. Admission to LCCC does not assure admission to the equine science program; a supplemental program application is required.

#### First Year

##### FALL SEMESTER

EQST 1515 – Equine Science I .....	4
AGRI 1010 – Computers: Agriculture.....	3
EQST 1900 – Basic Management and Training .....	4
CO/M 1010 – Public Speaking .....	3
ENGL 1010 – English I: Composition .....	3
	<hr/> 17

##### SPRING SEMESTER

EQST 1516 – Equine Science II .....	3
EQST 2825 – Advanced Horse Management and Training .....	4
EQST 1550 – Equine Evaluation I .....	3
ENGL 1020 – English II .....	3
MATH 1400 – Pre-Calculus Algebra.....	4
	<hr/> 17

#### Second Year

##### FALL SEMESTER

EQST 2500 – Equine Health Management.....	3
EQST 2700 – Equine Seminar .....	1
AGEC 2010 – Farm-Ranch Business Records .....	3
BIOL 1000 – Principles of Biology.....	4
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
Social Science Elective .....	3
	<hr/> 17

##### SPRING SEMESTER

EQST 2520 – Equine Breeding .....	3
Arts and Humanities Elective .....	3
MATH 2350 – Business Calculus I -OR-	
Statistics Elective.....	4
Physical Education Activity.....	1
Agriculture/Equine Elective .....	4
	<hr/> 15

Total credit hours required..... 66

EQST 2970 – Internship for 4-6 credit hours is an important educational experience that can be taken any time after successfully completing the first two semesters of the equine science program of study. Consult an equine instructor for further information.

## Equine Business Management Option

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 that 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

EQST 1515 – Equine Science I .....	4
ENGL 1010 – English I: Composition .....	3
BADM 1000 – Introduction to Business .....	3
BIOL 1000 – Principles of Biology.....	4
AGRI 1010 – Computers: Agriculture.....	3
Physical Education Activity .....	1
	<hr/> 18

##### SPRING SEMESTER

EQST 1516 – Equine Science II .....	3
EQST 2520 – Equine Breeding .....	3
CO/M 1010 – Public Speaking .....	3
ENGL 1020 – English II .....	3
MATH 1400 – Pre-Calculus Algebra.....	4
Equine Elective .....	2
	<hr/> 18

#### Second Year

##### FALL SEMESTER

EQST 2500 – Equine Health Management.....	3
ACCT 2010 – Principles of Accounting I .....	3
MGT 2100 – Principles of Management .....	3
AGEC 1010 – Agriculture Economics -OR-	
ECON 1010 – Principles of Macroeconomics .....	3
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
Arts and Humanities Elective .....	3
	<hr/> 18

##### SPRING SEMESTER

AGEC 2500 – Agricultural Trade Policy .....	3
MATH 2350 – Business Calculus I.....	4
MKT 2100 – Principles of Marketing .....	3
AGEC 1020 – Agriculture Economics II -OR-	
ECON 1020 – Principles of Microeconomics .....	3
EQST 2985 – Equine Business Law .....	3
Equine Elective .....	2
	<hr/> 18

Total credit hours required..... 72

## Equine Training Management Option

This program of study includes a balance of classroom instruction and sequential laboratory experiences leading to an Associate of Applied Science degree. Students learn how to train horses and manage farms upon completion of the program. Admission to the equine training management program is competitive. Please contact the equine studies department or the LCCC Admissions Office for procedures and deadlines. Admission to LCCC does not assure admission to the equine training management program; a supplemental program application is required.

### First Year

#### FALL SEMESTER

EQST	1515 – Equine Science I .....	4
EQST	1900 – Basic Management and Training .....	4
CO/M	1010 – Public Speaking .....	3
ENGL	1010 – English I: Composition .....	3
AGRI	1010 – Computers: Agriculture.....	3
		<u>17</u>

#### SPRING SEMESTER

EQST	1516 – Equine Science II .....	3
EQST	2520 – Equine Breeding.....	3
EQST	2825 – Advanced Horse Management and Training	4
EQST	1550 – Equine Evaluation I.....	3
MATH	1000 – Problem Solving .....	3
		<u>16</u>

### Second Year

#### FALL SEMESTER

EQST	2500 – Equine Health Management.....	3
EQST	2560 – Advanced Training Techniques.....	4
EQST	2700 – Equine Seminar .....	1
AGEC	2010 – Farm-Ranch Business Records .....	3
	Social Science Elective .....	3
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History -OR-	
ECON	1200 – Economics, Law, and Government.....	3
		<u>17</u>

#### SPRING SEMESTER

EQST	2985 – Equine Business Law .....	3
EQST	2660 – Equine Sales and Service.....	3
	Physical Education Activity .....	1
	Agriculture/Equine Electives .....	6
		<u>13</u>

#### SUMMER SEMESTER

EQST	2970 – Internship.....	4-6
	Total credit hours required	<u>67-69</u>

## Exercise 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, and 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 both the general education core and the exercise science core. From there, students may choose to complete either the exercise science track or the physical education teaching 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.

### First Year

#### FALL SEMESTER

PSYC	1000 – General Psychology	3
COSC	1200 – Computer Information Systems	3
ENGL	1010 – English I: Composition	3
BIOL	1010 – General Biology	4
MATH	1400 – Pre-Calculus Algebra	4
		<u>17</u>

#### SPRING SEMESTER

PHYS	1050 – Concepts of Physics	4
CO/M	1010 – Public Speaking	3
ENGL	1020 – English II	3
STAT	2050 – Fundamentals of Statistics	4
HIST	1251 – Wyoming History -OR-	
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
ECON	1200 – Economics, Law and Government	3
		<u>17</u>

### Second Year

#### FALL SEMESTER

CHEM	1000 – Introduction to Chemistry	4
HLED	1006 – Personal Health	3
PEPR	2050 – Care and Prevention of Athletic Injuries	2
	Fine Arts/Humanities Elective	3
ZOO	2010 – Anatomy and Physiology I	4-5
PEAC	1295 – Individualized Exercise Programs	1
		<u>17-18</u>

#### SPRING SEMESTER

HLED	1221 – Standard First Aid and Safety	2
HOEC	1140 – Nutrition	2
PTAT	2030 – Functional Kinesiology	4
ZOO	2020 – Anatomy and Physiology II	4-5
	Choose TWO of the following courses:	
	EDST 2450 – Human Life Span Development	3
	HMDV 1270 – Stress Management	2
	PSYC 2210 – Drugs and Behavior	3
	SOC 1150 – Sociology of Sport	3
		<u>17-19</u>

Total credit hours required.....68-71

## Physical Education

The physical education track leads to an Associate of Science degree and is designed to prepare students to meet academic standards leading to a bachelor's degree at a four-year institution. Students are exposed to behavioral and humanistic studies to foster an understanding of the school as a social institution and the value of a physically active lifestyle in school-aged children and youth. This suggested program is for students seeking a physical education teaching degree from the University of Wyoming or other four-year institutions. Students interested in coaching or recreation-oriented careers may also find this program of interest. Please see a Physical Education advisor for a suggested program schedule.

### First Year

#### FALL SEMESTER

PSYC	1000 – General Psychology	3
ENGL	1010 – English I: Composition	3
BIOL	1010 – General Biology	4
MATH	1400 – Pre-Calculus Algebra	4
PEAC	1295 – Individualized Exercise Programs	1
PEAC	1257 – Beginning Racquetball -OR-	
PEAC	1250 – Beginning Tennis	1
		<u>16</u>

#### SPRING SEMESTER

PHYS	1050 – Concepts of Physics	4
CO/M	1010 – Public Speaking	3
ENGL	1020 – English II	3
STAT	2050 – Fundamentals of Statistics	4
HIST	1251 – Wyoming History -OR-	
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
ECON	1200 – Economics, Law and Government	3
PEAC	2011 – Intermediate Swimming	1
		<u>18</u>

## Second Year

### FALL SEMESTER

PEAC 1031 – Western and Social Dance -OR-	
PEAC 1301 – Ballroom Dancing.....	1
HLED 1006 – Personal Health.....	3
PEPR 2050 – Care and Prevention of Athletic Injuries.....	2
Fine Arts/Humanities Elective.....	3
ZOO 2010 – Anatomy and Physiology I.....	4-5
COSC 1200 – Computer Information Systems.....	3
Choose TWO of the Following:	
PEAC 1047 – Introduction to Spinning -OR-.....	1
PEAC 1030 – Dance Aerobics -OR-.....	1
PEAC 1011 – Aquatic Conditioning -OR-.....	1
PEAC 1016 – Swimmastics -OR-.....	1
PEAC 1298 – Snowshoeing.....	1
	<u>18-19</u>

### SPRING SEMESTER

PEPR 1004 – Foundations of Physical and Health Education.....	3
HLED 1221 – Standard First Aid and Safety.....	2
HOEC 1140 – Nutrition.....	2
ZOO 2020 – Anatomy and Physiology II.....	4-5
PEAC 1273 – Heavy Resistance Conditioning -OR-	
PEAC 1044 – Beginning Tae Kwon Do.....	1
PEAC 1046 – Introduction to Pilates -OR-	
PEAC 1294 – Hatha Yoga.....	1
Choose TWO of the following courses:	
PEAC 1255 – Beginning Golf.....	1
PEAC 1287 – Rock Climbing.....	1
PEAC 2087 – Rafting Adventures I.....	1
PEAC 1250 – Archery.....	1
PEAC 1015 – Skin and Scuba Diving.....	1
PEAC 1254 – Fencing.....	1
PEAC 1285 – Kayaking.....	1
PEAC 1290 – Therapeutic Relaxation.....	1
	<u>15-16</u>
Total credit hours required.....	67-69

## Fire Science Technology

The Fire Science Technology program is designed to meet the demands of fire service personnel. The program prepares students for a career in the 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.

### Associate of Science

#### CORE COURSES

(students must take a minimum of 22 credits from the following:

FIRE	1501 – Principles of Emergency Services.....	3
FIRE	1510 – Firefighting Strategy and Tactics I.....	3
FIRE	1625 – Fire Protection Hydraulics and Water Supply.....	3
FIRE	1700 – Introduction to Fire Prevention.....	3
FIRE	1725 – Fire Protection Systems.....	3
FIRE	1760 – Building Construction.....	3
FIRE	1810 – Introduction to Wildland Firefighting.....	4
FIRE	1825 – Fire Behavior and Combustion.....	3
FIRE	2500 – Fire Investigator I.....	3
FIRE	2550 – Fire Investigator II.....	3
FIRE	2610 – Chemistry of Hazardous Materials.....	3
FIRE	2970 – Firefighter Field Experience.....	1-15
GEOG	1490 – Introduction to Meteorology.....	4
GEOG	1490 – Mobile Mapping GIS.....	1

In addition to the above, students must complete both of the following:

EMT	1500 – Emergency Medical Technician Basic (EMT-B).....	6
FIRE	2800 – Fire Academy.....	8
		<b>36</b>

#### GENERAL EDUCATION REQUIREMENTS (32 credits)

	Computer Literacy.....	1
PEAC	1295 – Individualized Exercise Program (Firefighter Conditioning).....	1
ENGL	1010 – English I: Composition.....	3
ENGL	1020 – English II.....	3
CO/M	1010 – Public Speaking -OR-	
CO/M	1030 – Interpersonal Communication.....	3
	Two courses from MATH 1400 and higher, excluding MATH 1510, or MATH 1400 or higher, excluding MATH 1510 -AND- Statistics.....	8
	Physical, Biological, or Earth Laboratory Science (recommended GEOG 1010).....	4
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History -OR-	
ECON	1200 – Economics, Law, and Government.....	3
	Social Science Elective.....	3
	Humanities/Fine Arts Elective.....	3
	Total credit hours required.....	<b>68</b>

### Associate of Applied Science

**CORE COURSES** (students must take a minimum of 24 credits from the following FIRE courses:

FIRE	1501 – Principles of Emergency Services.....	3
FIRE	1510 – Firefighting Strategy and Tactics I.....	3
FIRE	1625 – Fire Protection Hydraulics and Water Supply.....	3
FIRE	1700 – Introduction to Fire Prevention.....	3

FIRE	1725 – Fire Protection Systems.....	3
FIRE	1760 – Building Construction.....	3
FIRE	1810 – Introduction to Wildland Firefighting.....	4
FIRE	1825 – Fire Behavior and Combustion.....	3
FIRE	2500 – Fire Investigator I.....	3
FIRE	2550 – Fire Investigator II.....	3
FIRE	2610 – Chemistry of Hazardous Materials.....	3
FIRE	2970 – Firefighter Field Experience.....	1-15
GEOG	1490 – Introduction to Meteorology.....	4
GEOG	1490 – Mobile Mapping GIS.....	1

In addition to the above, students must complete the following:

EMT	1500 – Emergency Medical Technician Basic (EMT-B).....	6
FIRE	2800 – Fire Academy.....	8
HLTK	1200 – Medical Terminology.....	2
HLTK	2300 – Healthcare Ethics.....	3
		<b>43</b>

#### GENERAL EDUCATION REQUIREMENTS (21 credits)

	Computer Literacy.....	1
PEAC	1295 – Individualized Exercise Program (Firefighter Conditioning).....	1
ENGL	1010 – English I: Composition.....	3
ENGL	1020 – English II.....	3
CO/M	1010 – Public Speaking -OR-	
CO/M	1030 – Interpersonal Communication.....	3
	One course from MATH 1000 or higher.....	3
	Physical, Biological, or Earth Laboratory Science.....	4
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History -OR-	
ECON	1200 – Economics, Law, and Government.....	3
	Social Science -OR- Humanities/Fine Arts Elective	
	Total credit hours required.....	<b>64</b>

### Certificate

#### REQUIRED COURSES:

FIRE	1501 – Principles of Emergency Services.....	3
FIRE	2800 – Fire Academy (If students are already at the FFII level or higher, FIRE 2800 is not required providing proof of certification and program manager approval).....	8
EMT	1500 – Emergency Medical Technician Basic (EMT-B) (If students are already EMT-B certified, EMT 1500 is not required providing proof of certification and program manager approval).....	6

#### FIRE SCIENCE ELECTIVES:

Students must complete a minimum of 16 credits from the following:

FIRE	1510 – Firefighting Strategy and Tactics I.....	3
FIRE	1625 – Fire Protection Hydraulics and Water Supply.....	3
FIRE	1700 – Introduction to Fire Prevention.....	3
FIRE	1725 – Fire Protection Systems.....	3
FIRE	1760 – Building Construction.....	3
FIRE	1810 – Introduction to Wildland Firefighting.....	4
FIRE	1825 – Fire Behavior and Combustion.....	3
FIRE	2500 – Fire Investigator I.....	3
FIRE	2550 – Fire Investigator II.....	3
FIRE	2610 – Chemistry of Hazardous Materials.....	3
FIRE	2970 – Firefighter Field Experience.....	1-15
GEOG	1490 – Introduction to Meteorology.....	4
GEOG	1490 – Mobile Mapping GIS.....	1
PEAC	1295 – Individualized Exercise Programs (Firefighter Conditioning).....	1
	Total credits required.....	<b>33</b>

## General Studies

The Associate of Arts degree in general studies program is recommended for students who have not decided upon a particular field of study or who have identified a transfer institution for which a curriculum needs to be tailored to a particular transfer curriculum. Additionally, the general studies curriculum is designed to allow a maximum level of flexibility for students to change majors, either to a transfer program or an occupational program with a minimum loss of credits. Also, the program, through its structure, will assist students in making informed decisions concerning their educational goals. Students completing this program will have a solid educational foundation to transfer to another institution to complete their baccalaureate degree or to enter the world of work.

### GENERAL EDUCATION REQUIREMENTS

ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
*COLS 1000 – Introduction to College Success: First Year Seminars .....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3
Mathematics (MATH 1000 or higher, excluding MATH 1510) .....	3-5
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Business.....	3
Social Sciences (any two courses) .....	6-7
Arts and Humanities (two different disciplines).....	6
Lab Science .....	4
Computer Literacy .....	1-3
Physical Education Activity.....	1

### Discipline Specific Electives

Arts and Humanities or Social Sciences.....	3
Business (ACCT, BADM, BUSN, MGT).....	3
Science/Mathematics/Statistics/Computer .....	3-4

### General College Electives .....

.....	13-19
*Completion of COLS 000 is required during the first semester.	
Total minimum credit hours required .....	64

Note: Courses below the 1000 level and ENGL 1001 may not transfer to other institutions.

## General Studies in Fine Arts and Humanities

The general studies Associate of Arts in Fine Arts and Humanities degree program is recommended for students who want to focus in these creative areas of study, or who need this concentration to transfer to another educational institution or for employment enhancement. This program provides basic knowledge and skills needed to succeed in upper-level specialty courses, and the curriculum provides flexibility so students may study in several related areas, exploring their individual interests. Students are encouraged to work with an advisor to select appropriate transfer courses.

### COLLEGE REQUIREMENTS

POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3
Arts and Humanities Elective .....	3
Social Science Elective (excluding state statutory requirement) .....	6
Mathematics (MATH 1000 or higher excluding MATH 1510) ..	3-4
Physical, Biological, or Earth Laboratory Science Elective...	4
Computer Literacy Elective .....	1-3
Physical Education Activity (students should take PEAC 1295 if transferring to the University of Wyoming) .....	1
	<u>30-33</u>

### PROGRAM REQUIREMENTS

Courses in major areas of concentration and electives as indicated in specific programs of study or in consultation with advisor.

Fine Arts (Art, Music, Theater) .....	9
Humanities (HUMN) .....	3
Philosophy .....	3
Literature (ENGL 2000 level).....	3
Mass Media/Multimedia .....	3
Foreign Language or Electives .....	8-9
	<u>29-30</u>

Total minimum credit hours required .....

64

## General Studies in Science/Health Science

The general studies Associate of Science (A.S.) degree program is recommended for students who desire a science generalist curriculum. The curriculum provides flexibility in order to address individual learning needs within the requirements of the college's associate degree with a minimum loss of credit when transferring. Because of the varied directions students can take in the fields of science and health, they are urged to work closely with their advisor in outlining a course of study that will meet their needs within the college's degree requirements.

### I. General Education Core

#### Communication and Information Literacy

ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
*COLS 1000 – Introduction to College Success: First Year Seminar .....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3

#### Mathematics and Quantitative Reasoning

Two math courses from MATH 1400 or higher (excluding MATH 1510) -OR-	
MATH 1400 or higher (excluding MATH 1510) -AND-	
Statistics .....	7-8

#### Cultural, Historical, Political, and Social Development

POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
Social Science Elective .....	3
Fine Arts/Humanities Elective .....	3

#### Scientific Processes

Lab Science (physical, biological, or Earth lab science).	4
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Computer Literacy .....	1-3
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Physical Wellness (physical education activity).....	1
	31-34

### II. Program Requirements

Four additional lab science courses -OR-	
Three additional lab science courses -AND-	
One additional math course .....	15-17

### III. College Electives .....

*Completion of COLS 000 is required during the first semester.	
Total minimum credit hours required .....	64

## General Studies in Social Sciences

The general studies Associate of Arts in Social Sciences degree program is recommended for students who need concentrated social sciences 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. Completion of this course of study earns an Associate of Arts degree. Because of the varied directions students can take in the field of social science, they are urged to work closely with their advisor in outlining a course of study that will meet their needs, especially if they plan to transfer into a specific discipline.

### I. General Education Core

#### Communication and Information Literacy

ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
*COLS 1000 – Introduction to College Success: First Year Seminars .....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3

#### Mathematics and Quantitative Reasoning

MATH 1000 – Problem Solving .....	3
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#### Cultural, Historical, Political, and Social Development

POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
Social Science Electives.....	6
Fine Arts/Humanities (two courses in two different disciplines).....	6

#### Scientific and Technical Processes

Lab Science (physical, biological, or Earth laboratory science).....	4
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Computer Literacy .....	1-3
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Physical Wellness (physical education activity).....	1
	33-35

### II. Courses in Major Area of Concentration

This degree is designed for students to experience a wide range of academic areas. Students select courses from the following disciplines: American studies, anthropology, criminal justice, economics, geography, history, political science, psychology, and sociology.....	18
STAT 2070 – Introductory Statistics for the Social Sciences .....	4

III. College Electives .....	4-6
	29-31

*Completion of COLS 000 is required during the first semester.	
Total minimum credit hours required .....	64



## Government Studies

The Associate of Arts degree in government studies is committed to the study of political influence and political institutions in both American and international contexts. LCCC's location in Wyoming's capital city of Cheyenne affords opportunities for students to study government "up close and personal." Government studies courses at LCCC (which are listed as Political Science or POLS courses) provide the basis for either entry-level careers in government or preparation to transfer to a four-year program in political science or related fields.

The government studies program at LCCC is divided into two tracks: 1) American and comparative government, which is more theoretical in scope, and 2) public policy and administration, which has a more practical focus. Students must complete the requirements of one of the tracks to graduate. Emphasis in both tracks is on the multidisciplinary nature of social problems, governmental responses to those problems, and on service learning opportunities.

## American and Comparative Government

### First Year

#### FALL SEMESTER

ENGL 1010 – English I: Composition .....	3
GEOG 1000 – World Regional Geography .....	3
MATH 1000 – Problem Solving (or higher excluding MATH 1510) .....	3-4
POLS 1000 – American and Wyoming Government .....	3
Computer Literacy (POLS 1005 recommended) .....	1
POLS 1200 – Non-Western Political Cultures .....	3
	<u>16-17</u>

#### SPRING SEMESTER

ENGL 1020 – English II .....	3
GEOG 1010 – Introduction to Physical Geography .....	4
STAT 2070 – Introductory Statistics for the Social Sciences .....	4
POLS 2000 – Current Issues in American Government .....	3
POLS 2310 – Introduction to International Relations .....	3
	<u>17</u>

### Second Year

#### FALL SEMESTER

CO/M 1010 – Public Speaking .....	3
ECON 1010 – Principles of Macroeconomics .....	3
HIST 1110 – Western Civilization I -OR- HIST 1211 – U.S. to 1865 .....	3
POLS 2070 – Politics of State and Local Government .....	3
SOC 1000 – Sociological Principles .....	3
Physical Education Activity .....	1
	<u>16</u>

#### SPRING SEMESTER

ECON 1020 – Principles of Microeconomics .....	3
HIST 1120 – Western Civilization II -OR- HIST 1221 – U.S. from 1865 .....	3
PHIL 2301 – Ethics .....	3
POLS 2128 – Terrorism .....	3
POLS 2470 – Government Internship I .....	3
Arts and Humanities Elective (excluding philosophy) .....	3
	<u>18</u>

Total minimum credit hours required ..... 67-68

## Public Policy and Administration

### First Year

#### FALL SEMESTER

ENGL 1010 – English I: Composition .....	3
MATH 1000 – Problem Solving (or higher excluding MATH 1510) .....	3-4
POLS 1000 – American and Wyoming Government .....	3
Computer Literacy (POLS 1005 recommended) .....	1
Public Policy Administration Electives* .....	3
Arts and Humanities Elective (excluding philosophy) .....	3
	<u>16-17</u>

#### SPRING SEMESTER

ENGL 1020 – English II .....	3
GEOG 1010 – Introduction to Physical Geography .....	4
STAT 2070 – Introductory Statistics for the Social Sciences .....	4
POLS 2410 – Introduction to Public Administration .....	3
Public Policy Administration Electives* .....	3
	<u>17</u>

### Second Year

#### FALL SEMESTER

CO/M 1010 – Public Speaking .....	3
ECON 1010 – Principles of Macroeconomics .....	3
HIST 1110 – Western Civilization I -OR- HIST 1211 – U.S. to 1865 .....	3
POLS 2070 – Politics of State and Local Government .....	3
SOC 1000 – Sociological Principles .....	3
Physical Education Activity .....	1
	<u>16</u>

#### SPRING SEMESTER

ECON 1020 – Principles of Microeconomics .....	3
HIST 1120 – Western Civilization II -OR- HIST 1221 – U.S. from 1865 .....	3
PHIL 2301 – Ethics .....	3
POLS 2128 – Terrorism .....	3
POLS 2470 – Government Internship I .....	3
Arts and Humanities Elective (excluding philosophy) .....	3
	<u>18</u>

Total minimum credit hours required ..... 67-68

\*Consult with advisor.

Students planning to transfer to the public administration program at Regis University should complete the following course work:

#### REQUIRED:

BADM 1000 – Introduction to Business .....	3
MGT 1000 – Introduction to Supervision .....	3
MGT 2100 – Principles of Management .....	3
PHIL 1000 – Introduction to Philosophy .....	3

#### ELECTIVES (at least 6 hours):

PHIL 2311 – Philosophy of Religion .....	3
RELI 1150 – History and Philosophy of Islam .....	3
RELI 2110 – Introduction to the Old Testament .....	3
RELI 2150 – New Testament Survey .....	3
RELI 2225 – History of Christianity .....	3

## Health

For information on health-related programs, please see the Biology program, the General Studies in Science/Health Science program, or the specific degree—dental hygiene, diagnostic medical sonography, emergency medical services—paramedics, health information technology and management, nursing, physical therapist assistant, radiography, or surgical technology.

## Health Information Technology and Management

The Health Information Technology and Management program provides a multi-level educational pathway for careers in medical office environments. A number of high demand, high growth occupations today require entry-level employees to have a specific skill set. Students may earn an Associate of Applied Science degree, as well as a Medical Office Essentials certificate and/or a Medical Claims Coding Associate certificate.

### 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 A.A.S. degree program of study contains courses from both the Medical Office Essentials and the Medical Claims Coding Associate certificates with the addition of health information technology and leadership courses that students need to advance their careers on the administrative side of the medical field.

#### First Year

##### FALL SEMESTER

HIT	1510 – Computer Software for Medical Office Professionals .....	4
HIT	1500 – Introduction to Health Care Careers and Workplace Preparedness .....	4
HIT	1550 – Medical Office Procedural Skills .....	3
ENGL	1010 – English I: Composition .....	3
HLTK	1200 – Medical Terminology .....	2
		<b>16</b>

##### SPRING SEMESTER

MATH	1000 – Problem Solving (or higher) .....	3
HLTK	1210 – Human Body Systems .....	3
MEDC	1500 – Basic Diagnostic Coding .....	4
	Physical Education Activity .....	1
HIT	1600 – Introduction to Health Information .....	3
MEDC	1700 – Reimbursement methodologies .....	3
		<b>17</b>

#### Second Year

##### FALL SEMESTER

MEDC	1550 – Advanced Diagnostic Coding .....	3
MEDC	1600 – Basic CPT Coding .....	3
MEDC	1650 – Advanced CPT Coding .....	2
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History -OR-	
ECON	1200 – Economics, Law, and Government .....	3
MEDC	1970 – Professional Practice Experience (Coding) ..	2
HLTK	2510 – Pathophysiology* .....	2
HLED	1221 – Standard First Aid and Safety .....	2
		<b>17</b>

##### SPRING SEMESTER

MGT	1500 – Leadership Essentials .....	3
PSYC	1000 – General Psychology (social science requirement) .....	3
HIT	2550 – Health Care Quality and Performance Improvement .....	2
CO/M	1010 – Public Speaking .....	3
HIT	2500 – Health Data Management .....	2

HIT	2600 – Health Information Application Skills .....	3
HIT	2970 – Professional Practice Experience (HIM) .....	2
		<b>18</b>

Total credit hours required .....

\* Course substituted for previous courses. Please see HITM Advisor for additional information,

### Medical Office Essentials Certificate

The Medical Office Essentials certificate provides the necessary skills to perform successfully in entry-level positions in medical offices. These support skills cover managing medical office operations, basic records management with HIPAA training, basic insurance knowledge for billing and collections, understanding ethics as related to medicine, and computer fundamentals customized for medical offices. Once students have completed the Medical Office Essentials certificate program, they may take additional specialized courses in coding, health information technology, and office management.

HIT	1510 – Computer Software for Medical Office Professionals .....	4
HIT	1500 – Introduction to Health Care Careers and Workplace Preparedness .....	4
HIT	1550 – Medical Office Procedural Skills .....	3
HLTK	1200 – Medical Terminology .....	2
ENGL	1010 – English I: Composition .....	3
		<b>16</b>

### Medical Claims Coding Associate Certificate

The Medical Claims Coding Associate certificate builds on the Medical Office Essentials certificate and addresses specialized skills in medical coding and reimbursement, including advanced techniques in medical insurance, accounts receivable management with basic bookkeeping, 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). The courses for the Medical Office Essentials certificate are embedded in the Medical Claims Coding Associate certificate.

#### First Year

##### FALL SEMESTER

HIT	1510 – Computer Software for Medical Office Professionals .....	4
HIT	1500 – Introduction to Health Care Careers and Workplace Preparedness .....	4
HIT	1550 – Medical Office Procedural Skills .....	3
ENGL	1010 – English I: Composition .....	3
HLTK	1200 – Medical Terminology .....	2
		<b>16</b>

##### SPRING SEMESTER

MATH	1000 – Problem Solving (or higher) .....	3
HIT	1600 – Introduction to Health Information .....	3
MEDC	1700 – Reimbursement Methodologies .....	3
HLTK	1210 – Human Body Systems .....	3
MEDC	1500 – Basic Diagnostic Coding .....	4
		<b>16</b>

#### Second Year

##### FALL SEMESTER

MEDC	1600 – Basic CPT Coding .....	3
MEDC	1550 – Advanced Diagnostic Coding .....	2
MEDC	1650 – Advanced CPT Coding .....	2
MEDC	1970 – Professional Practice Experience (Coding) ..	2
HLTK	2510 – Pathophysiology* .....	2
		<b>11</b>

Total credit hours required .....

\* Course substituted for previous courses. Please see HITM Advisor for additional information,

## Heating, Ventilation, and Air Conditioning/Refrigeration

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; thermal dynamics, fluid dynamics, and electrical topics – all of which are combined to provide the groundwork for direct industry employment. For individuals desiring faster entry into the workforce, a Basic HVAC/R Technician Certificate is offered.

### Basic HVAC/R Technician Certificate

IST	1510 – Introduction to Industrial Tools .....	1
IST	1520 – Introduction to Industrial Safety .....	1
HVAC	1600 – Mechanical Piping Systems .....	3
IST	1710 – DC Electricity .....	2
IST	1711 – DC Electrical Circuits .....	1
IST	1712 – AC Electricity .....	2
IST	1713 – AC Electrical Circuits .....	1
HVAC	1610 – Heating and Air Conditioning Principles .....	3
HVAC	1620 – Refrigeration Circuit Components .....	3
HVAC	1630 – Energy Efficient Residential Heating Systems .....	4
Total credit hours .....		21

### Advanced HVAC/R Technician Certificate

HVAC	1650 – Residential Air Conditioning Systems .....	3
HVAC	1660 – HVAC Distribution Systems .....	3
HVAC	1640 – Automatic Building Controls .....	3
HVAC	1670 – Light Commercial Refrigeration Systems .....	3
IST	1780 – Electrical Motors .....	2
IST	1781 – Electric Motor Circuits .....	1
IST	1770 – Electrical Motor Controls .....	2
IST	1771 – Electrical Motor Control Circuits .....	1
Total credit hours .....		18

## Associate of Applied Science Degree

### FIRST SEMESTER

MATH	1000 – Problem Solving .....	3
IST	1510 – Introduction to Industrial Tools .....	1
IST	1520 – Introduction to Industrial Safety .....	1
HVAC	1600 – Mechanical Piping Systems .....	3
IST	1710 – DC Electricity .....	2
IST	1711 – DC Electrical Circuits .....	1
IST	1712 – AC Electricity .....	2
IST	1713 – AC Electrical Circuits .....	1
HVAC	1610 – Heating and Air Conditioning Principles .....	3
		<hr/> 17

### SECOND SEMESTER

ENGL	1010 – English I: Composition .....	3
COSC	1200 – Computer Information Systems .....	3
Physical Education	Activity Elective .....	1
IST	1780 – Electrical Motors .....	2
IST	1781 – Electric Motor Circuits .....	1
IST	1770 – Electrical Motor Controls .....	2
IST	1771 – Electrical Motor Control Circuits .....	1
HVAC	1650 – Residential Air Conditioning Systems .....	3
HVAC	1630 – Energy Efficient Residential Heating Systems .....	4
		<hr/> 20

Internship (mid-semester, summer break)

HVAC	1970 – Energy Audit Skills .....	4
		<hr/> 4

### THIRD SEMESTER

PHYS	1050 – Concepts of Physics (MATH 0930 is a prerequisite for this course) .....	4
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History -OR-	
ECON	1200 – Economics, Law, and Government .....	3
HVAC	1640 – Automatic Building Controls .....	3
HVAC	1620 – Refrigeration Circuit Components .....	3
HVAC	1660 – HVAC Distribution Systems .....	3
		<hr/> 16

### FOURTH SEMESTER

CO/M	1030 – Interpersonal Communication .....	3
Choose any one course from Social Sciences or Arts and Humanities .....		3
HVAC	1670 – Light Commercial Refrigeration Systems .....	3
HVAC	1680 – Energy Efficient Air Conditioning Units .....	3
HVAC	1690 – Advanced Air Conditioning Skills .....	3
		<hr/> 15

Total credit hours required .....

		72
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## History

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.

Students who enter the program might be unable to take the courses in the order suggested. In most instances, this does not pose a problem. Students should consult with the history advisor concerning any questions or changes.

### GENERAL EDUCATION CORE

#### Communication and Information Literacy

ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3

#### Mathematics and Quantitative Reasoning

MATH 1000 or higher (excluding MATH 1510).....	3
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#### Cultural, Historical, Political, and Social Development

Wyoming Statutory Requirement:

POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
Social Science Elective .....	6
Fine Arts/Humanities Elective (one foreign language class)	6

#### Scientific and Technical Processes

Lab science (physical, biological, or Earth lab science).....	4
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Computer Literacy .....	1-3
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Physical Wellness (physical education activity) .....	1
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General Education Core Total	33-35
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### PROGRAM REQUIREMENTS

HIST 1211 – U.S. to 1865* .....	3
HIST 1221 – U.S. from 1865* .....	3
HIST 1110 – Western Civilization I.....	3
HIST 1120 – Western Civilization II .....	3
HIST 2290 – History of North American Indians -OR-	
HIST 1251 – Wyoming History* .....	3
POLS 1000 – American and Wyoming Government* .....	3
ECON 1000 – Survey of Economics -OR-	
ECON 1010 – Principles of Macroeconomics .....	3
Foreign Language .....	4
Program Requirements Total	22-25

#### College Electives (Suggested electives: POLS 1200,

POLS 2310, ANTH 2210, GEOG 1020, ECON 1020, HIST 1150, HIST 1290, HIST 2020, HIST 2120, HIST 2225) .....	7-9
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Total minimum credit hours required .....	64
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\* One of these classes may have been taken to fulfill the Wyoming statutory requirement.

## Religious Studies Option

This degree option provides students with the opportunity to take a range of courses in the academic study of religions. Religious studies courses serve not only as core courses within the history Associate of Arts degree programs but also may be applied toward meeting social sciences and humanities general education requirements.

### General Education Distribution

POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government .....	3
ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3
HIST 1110 – Western Civilization I.....	3
HIST 1120 – Western Civilization II .....	3
Physical, Biological, or Earth Laboratory Science .....	4
MATH 1000 or higher (excluding MATH 1510).....	3-4
PHIL 2311 – Philosophy of Religion .....	3
Foreign Languages.....	8
Electives .....	12
Computer Literacy Elective .....	1
Physical Education Activity .....	1
	<hr/> 50-51

### Concentration Area Courses

RELI 1150/HIST 1150 – History and Philosophy of Islam .	3
RELI 2110/HIST 1130 – Introduction to the Old Testament .....	3
RELI 2150/HIST 1135- New Testament Survey .....	3
HIST 2225 – History of Christianity .....	3
	<hr/> 12-15

Total minimum credit hours required .....	64
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# Homeland Security

Homeland Security is about protecting people, property, and infrastructure while minimizing economic impacts of natural and man-made crises. The Homeland Security associate of science degree and certificate programs prepare students for careers in government, non-profit organizations, and the private sector. The courses prepare students for jobs in Homeland Security as well as provide information and a depth of understanding in security that will be useful in any career in turbulent times. This program will be of significant value to students employed in, or seeking employment in, first responder disciplines such as law enforcement, fire services, emergency medical services, and public health.

## Associate of Science

### First Year

#### FALL SEMESTER

ENGL 1010 – English I: Composition .....	3
MATH 1400 – Pre-Calculus Algebra .....	4
HSEC 1000 – Introduction to Homeland Security .....	3
HSEC 1001 – School Safety and Homeland Security.....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3
Physical Education Activity .....	1
	<u>17</u>

#### SPRING SEMESTER

ENGL 1020 – English II .....	3
STAT 2010 – Statistical Concepts–Business .....	4
Arts and Humanities Elective .....	3
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
HSEC 1015 – Homeland Security and Critical Infrastructure: Facilities and Networks .....	3
	<u>16</u>

### Second Year

#### FALL SEMESTER

Physical, Biological, or Earth Lab Science .....	4
Social Science Elective .....	3
HSEC 1002 – Terrorism and Counterterrorism.....	3
HSEC 1003 – Homeland Security and First Responders ...	3
HSEC 2006 – Terrorism and Weapons of Mass Destruction.....	3
	<u>16</u>

#### SPRING SEMESTER

COSC 1200 – Computer Information Systems .....	3
HSEC 2001 – Homeland Security Legal, Policy, and Privacy Issues.....	3
HSEC 1025 – Homeland Security and Emergency Management Partnerships.....	3
HSEC 2004 – Homeland Security and Law Enforcement ..	3
HSEC 2010 – Cyber-Terrorism .....	3
	<u>15</u>
Total credit hours required .....	64

## Certificate

#### FALL SEMESTER

HSEC 1000 – Introduction to Homeland Security .....	3
ENGL 1010 – English I: Composition .....	3
HSEC Electives* .....	6
	<u>12</u>

#### SPRING SEMESTER

HSEC 1015 – Homeland Security and Critical Infrastructure: Facilities and Networks .....	3
HSEC 1025 – Homeland Security and Emergency Management Partnerships.....	3
HSEC 2001 – Homeland Security Legal, Policy, and Privacy Issues.....	3
BADM 1020 – Business Communication.....	3
	<u>12</u>

Total credit hours required..... 24

\*Homeland Security Electives (Choose two)

HSEC 1001 – School Safety and Homeland Security.....	3
HSEC 1002 – Terrorism and Counterterrorism.....	3
HSEC 1003 – Homeland Security and First Responders ...	3
HSEC 2004 – Homeland Security and Law Enforcement ..	3
HSEC 2006 – Terrorism and Weapons of Mass Destruction.....	3
HSEC 2010 – Cyber-Terrorism .....	3

## Human Services

The Human Services field is broadly defined with professionals having a wide variety of job titles. This person provides services to individuals and families in need of assistance and can serve a variety of roles. Human services professionals have the potential to be employed in various community agencies, such as group and halfway homes; mental health centers; family, child, and youth service agencies; and programs for substance abuse. Human services workers may also be known by the following occupational titles: case worker, family support worker, social service liaison, residential counselor, child abuse worker, intake interviewer, life skills instructor, and drug/alcohol abuse counselor.

Competencies necessary for human services workers include understanding human systems; skills in identifying and selecting interventions; planning, implementing, and evaluating interventions; understanding conditions that promote healthy functioning of human systems; and processing skills including oral and interpersonal communication and time management.

Laramie County Community College is in the process of developing an articulation agreement with the social work program at the University of Wyoming. Please work closely with an advisor.

Completion of the following program leads to an Associate of Arts degree.

### GENERAL EDUCATION CORE

#### Communication and Information Literacy

ENGL	1010 – English I: Composition .....	3
ENGL	1020 – English II .....	3
CO/M	1010 – Public Speaking -OR-	
CO/M	1030 – Interpersonal Communication .....	3

#### Mathematics and Quantitative Reasoning

MATH	1000 – Problem Solving .....	3
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#### Cultural, Historical, Political, and Social Development

POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History -OR-	
ECON	1200 – Economics, Law, and Government .....	3
SOC	1000 – Sociological Principles .....	3
PSYC	1000 – General Psychology .....	3
	Foreign Language (Spanish) -OR- .....	4
	Sign Language (Speech Pathology and Audiology) .....	4
	Humanities (ART, ENGL, HUMN, MMMM, MUSC, PHIL, RELI, THEA) .....	3

	Scientific and Technical Processes Lab Science (physical, biological, or Earth lab science) .....	4
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	Computer Literacy .....	1-3
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	Physical Wellness (physical education activity) .....	1
		34-36

	GENERAL COLLEGE ELECTIVES .....	3-6
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### MAJOR CORE COURSES

EDST	2450 – Human Life Span Development .....	3
HMSV	1010 – Orientation to Human Services .....	3
HMSV	1060 – Case Management .....	3
HMSV	1110 – Ethics for Helping Professions .....	3
HMSV	2000 – Human Services Administration .....	3
HMSV	1200 – Field Experiences in Human Services I .....	3
HMSV	2110 – Field Experiences in Human Services II .....	4

22

## Addictionology Option

Students choosing to add the addictionology option must take all the courses for the Associate of Arts degree in Human Services in addition to the following courses:

PSYC	2050 – Introductory Counseling/Clinical Theories..	3
PSYC	2210 – Drugs and Behavior .....	3
PSYC	2330 – Psychology of Adjustment -OR-	
PSYC	2340 – Abnormal Psychology .....	3
CNSL	2300 – Counseling Skills for Helping Professions...	3
ADDN	1010 – Addictions Prevention .....	3
ADDN	2010 – Addictions Assessment .....	3
ADDN	2970 – Addictionology Internship .....	4

22

A minimum of 64 hours is required for an Associate of Arts degree.

## International Studies

The international studies program uses a broad multidisciplinary curriculum that allows students to study a region of the world or a global issue from multiple perspectives. This program draws on courses from anthropology, economics, foreign language, geography, history, political science, and sociology. The curriculum provides a strong substantive background in world affairs along with analytic and language skills to prepare students who wish to pursue additional study and careers in government, business, law, or education.

The Associate of Arts degree in international studies is designed to facilitate transfer of coursework to one of the many four-year programs in the region. A minimum of 64 hours is required for an Associate of Arts degree.

### **First Year**

#### **FALL SEMESTER**

ENGL	1010 – English I: Composition .....	3
GEOG	1000 – World Regional Geography .....	3
HIST	1110 – Western Civilization I.....	3
MATH	1000 – Problem Solving .....	3
POLS	1000 – American and Wyoming Government .....	3
	Computer Literacy (POLS 1005 recommended) .....	1
		<hr/>
		16

#### **SPRING SEMESTER**

ENGL	1020 – English II .....	3
HIST	1120 – Western Civilization II .....	3
GEOG	1010 – Introduction to Physical Geography(lab science).....	4
STAT	2070 – Introductory Statistics for the Social Sciences .....	4
POLS	1200 – Non-Western Political Cultures.....	3
		<hr/>
		17

### **Second Year**

#### **FALL SEMESTER**

	Foreign Language I (any modern language).....	4
CO/M	1010 – Public Speaking .....	3
ECON	1010 – Principles of Macroeconomics .....	3
POLS	2310 – Introduction to International Relations.....	3
SOC	1000 – Sociological Principles.....	3
		<hr/>
		16

#### **SPRING SEMESTER**

	Foreign Language II (any modern language) .....	4
ANTH	1200 – Introduction to Cultural Anthropology .....	3
ECON	1020 – Principles of Microeconomics .....	3
	Physical Education Activity .....	1
	Elective (BUSN 2000 recommended) .....	3
	Arts and Humanities Elective .....	3
		<hr/>
		17

Total credit hours required..... 66

## Journalism

(See Mass Media)

## Legal Assistant

(See Paralegal)

## Mass Media

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.

LCCC'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. Photographers enjoy the use of a film-processing darkroom and print 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, they 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 REQUIREMENTS

MMMM 1000 – Introduction to Mass Media (Offered fall semester) .....	3
MMMM 1111 – Journalistic Writing (Offered fall semester) .....	3
MMMM 1370 – Publications Production I .....	3
MMMM 1375 – Publications Production II .....	3
MMMM 2100 – Reporting and Newswriting (Offered spring semester) .....	3
MMMM 2310 – Desktop Publishing .....	3
MMMM 2320 – Advanced Desktop Publishing (Offered spring semester) .....	3
MMMM 2408 – Digital Photography .....	3
Mass Media/Multimedia Electives .....	4
	<u>28</u>

### COLLEGE REQUIREMENTS

CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3
ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
MATH 1000 – Problem Solving -OR-	
MATH 1400 – Pre-Calculus Algebra .....	3-4
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government .....	3
Art, Music, or Theater Elective .....	3
Humanities Electives (see advisor) .....	6
Physical Education Activity .....	1
Lab Science .....	4
Social Science Elective .....	6-8
	<u>35-38</u>

Total minimum credit hours required ..... 64

## Multimedia Option

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.

Using the college's sophisticated multimedia computer lab, students learn the same software programs used in major productions for Hollywood, television, and computer games.

### PROGRAM REQUIREMENTS

MMMM 1111 – Journalistic Writing (Offered fall semester) .....	3
MMMM 2222 – Desktop Audio/Video Production .....	3
MMMM 2310 – Desktop Publishing .....	3
MMMM 2320 – Advanced Desktop Publishing (Offered spring semester) .....	3
MMMM 2325 – Computer Graphics (Offered fall semester) .....	3
MMMM 2326 – Interactive Media (Offered spring semester) .....	3
MMMM 1371 – Multimedia Productions I .....	3
MMMM 2408 – Digital Photography .....	3
MMMM 2410 – Introduction to Multimedia (Offered fall semester) .....	3
Mass Media/Multimedia or INET Elective (see advisor) .....	3
	<u>30</u>

### COLLEGE REQUIREMENTS

ART 1110 – Foundation: Two Dimensional (Offered fall semester) .....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3
ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
MATH 1000 – Problem Solving -OR-	
MATH 1400 – Pre-Calculus Algebra .....	3-4
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government .....	3
Social Science Elective .....	6
Lab Science .....	4
Physical Education Activity .....	1
Electives .....	4
	<u>33-34</u>

Total minimum credit hours required ..... 64



## Mathematics

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.

The major in mathematics is unique because a student can earn an Associate of Arts and/or an Associate of Science degree. Students who complete an Associate of Science or Associate of Arts degree in Mathematics will demonstrate knowledge and skills necessary for mathematics majors and will be prepared to transfer to four-year institutions.

Those students unprepared to begin the calculus sequence upon entry at LCCC should consult their advisors for an amended course of study.

### First Year

#### FALL SEMESTER

MATH 2200 – Calculus I.....	5
ENGL 1010 – English I: Composition .....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3
Spanish, French -OR- other language.....	4
Physical Education Activity .....	1
	<hr/> 16

#### SPRING SEMESTER

MATH 2205 – Calculus II.....	5
ENGL 1020 – English II .....	3
Spanish, French -OR- other language.....	4
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
	<hr/> 15

### Second Year

#### FALL SEMESTER

MATH 2210 – Calculus III .....	5
PHYS 1310 – College Physics.....	4
COSC 1010 – Introduction to Computer Science I.....	4
MATH 2250 – Elementary Linear Algebra* .....	3
	<hr/> 16

#### SPRING SEMESTER

MATH 2310 – Applied Differential Equations* .....	3
PHYS 1320 – College Physics II.....	4
Social Science Elective .....	3
Electives (STAT course recommended for A.S. degree -OR- Social Science course required for A.A. degree) .....	4
Arts and Humanities Elective .....	3
	<hr/> 17

Total credit hours required..... 64

\* MATH 2250 is offered fall semester only. MATH 2310 is offered spring semester only. Student must take one of these courses.

## Medicine

For information about transfer programs in medical careers, please see the Biology program, the General Studies in Science/Health Science program, or the specific degree—dental hygiene, diagnostic medical sonography, emergency medical services—paramedics, health information technology and management, nursing, physical therapist assistant, radiography, or surgical technology.

## Music

The major in music prepares students for careers in performance, school or studio teaching, music business, and music theory and composition. The courses offered lead to an Associate of Arts degree and may be applied toward various bachelor's degree programs in music.

Many courses and ensembles are available to the non-music major. Students can study and experience music of virtually any style, from Western European art music to jazz or ethnic music.

Private music lessons (applied music) are required of all music majors. Registration for ensemble requirements should be in consultation with a music advisor.

### PROGRAM REQUIREMENTS

MUSC 1000 – Introduction to Music.....	3
MUSC 1030 – Written Theory I .....	3
MUSC 1035 – Aural Theory I.....	1
MUSC 1040 – Written Theory II .....	3
MUSC 1045 – Aural Theory II.....	1
MUSC 1051 – Applied Music: Vocal and Instrumental .....	1
MUSC 1052 – Applied Music: Vocal and Instrumental .....	1
MUSC 1290 – Elementary Class Piano I .....	1
MUSC 1295 – Elementary Class Piano II .....	1
MUSC 1400 – Collegiate Chorale -OR-	
MUSC 1410 – Vocal Ensemble (Cantorei) -OR-	
MUSC 1380 – Wind Symphony -OR-	
MUSC 1390 – Jazz Ensemble .....	4
MUSC 2030 – Written Theory III .....	3
MUSC 2035 – Aural Theory III.....	1
MUSC 2040 – Written Theory IV .....	3
MUSC 2045 – Aural Theory IV.....	1
MUSC 2050 – Historical Survey I ( <i>Offered fall</i> ) .....	3
MUSC 2055 – Historical Survey II ( <i>Offered spring</i> ).....	3
MUSC 2071 – Applied Music: Vocal and Instrumental .....	1
MUSC 2072 – Applied Music: Vocal and Instrumental .....	1
MUSC 2290 – Elementary Class Piano III .....	1
MUSC 2295 – Elementary Class Piano IV .....	1
	<hr/> 37

### COLLEGE REQUIREMENTS

CO/M 1030 – Interpersonal Communication -OR-	
CO/M 1010 – Public Speaking .....	3
ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
MATH 1000 – Problem Solving -OR-	
MATH 1400 – Pre-Calculus Algebra.....	3-4
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
Lab Science .....	4
Physical Education Activity .....	1
Social Science Electives .....	6
Arts and Humanities Elective .....	3
Computer Literacy Elective.....	1
	<hr/> 30-31

Total credit hours required..... 67-68

# Nursing

This is a four-semester program that 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. The program is approved by the Wyoming State Board of Nursing and accredited by the Accrediting Commission of Education in Nursing (ACEN). 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 Cheyenne, Wyoming, and the surrounding region.

Upon completion of the program, the graduate earns an Associate of Applied Science degree and is eligible to write the qualifying examination for registered nurse licensure.

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).

Prerequisites – All courses must be completed with a grade of C or better and applicants must have a cumulative GPA of 2.0 or higher.

- Kaplan entrance exam with a score of 70 overall and a 73 on reading comprehension on the same test (within the last three years).
- Verification of Computer Literacy
- ZOO 2010 – Anatomy and Physiology I (BIO 201 in Colorado)\*
- MATH 1400 – Pre-Calculus Algebra or higher (Statistics does not qualify)
- Demonstrated competency to enter ENGL 1010

\* Students may also complete the eight-credit sequence with ZOO 2015 – Human Anatomy and ZOO 2025 – Human Physiology to fulfill this requirement. Taking one course from each sequence will not fulfill the requirement.

**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.

## FIRST SEMESTER

NRST	1610 – Nursing I.....	6
NRST	1710 – Clinical Experience I.....	3
ZOO	2020 – Anatomy and Physiology II* (If you took ZOO 2015, then ZOO 2025 needs to be completed) .....	4-5
Social Science Elective* (Cultural Anthropology or General Psychology).....		3
		<u>16-17</u>

## SECOND SEMESTER

NRST	1620 – Nursing II.....	6
NRST	1720 – Clinical Experience II.....	5
HOEC	1140 – Nutrition* .....	2
Physical Education Activity* .....		1
ENGL	1010 – English I: Composition* .....	3
		<u>17</u>
NRST	1980 – Practical Nursing Role Exploration** .....	2

## THIRD SEMESTER

NRST	2630 – Nursing III .....	6
NRST	2730 – Clinical Experience III.....	5
MOLB	2220 – Pathogenic Microbiology* -OR-	
MICR	2240 – Medical Microbiology.....	4
CO/M	1030 – Interpersonal Communication* -OR-	
CO/M	1010 – Public Speaking* .....	3
		<u>18</u>

## FOURTH SEMESTER

NRST	2640 – Nursing IV.....	6
NRST	2740 – Clinical Experience IV.....	5
POLS	1000 – American and Wyoming Government* -OR-	
HIST	1211 – U.S. to 1865* -OR-	
HIST	1221 – U.S. from 1865* -OR-	
HIST	1251 – Wyoming History* -OR-	
ECON	1200 – Economics, Law, and Government* .....	3
		<u>14</u>

Total credit hours required.....72-75

\* Indicates course may be taken before program admission. However, all courses must be completed before or during the semester progression as indicated.

\*\* Completion needed to qualify for practical nurse licensure; not required for ADN.

## Paralegal

Paralegals or legal assistants are “persons who, although not members of the legal profession, are qualified through education, training, or work experience, who are employed or retained by a lawyer, law office, governmental agency, or other entity in a capacity or function which involves the performance, under the ultimate direction and supervision of an attorney, of specifically delegated substantive legal work, which work, for the most part, requires a sufficient knowledge of legal concepts that, absent that paralegal, the attorney would perform the task.” (Definition provided by the American Bar Association.)

**As such, paralegals are not allowed to practice law. In Wyoming it is illegal for anyone who is not a licensed attorney to practice law. The practice of law refers to the rendition of services for others that call for the professional judgment of a lawyer. Therefore, nonlawyers may not, at a minimum, represent others in court, draft legal documents for someone, or give someone legal advice.**

A paralegal's duties are many and varied depending on the individual's capabilities and the needs of the employer. A person interested in a paralegal career must be a good communicator who is willing and able to accept significant responsibility while assisting an attorney in a modern law practice.

The primary goal of the paralegal program is to provide students with the technical skills and knowledge necessary for them to perform successfully and ethically as paralegals under the supervision of attorneys in a variety of legal settings. Upon completion of the program, graduates will be able to perform legal research in a variety of fields using both traditional and computer-assisted methods; to draft pleadings, discovery and other legal documents, legal correspondence, and legal memoranda; to demonstrate substantive knowledge of at least three areas of practice; to demonstrate an understanding of the ethical rules governing both attorneys and paralegals in the jurisdiction; and to demonstrate the analytical and judgmental abilities necessary for ethical decision-making in a legal environment.

Program objectives include providing students with appropriate general education to meet state statutory requirements and to develop the student's communication, quantitative, analytical, and technological skills; preparing students to perform legal and factual research using traditional and computer-assisted methods; preparing students to draft a variety of legal documents and correspondence; preparing students to effectively interview clients and witnesses; providing students with an understanding of the evolving paralegal field and career opportunities within that field; providing students with the skills needed to assist an attorney with the investigation and litigation process; providing students with an understanding of the legal system and the modern practice of law; and providing students with an understanding of the ethical rules governing the practice of law and the behaviors and judgment necessary to perform paralegal duties in a manner ethically consistent with those rules.

The following program of study is designed to develop the specific skills and abilities required for success in the paralegal career field. Completion of this program leads to the Associate of Applied Science degree.

The paralegal program also offers a certificate. The certificate program is reserved for individuals who have already earned a bachelor's degree in another discipline and now desire to work as a paralegal.

The paralegal program is approved by the American Bar Association (ABA). Majors must be careful to check with the advisor before enrolling for general education courses since some additional course work may be required.

## Associate of Applied Science Degree

### REQUIREMENTS:

**Eighteen credit hours from the following courses must be derived from a list of approved courses. This list may be obtained from the Paralegal Program advisor.**

### GENERAL EDUCATION COURSES (21-24 credit hours)

#### Communication and Information Literacy

ENGL	1010 – English I: Composition .....	3
CO/M	1030 – Interpersonal Communication -OR-	
CO/M	1010 – Public Speaking .....	3

#### Mathematics and Quantitative Reasoning

Mathematics (MATH 1000 or higher).....	3-4
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#### Cultural, Historical, Political, and Social Development

POLS	1000 – American and Wyoming Government -OR-	
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HIST	1211 – U.S. to 1865 -OR-	
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HIST	1221 – U.S. from 1865 -OR-	
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HIST	1251 – Wyoming History -OR-	
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ECON	1200 – Economics, Law, and Government.....	3
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Social Sciences/Humanities/Fine Arts Elective .....	3
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#### Scientific and Technical Processes .....

Computer Literacy .....	1-3
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#### Physical Wellness (Physical Education Activity) .....

	1
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### MAJOR CORE COURSES (30 credit hours minimum)

LEGL	1500 – Introduction to Paralegal Studies* .....	3
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LEGL	1710 – Legal Research and Writing I* .....	3
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LEGL	1720 – Legal Research and Writing II* .....	3
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LEGL	2500 – Civil Procedure and Litigation* .....	3
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LEGL	2550 – Evidence and Investigation* .....	3
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BADM	2010 – Business Law I .....	3
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BADM	2020 – Business Law II .....	3
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LEGL	1800 – Law Office Management .....	3
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LEGL	2560 – Probate Practices and Procedures.....	3
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LEGL	2570 – Torts.....	3
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LEGL	2610 – Family Law .....	3
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LEGL	2620 – Court Procedures and the Legal System .....	3
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LEGL	2630 – Real Estate and Property Law .....	3
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LEGL	2650 – Criminal Law and Procedure.....	3
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LEGL	2670 – Constitutional Law .....	3
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LEGL	2680 – Administrative Law .....	3
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LEGL	2830 – Computer Applications in the Law.....	3
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LEGL	2990 – Paralegal Internship .....	3-5
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\*Mandatory Courses

### OTHER COURSES (Restricted Electives, 15+ credit hours)

ACCT	1050 – Practical Accounting I.....	3
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ACCT	1060 – Practical Accounting II .....	3
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BADM	1020 – Business Communication.....	3
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COSC	1200 – Computer Information Systems .....	3
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PHIL	2221 – Logic.....	3
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PHIL	2301 – Ethics.....	3
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CRMJ	2120 – Introduction to Criminal Justice .....	3
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CRMJ	1310 – Criminal Investigation I.....	3
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POLS	2070 – Politics of State and Local Government.....	3
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POLS	2410 – Introduction to Public Administration.....	3
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POLS	2470 – Government Internship.....	1-4
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A minimum of 64 credit hours is required for a degree.

Other electives may be applied upon receiving advisor approval.

Students are encouraged to choose electives from computer, business, political science, criminal justice, and language courses. Students seeking approval for an elective course not listed above should contact the program advisor prior to enrolling for the course.

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.

### ***Certificate***

**FALL SEMESTER**

LEGL 1500 – Introduction to Paralegal Studies .....	3
LEGL 1710 – Legal Research and Writing I .....	3
LEGL Elective .....	3
BADM 2010 – Business Law I .....	3

**SPRING SEMESTER**

LEGL 1720 – Legal Research and Writing II .....	3
LEGL 2550 – Evidence and Investigation .....	3
LEGL Elective .....	3
BADM 2020 – Business Law II -OR-	
LEGL Elective .....	3

**FALL SEMESTER**

LEGL 2500 – Civil Procedure and Litigation .....	3
LEGL Elective .....	3

NOTE: A LEGL elective could also be taken in the summer semester.

## **Paramedics**

(See Emergency Medical Services—Paramedics)

## **Philosophy**

Students interested in a concentration in philosophy should complete the degree in General Studies in Fine Arts and Humanities (see [Page 61](#)). By completing this degree and by taking the courses listed below, students will be introduced to the systems of thought developed by the world's great thinkers. Philosophy attempts to understand people and the world we inhabit by asking questions pertaining to every aspect of human life. Philosophy classes explore answers to such questions offered by influential thinkers. In addition, classes in philosophy encourage students to create and clearly support their own answers.

PHIL 1000 – Introduction to Philosophy.....	3
PHIL 2221 – Logic.....	3
PHIL 2301 – Ethics.....	3
PHIL 2311 – Philosophy of Religion .....	3

## **Physical Education**

(See Exercise Science)

# Physical Therapist Assistant

Physical Therapist Assistants (PTAs) work under the direction of physical therapists to help people of all ages who have health-related conditions that limit their ability to move and perform daily activities. Physical therapist assistants help patients reach their maximum performance and level of functioning while learning to live within the limits of their rehabilitation goals. Physical therapist assistants may assist in the development of treatment plans, treatment documentation, and modification of specific treatments that have been established by the physical therapist.

The 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 fully accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association (APTA), 111 North Fairfax Street, Alexandria, VA 22314, [accreditation@apta.org](mailto:accreditation@apta.org), 703.684.2782.

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 accreditation, 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.

## HEALTH AND PHYSICAL REQUIREMENTS:

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.

All students admitted to the Physical Therapist Assistant program are expected to carry their own personal health insurance.

## 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.

## 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.

## 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, 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.

## PREREQUISITES:

CO/M	1030 – Interpersonal Communication -OR-	
CO/M	1010 – Public Speaking .....	3
ENGL	1010 – English I: Composition .....	3
MATH	1400 – Pre-Calculus Algebra (or higher, excluding MATH 1510) .....	4
ZOO	2010 – Anatomy and Physiology I* .....	4-5
HLTK	1200 – Medical Terminology .....	2
		<u>16-17</u>

## SPRING I

ZOO	2020 – Anatomy and Physiology II* .....	4-5
PTAT	1600 – Introduction to Physical Therapy .....	3
PTAT	1650 – Therapeutic Procedures I .....	4
PTAT	2030 – Functional Kinesiology .....	4
		<u>15-16</u>

## SUMMER I

PTAT	1660 – Therapeutic Procedures II .....	3
PTAT	1740 – Cardiac Rehabilitation .....	1
PTAT	1970 – PTA Internship I .....	4
CMAP	1685 – Using Computers in: Healthcare -OR- Computer Literacy Elective .....	1
		<u>9</u>

## FALL II

PTAT	1720 – Therapeutic Exercise .....	4
EDST	2450 – Human Lifespan Development .....	3
HLTK	2510 – Pathophysiology .....	2
PTAT	2970 – PTA Internship II .....	5
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History -OR-	
ECON	1200 – Economics, Law, and Government .....	3
		<u>17</u>

## SPRING II

PTAT	1800 – Neurology .....	3
PTAT	1820 – Orthopedics .....	4
PTAT	1840 – Specialty Rehabilitation .....	1
PTAT	2971 – PTA Internship III .....	5
	Physical Education Activity .....	1
		<u>14</u>

Total credit hours required..... 71-73

\*Students may also complete the 8-credit sequence with ZOO 2015–Human Anatomy and ZOO 2025–Human Physiology to fulfill this requirement. Taking one course from each sequence will NOT fulfill the requirement.

## Political Science

(See Government Studies)

## Process Technology

The Process Technology Program of study is designed for students who want to gain valuable industry skills while pursuing a basic understanding of petrochemical and related industries. Students develop awareness of the work environment and systems used as well as industrial maintenance knowledge and skills. Process Technician/Operator specific industry topics are combined to provide the groundwork for direct industry employment. Process Technology is an accelerated program designed to be completed in one, 16 week semester.

### ***Certificate***

PTEC	1500 – Introduction to Process Technology.....	2
PTEC	1510 – Safety, Health and the Environment .....	4
PTEC	1550 – Foundation of Quality .....	1
PTEC	1600 – Process Technology I: Equipment .....	4
PTEC	1605 – Process Technology II: Systems .....	4
IST	1730 – Introduction to Electrical Fundamentals.....	2
IST	1830 – Introduction to Mechanical Fundamentals ....	2
		<hr/>
		19

## Psychology

A psychology major pursues the Associate of Arts degree. This major requires the completion of 22-23 credit hours in psychology in addition to meeting the general education requirements. The program listed below is designed to satisfy all requirements for an Associate of Arts degree at LCCC with a major in psychology. Completion of an Associate of Arts degree with a major in psychology can prepare students to transfer into the junior year of a baccalaureate degree program. Psychology majors are strongly encouraged to determine the degree requirements of the specific college to which they plan to transfer.

<b>I. General Education Courses (34-37 credit hours)</b>	
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
CO/M 1010 – Public Speaking .....	3
Arts and Humanities (one foreign language [can be ASL] and a course from a different discipline).....	7
Mathematics (MATH 1000 or higher, excluding MATH 1510) .....	3-4
Physical, Biological -OR- Earth Laboratory Science (BIOL 1003 -OR- BIOL 1010).....	4
PSYC 1000 – General Psychology (P) .....	3
SOC 1000 – Sociological Principles .....	3
PEAC 1295 – Individualized Exercise Programs .....	1
Computer Literacy Elective.....	1-3
	<u>34-37</u>

### II. General College Electives

(minimum of 14 credit hours required, including STAT 2070).....	10
STAT 2070 – Introductory Statistics for the Social Sciences (P) .....	4
	<u>14</u>

### III. Major Core Courses (minimum 16 credit hours)

#### A. Required Core Courses (4 credit hours)

PSYC 2000 – Research: Psychological Methods (P)....	4
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#### B. Elective Core Courses

##### (4 courses REQUIRED, 12 credit hours)

CNSL 2300 – Counseling Skills for Helping Professionals (P) .....	3
PSYC 1100 – Organizational Human Relations* .....	3
PSYC 2080 – Psychobiology (P) .....	4
PSYC 2090 – Psychology of Religion (P)* .....	3
PSYC 2210 – Drugs and Behavior (P).....	3
PSYC 2300 – Child Psychology (P).....	3
PSYC 2330 – Psychology of Adjustment (P).....	3
PSYC 2340 – Abnormal Psychology (P).....	3
PSYC 2380 – Social Psychology (P) .....	3
PSYC 2400 – Contemporary Social Issues (P).....	3

Minimum Core Elective Hours .....

Total Major Core Credit Hours.....

Minimum credit hours required.....

**University of Wyoming transfer students should see their LCCC advisor or the UW bulletin for information regarding these requirements.**

\* This course will transfer only as general elective hours in psychology at the University of Wyoming.

It is suggested that students transferring to UW take these courses as general college electives.

Anthropology or Sociology (6 credits in one of these disciplines) .....	6
MATH 1400 – Pre-Calculus Algebra.....	4
MATH 2200 – Calculus I .....	5
A second semester of foreign language in the same field as above.....	4

(P) This course has prerequisites.

## Public Administration

(See Government Studies)

## Radiography (X-ray)

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 24-month program combines academic study with supervised clinical experience. Graduates of the program will receive the 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, 20 North Wacker Drive, Suite 2850, Chicago, IL 60606-3182, through its approval of the program in radiography at LCCC, has established a maximum number of students selected each year for the program based on limited hospital facilities. 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 on 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 educational programs or activities.

### 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 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 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 Radiographic Examiners and the American Registry of Radiologic Technologists. The Wyoming State Board of Radiologic 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.

Prerequisites and other courses in the 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 program director for transfer credit and/or advanced placement, as applicable.

Courses marked with an asterisk (\*) in the formal curriculum listed here may be taken prior to entering the program. Note that the semester hours are quite high for most semesters. Students are strongly urged to take some of the courses marked with an asterisk before entering the program to reduce the stress associated with heavy class loads.

### PREREQUISITES

- Reading Level III
- GPA of 2.0 or higher

### REQUIRED:

EITHER:\*

ZOO 2010 – Anatomy and Physiology II -AND-	4-5
ZOO 2020 – Anatomy and Physiology III	4-5

OR:

ZOO 2015 – Human Anatomy I -AND-	4
ZOO 2025 – Human Physiology I	4
MATH 1000 – Problem Solving I -OR-	
MATH 1400 – Pre-Calculus Algebra I	3-4
PSYC 1000 – General Psychology	3
	<u>14-17</u>

<sup>1</sup> Science and math courses must be five years current with a grade of "C" or better.

\* Students must complete one 8-10 credit sequence.

Taking one course from each sequence will NOT fulfill this requirement.

### First Year

#### FALL SEMESTER

RDTK 1503 – Introduction to Radiography	4
RDTK 1520 – Radiographic Patient Skills	1
RDTK 1620 – Radiation Biology and Protection	3
HLTK 1200 – Medical Terminology*	2
CO/M 1010 – Public Speaking*	3
ENGL 1010 – English I: Composition*	3
	<u>16</u>

(Clinical: Last 8 weeks, 10 hours/week = 80 hours<sup>3</sup>)

PHYS 1050 – Concepts of Physics and HLTK 2300 – Healthcare Ethics also may be taken as supplemental courses but are not required.

#### SPRING SEMESTER

RDTK 1610 – Radiographic Imaging I	3
RDTK 1611 – Radiographic Imaging Lab I	1
RDTK 1583 – Radiographic Procedures I	3
RDTK 1584 – Radiographic Lab I	1
POLS 1000 – American and Wyoming Government*2 -OR-	



HIST	1211 – U.S. to 1865*2 -OR-	
HIST	1221 – U.S. from 1865*2 -OR-	
HIST	1251 – Wyoming History*2 -OR-	
ECON	1200 – Economics, Law, and Government*2	
	(Note re: POLS 1000, HIST 1211, HIST 1221, HIST 1251, or ECON 1200 –	
	If any of these courses have been accepted for transfer at LCCC from an out-of-state institution, testing on the Wyoming Constitution may be required. Refer to your degree requirements in the college catalog for more specific guidelines.)	3
CMAP	1685 – Using Computers in: Healthcare* -OR-	
CMAP	1610 – Windows I*	1
RDTK	1590 – Clinical Education I	4
	Physical Education Activity*	1
		<u>17</u>

(Clinical: 12 hours/week = 192 hours<sup>3</sup>)

### SUMMER SESSION

RDTK	1683 – Radiographic Positioning II	3
RDTK	1684 – Radiographic Lab II	1
RDTK	1713 – Clinical Education II	4
		<u>8</u>

(Clinical: MWF 24 hours/week = 192 hours plus 20 shiftwork hours = 212 hours<sup>3</sup>)

## Second Year

### FALL SEMESTER

RDTK	2583 – Radiographic Positioning III	3
RDTK	2584 – Radiographic Lab III	1
RDTK	2510 – Clinical Education III	8
RDTK	2630 – Radiographic Pathology	1
		<u>13</u>

(Clinical: First 8 weeks, MTWThF 29 hours/week plus last 8 weeks, MWF 21 hours/week = 400 hours<sup>3</sup>)

### SPRING SEMESTER

RDTK	2623 – Radiographic Equipment, Digital Imaging and Quality Assurance	3
RDTK	2624 – Radiographic Lab IV	1
RDTK	2603 – Survey of Technical Specialties	2
RDTK	2613 – Clinical Education IV	7
		<u>13</u>

(Clinical: MWF 21 hours/week = 336 hours<sup>3</sup>)

### SUMMER SESSION

RDTK	2900 – Radiography Seminar	4
RDTK	2713 – Clinical Education V	3
		<u>7</u>

(Clinical: TTh 16 hours/week plus 40-hour week during first week = 168 hours<sup>3</sup>)

Total credit hours required ..... 74

Total clinical hours = 1,388 hours<sup>3</sup>

<sup>1</sup> Science and math courses must be five years current with a grade of "C" or better.

<sup>2</sup> For students transferring these credits from another institution, check with an adviser for additional coursework that may be required.

<sup>3</sup> Clinical hour totals shown are approximate and may vary slightly because of scheduled college holidays/planning days.

\* These courses can be taken prior to acceptance in the program.

## Sociology

The Associate of Arts degree in sociology is designed primarily for the student who plans to transfer to a four-year institution and pursue a Bachelor of Arts degree in sociology. The program is designed around the requirements set by the University of Wyoming for a four-year degree. Also, the program can help prepare students in studies other than sociology including international studies, prelaw, administration of justice, library preprofessional, and aging and human development.

A minimum of 64 semester credit hours is required for a degree. Students should consult with an advisor in order to ensure that all courses selected are appropriate and transferable. All degree candidates must complete **two** semesters of a foreign language (8 semester hours).

### First Year

#### FALL SEMESTER

ENGL	1010 – English I: Composition	3
	Foreign Language	4
MATH	1000 – Problem Solving -OR-	
MATH	1400 – Pre-Calculus Algebra	3-4
SOC	1000 – Sociological Principles	3
	Computer Literacy	1
	Physical Education Activity	1
		<u>15-16</u>

#### SPRING SEMESTER

CO/M	1010 – Public Speaking -OR-	
CO/M	1030 – Interpersonal Communication	3
ANTH	1200 – Introduction to Cultural Anthropology	3
BIOL	1000 – Principles of Biology -OR-	
BIOL	1010 – General Biology	4
ENGL	1020 – English II	3
	Foreign Language	4
		<u>17</u>

## Second Year

### FALL SEMESTER

STAT	2070 – Introductory Statistics for the Social Sciences	4
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History -OR-	
ECON	1200 – Economics, Law, and Government	3
SOC	2400 – Criminology -AND/OR- Electives	8-9
		<u>15-16</u>

### SPRING SEMESTER

PSYC	1000 – General Psychology	3
	Social Sciences (Recommended: HIST 1211/1221)	4-6
	Fine Arts/Humanities Elective	
	(other than a foreign language)	3
	Electives	6
		<u>16-18</u>

Total minimum credit hours required ..... 64

## Spanish

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. In addition, students majoring in business, criminal justice, education, social sciences, or health care professions may be interested in a double major in Spanish to increase their employability by becoming bilingual. If students previously have completed modern languages at other institutions, they should consult the Advising Center or the Spanish instructor for appropriate placement.

### PROGRAM REQUIREMENTS

HUMN 2395 – Mexican Civilization (Offered fall, odd years) -OR-	
Humanities elective approved by advisor .....	3
SPAN 1010 – First-Year Spanish I .....	4
SPAN 1020 – First-Year Spanish II .....	4
SPAN 2030 – Second-Year Spanish I .....	4
SPAN 2041 – Intermediate Spanish II .....	4
	<b>19</b>

### COLLEGE REQUIREMENTS

Art, Music, Theater Elective .....	3
CO/M 1010 – Public Speaking -OR-	
CO/M 1030 – Interpersonal Communication .....	3
ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
EDFD 1010 – Introduction to Teaching -OR- Elective .....	2-3
EDFD 2020 – Foundations of Education -OR- Elective .....	3
EDFD 2100 – Educational Psychology -OR- Elective .....	3
Humanities Elective .....	3
HUMN 2400 – Study Tour: Mysteries of Mexico -OR- Humanities, Art, Music, Theater Elective .....	3
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government .....	3
Lab Science .....	4
MATH 1000 – Problem Solving -OR-	
MATH 1400 – Pre-Calculus Algebra .....	3-4
Physical Education Activity .....	1
Social Science Elective .....	9-10
Computer Literacy Elective .....	1
	<b>47-50</b>
Total credit hours required .....	<b>66-69</b>

## Speech

(See Communication)

## Surgical Technology

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 operating room; prepare, handle, sterilize, and care for surgical instruments, supplies, equipment, and medications; set up instrumentation, 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 Associate of Applied Science degree program is to prepare competent, entry-level surgical technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. Graduates of the program will be able to apply fundamental theoretical knowledge in the practice of surgical technology; acquire and evaluate emerging surgical knowledge; effectively and safely manipulate surgical equipment, instruments, and supplies; consistently maintain sterile technique; 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 prerequisite courses listed below must be completed or in progress prior to application for program admission. Prospective students should contact the Surgical Technology Program Director for admission deadlines. Applicants must be in excellent physical health and be able to perform the rigorous physical tasks required of the profession. In addition, candidates must have a stable emotional temperament to be able to function safely and use good judgment under stressful conditions. Drug screening and criminal background checks are required by clinical affiliates for those persons accepted into the program.

Once the student has been accepted, the intensive 11-month surgery core program combines classroom lectures and discussions, laboratory demonstrations with hands-on practice, and supervised clinical experiences in actual patient care settings to provide students with a variety of learning opportunities. Clinical rotations will include experiences outside of Laramie County, and students must be willing and able to travel to attend scheduled clinical assignments. Due to the distance, overnight stays may be necessary.

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).

### 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.

**PREREQUISITE COURSES**

HLTK 1200 – Medical Terminology.....	2
EITHER:*	
ZOO 2010 – Anatomy and Physiology I -AND- .....	4-5
ZOO 2020 – Anatomy and Physiology II .....	4-5
OR:	
ZOO 2015 – Human Anatomy -AND- .....	4
ZOO 2025 – Human Physiology .....	4
MICR 2240 – Medical Microbiology.....	4
ENGL 1010 – English I: Composition .....	3
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
MATH 1000 – Problem Solving .....	3
CO/M 1030 – Interpersonal Communication .....	3
Social Science/Humanities Elective .....	3
Physical Education Activity .....	1
Computer Literacy Elective .....	1-3
HLTK 2510 – Pathophysiology.....	2
HLTK 2300 – Health Care Ethics.....	3
Total prerequisite credits .....	36-40

\* Students must complete one 8-credit sequence. Taking one course from each sequence will NOT fulfill this requirement.

**SURGICAL TECHNOLOGY CORE COURSES**

**FALL SEMESTER**

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
	<u>12</u>

**SPRING SEMESTER**

SURG 1630 – Surgical Technology Skills Lab II .....	1
SURG 1750 – Surgical Procedures I (first 8 weeks).....	4
SURG 2750 – Surgical Procedures II (second 8 weeks) .....	4
SURG 1850 – Surgical Technology Clinical I.....	5
SURG 2810 – Surgical Technology Clinical Synthesis I.....	1
	<u>15</u>

**SUMMER SEMESTER**

SURG 2850 – Surgical Technology Clinical II.....	7
SURG 2895 – Surgical Technology Clinical Synthesis II.....	1
	<u>8</u>

Total Surgical Technology core credits ..... 35  
 Total credit hours required..... 71-75

**Technical Studies**

The Associate of Applied Science degree in Technical Studies is intended for individuals who desire to build upon a Department of Labor (DOL) recognized apprenticeship training program, bringing demonstrated knowledge, skills and competencies in their field as the technical foundation of the degree. Students will complete course work in the general education core and a selection of management courses to complete the degree program. Students will be advised and their apprenticeship evaluated for awarding of credit on an individual basis.

**GENERAL EDUCATION CORE**

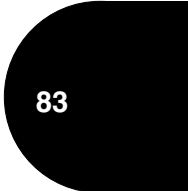
ENGL 1010 – English I: Composition .....	3
CO/M 1010 – Public Speaking -OR- .....	3
CO/M 1030 – Interpersonal Communication .....	3
MATH 1000 – Problem Solving (or higher).....	3
POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government.....	3
Social Science -OR- Arts and Humanities Elective.....	3
Lab Science (physical, biological, or	
Earth lab science or technical) .....	3-4
Computer Literacy .....	1-3
Physical Education Activity .....	1
	<u>22-24</u>

**TECHNICAL CORE (approved training) .....** 15-42

MGT 1500 – Leadership Essentials.....	3
MGT 1501 – Practical Workplace Management .....	3
MGT 1502 – Career Assessment and Portfolio:	
Creating the Total Package.....	3
	<u>9</u>

**Approved Electives .....** 0-20

Total minimum credit hours required ..... 64



## Welding Technology

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 machine tool operation. Students gain knowledge and skills necessary to prepare them for weld qualification to code specification(s).

### Associate of Applied Science

#### First Year

##### FALL SEMESTER

WELD 1555 – Welding Safety .....	2
WELD 1650 – Print Reading and Welding Symbols .....	3
WELD 1715 – Thermal Cutting and Oxyfuel Welding .....	3
WELD 1755 – Shielded Metal Arc Welding .....	4
WELD 1720 – Welding Shop I .....	2
	<hr/> 14

##### SPRING SEMESTER

WELD 1760 – Advanced Shielded Metal Arc Welding .....	4
WELD 1771 – Gas Metal Arc Welding/ Flux Core Arc Welding .....	4
WELD 2680 – Welding Metallurgy .....	2
WELD 1721 – Welding Shop II .....	2
	<hr/> 12

#### Second Year

##### FALL SEMESTER

ENGL 1010 – English I: Composition .....	3
MATH 1510 – Technical Mathematics .....	3
Physical Education Activity .....	1
WELD 2650 – Gas Tungsten Arc Welding .....	4
ENTK 2500 – Computer-Aided Drafting I .....	3
WELD 1722 – Welding Shop III .....	2
	<hr/> 16

##### SPRING SEMESTER

HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government -OR-	
POLS 1000 – American and Wyoming Government .....	3
CO/M 1030 – Interpersonal Communication .....	3
Social Science -OR- Humanities/Fine Arts Elective .....	3
WELD 1860 – Welding Fabrication .....	3
WELD 1723 – Welding Shop IV .....	3
WELD 1920 – Basic Pipe Welding .....	4
	<hr/> 19

Total credit hours required .....

### Certificate

##### FALL SEMESTER

WELD 1555 – Welding Safety .....	2
WELD 1650 – Print Reading and Welding Symbols .....	3
WELD 1715 – Thermal Cutting and Oxyfuel Welding .....	3
WELD 1755 – Shielded Metal Arc Welding .....	4
WELD 1720 – Welding Shop I .....	2
	<hr/> 14

##### SPRING SEMESTER

WELD 1760 – Advanced Shielded Metal Arc Welding .....	4
WELD 1771 – Gas Metal Arc Welding/ Flux Core Arc Welding .....	4
WELD 2680 – Welding Metallurgy .....	2
WELD 1721 – Welding Shop II .....	2
	<hr/> 12

Total credits required .....

## Wildlife Conservation and Management

This major leads to the Associate of Science degree and will transfer to most four-year college programs in wildlife conservation and management. Students planning a course of study are urged to check with prospective four-year schools for additional requirements and to work closely with an academic advisor.

### GENERAL EDUCATION CORE (34 total credit hours)

#### Communication and Information Literacy (9 credit hours)

ENGL 1010 – English I: Composition .....	3
ENGL 1020 – English II .....	3
CO/M 1010 – Public Speaking .....	3

#### Mathematics and Quantitative Reasoning (8 credit hours)

Two math courses MATH 1400 – Pre-Calculus Algebra or higher (excluding MATH 1510) -OR-	
MATH 1400 – Pre-Calculus Algebra or higher (excluding MATH 1510) -AND-	
STAT 2050 – Fundamentals of Statistics .....	8

#### Cultural, Historical, Political,

#### and Social Development (9 credit hours)

POLS 1000 – American and Wyoming Government -OR-	
HIST 1211 – U.S. to 1865 -OR-	
HIST 1221 – U.S. from 1865 -OR-	
HIST 1251 – Wyoming History -OR-	
ECON 1200 – Economics, Law, and Government .....	3
Social Science Elective Recommendations	
GEOG 1010 – Introduction to Physical Geography (4) -OR-	
GEOG 1050 – Introduction to Natural Resources (3) .....	3-4
Arts and Humanities Elective .....	3

#### Computer Literacy (3 credit hours)

COSC 1200 – Computer Information Systems .....	3
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#### Scientific and Technical Processes (4 credit hours)

Lab science (physical, biological, or earth lab science)	
BIOL 1010 – General Biology .....	4

Physical Wellness (1 credit hour) .....	1
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#### PROGRAM REQUIREMENTS (25 total credit hours)

BIOL 2022 – Animal Biology .....	4
BIOL 2400 – General Ecology .....	3
BIOL 2410 – Introduction to Field Ecology .....	2
CHEM 1020 – General Chemistry I .....	5
CHEM 1030 – General Chemistry II .....	4
PHYS 1110 – General Physics I -OR-	
GEOL 1100 – Physical Geology .....	4
ZOO 2450 – Wildlife Management .....	3

#### Electives (Minimum of 5 credit hours)

Recommendations:	
BIOL 1390 – Scientific Research I .....	4
BIOL 2320 – Tropical Ecology .....	4
BIOL 2390 – Scientific Research II .....	4
BIOL 2470 – Field Methods in the Biological Sciences .....	4
BOT 2100 – Principles of Forest Management .....	3
GEOG 1050 – Introduction to Natural Resources .....	3
GEOG 1100 – Introduction to Geographic Information Systems .....	3
RGMG 2000 – Principles of Range Management .....	3
MATH 2200 – Calculus I (recommended as it is needed for most bachelor-level programs) .....	4

Total minimum credit hours required .....

# Wind Energy

## Associate of Applied Science Degree

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 SEMESTER

IST	1660 – Mechanical Drive Systems .....	2
IST	1661 – Mechanical Drive Assemblies (Lab) .....	1
IST	1710 – DC Electricity (half semester) .....	2
IST	1711 – DC Electrical Circuits (Lab).....	1
IST	1712 – AC Electricity (half semester) .....	2
IST	1713 – AC Electrical Circuits (Lab).....	1
WTT	1000 – Introduction to Wind Energy .....	3
WTT	1100 – Climb Safety and Tower Rescue Training .....	2
		<u>14</u>

### SECOND SEMESTER

IST	1522 – Introduction to Lifting and Crane Operations .....	1
IST	1610 – Fluid Power .....	2
IST	1611 – Fluid Power Circuits (Lab).....	1
IST	1770 – Motor Controls .....	2
IST	1771 – Motor Control Circuits (Lab) .....	1
WTT	1200 – Wind Turbine Mechanical Systems .....	3
WTT	1200L- Wind Turbine Mechanical Systems (Lab).....	0
WTT	2500 – Advanced AC Electricity .....	3
WTT	2500L- Advanced AC Electricity (Lab) .....	0
		<u>13</u>

### THIRD SEMESTER

WTT	1300 – Theoretical Concepts of Rotating Machines and Transformers .....	3
IST	1810 – Programmable Logic Controllers .....	2
IST	1811 – PLC Circuits I (Lab).....	1
WTT	2200 – Advanced Wind Turbine Generator Mechanical Systems .....	3
		<u>9</u>

### FOURTH SEMESTER

WTT	2300 – Wind Turbine Data Acquisition .....	2
WTT	2400 – Power Generation, Transmission, and Distribution .....	3
WTT	2600 – Advanced Industrial Motor Control Applications .....	4
		<u>9</u>

### GENERAL EDUCATION REQUIREMENTS

CO/M	1010 – Public Speaking -OR-	
CO/M	1030 – Interpersonal Communication .....	3
ENGL	1010 – English I: Composition .....	3
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History -OR-	
ECON	1200 – Economics, Law and Government.....	3
MATH	1000 – Problem Solving (or higher).....	3-4
	Social Science or Fine Arts/Humanities Elective .....	3
	Lab Science or Technical Course Elective .....	3-4
	Computer Literacy Elective .....	1
	Physical Education Activity .....	1
		<u>20-22</u>

Total credit hours required.....65-67

## Associate of Science Degree

The Associate of Science degree in Wind Energy with a concentration in Wind Power Technology is designed for students who want to gain valuable industry skills and a strong academic foundation. General education requirements, industrial maintenance knowledge and skills, and specific wind power industry topics are combined to provide the groundwork for both industry involvement and future academic programs.

### FIRST SEMESTER

IST	1660 – Mechanical Drive Systems .....	2
IST	1661 – Mechanical Drive Assemblies (Lab) .....	1
IST	1710 – DC Electricity (half semester) .....	2
IST	1711 – DC Electrical Circuits (Lab).....	1
IST	1712 – AC Electricity (half semester) .....	2
IST	1713 – AC Electrical Circuits (Lab).....	1
WTT	1000 – Introduction to Wind Energy .....	3
WTT	1100 – Climb Safety and Tower Rescue Training .....	2
		<u>14</u>

### SECOND SEMESTER

IST	1522 – Introduction to Lifting and Crane Operations .....	1
IST	1610 – Fluid Power .....	2
IST	1611 – Fluid Power Circuits (Lab).....	1
IST	1770 – Motor Controls .....	2
IST	1771 – Motor Control Circuits (Lab) .....	1
WTT	1200 – Wind Turbine Mechanical Systems .....	3
WTT	1200L- Wind Turbine Mechanical Systems (Lab).....	0
WTT	2500 – Advanced AC Electricity .....	3
WTT	2500L- Advanced AC Electricity (Lab) .....	0
		<u>13</u>

### THIRD SEMESTER

WTT	1300 – Theoretical Concepts of Rotating Machines and Transformers .....	3
IST	1810 – Programmable Logic Controllers .....	2
IST	1811 – PLC Circuits I (Lab).....	1
WTT	2200 – Advanced Wind Turbine Generator Mechanical Systems .....	3
		<u>9</u>

### FOURTH SEMESTER

WTT	2300 – Wind Turbine Data Acquisition .....	2
WTT	2400 – Power Generation, Transmission, and Distribution .....	3
WTT	2600 – Advanced Industrial Motor Control Applications .....	4
		<u>9</u>

### GENERAL EDUCATION REQUIREMENTS

CO/M	1010 – Public Speaking -OR-	
CO/M	1030 – Interpersonal Communication .....	3
ENGL	1010 – English I: Composition .....	3
ENGL	1020 – English II .....	3
POLS	1000 – American and Wyoming Government -OR-	
HIST	1211 – U.S. to 1865 -OR-	
HIST	1221 – U.S. from 1865 -OR-	
HIST	1251 – Wyoming History -OR-	
ECON	1200 – Economics, Law and Government.....	3
	Two courses from MATH 1400 (or higher, Excluding MATH 1510) .....	7-8
	Fine Arts/Humanities Elective .....	3
	Lab Science Elective .....	4
	Social Science Elective .....	3
	Computer Literacy Elective .....	1
	Physical Education Activity .....	1
		<u>31-32</u>

Total minimum credit hours required ..... 76-77



# 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 Student Records Office/Registrar. For additional information, please refer to the “Academic Skills Assessment and Placement Policy” on [Page 9](#).

The college has designated reading, writing, and math prerequisite skill levels for many of the courses in the curriculum. The table below equates placement test levels with a specific developmental course.

This sample course description identifies how to determine the prerequisites for a given course.

**PHYS 1050 (4 CR.)  
CONCEPTS OF PHYSICS**

This course is designed to introduce the student to 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—pharmacy, medical technology, radiographic technology, and dental hygiene—and other nonscience majors requiring a lab physics course. Three hours lecture, two hours lab per week. Prerequisites: Completion of DVST 0520 or ENGL 0520, DVST 0630 or ENGL 0630, and MATH 0930 (or equivalent placement test scores).

Students registering for PHYS 1050 must have completed successfully:

- DVST 0520 or ENGL 0520—Reading Improvement II or scored on the placement test at a READING LEVEL III (or higher);
- DVST 0630 or ENGL 0630—Grammar and Writing Improvement (or higher-level writing course) or scored on the placement test at a WRITING LEVEL II (or higher);
- MATH 0930—Intermediate Algebra (or higher-level math course) or scored on the placement test at a MATH LEVEL II (or higher).

Prerequisite Course Level	Equivalent Placement Test Level
<b>ENGL 0630—Grammar and Writing Improvement (formerly DVST 0630)</b>	Writing Level II is the same as having completed DVST 0630 or ENGL 0630
<b>ENGL 0700—Fundamentals of English (formerly ENGL 1001)</b>	Writing Level III is the same as having completed ENGL 0700
<b>ENGL 0520—Reading Improvement II (formerly DVST 0520)</b>	Reading Level III is the same as having completed DVST 0520 or ENGL 0520
<b>MATH 0900—Pre-Algebra Arithmetic (formerly DVST 0900)</b>	Math Level I is the same as having completed DVST 0900 or MATH 0900
<b>MATH 0920—Elementary Algebra</b>	Math Level II is the same as having completed MATH 0920
<b>MATH 0930—Intermediate Algebra</b>	Math Level III is the same as having completed MATH 0930

# Course Descriptions

## Accounting

### **ACCT 2010** (3 cr.) **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 0920 and ENGL 0520 (or equivalent placement test scores).

### **ACCT 2020** (3 cr.) **Principles of Accounting II**

A continuation of ACCT 2010 involving financial statement preparation and analysis, corporations, partnerships, international accounting, cost accounting, and budgeting. Prerequisites: Completion of ACCT 2010 or both ACCT 1050 and ACCT 1060.

### **ACCT 2110** (2 cr.) **Microcomputer Accounting I**

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 2120** (2 cr.) **Microcomputer Accounting II**

Students learn the practical application of accounting utilizing an additional software program. 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, inventory control, job costing, payroll and billing features of software. Prerequisite: Completion of ACCT 2010 or equivalent preparation.

### **ACCT 2230** (3 cr.) **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 cr.) **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 forms completion. Prerequisites: Completion of DVST 0520 or ENGL 0520 and MATH 0920 (or equivalent placement test scores) or permission of instructor.

### **ACCT 2450** (3 cr.) **Cost Accounting**

Students acquire knowledge in 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 cr.) **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 ACCT 2010 or concurrent enrollment in ACCT 2010.

## Addictionology

### **ADDN 1010** (3 cr.) **Addictions Prevention**

Students develop skills in applying major theories, models, activities, and resources that an individual, family member, school or community can use to educate others, raise awareness, and prevent and intervene with addictive behaviors. Prerequisite: Completion of PSYC 2210.

### **ADDN 2010** (3 cr.) **Addictions Assessment**

Students explore the process of assessment of addictive behaviors including alcohol and drugs, smoking, and eating disorders. In addition, students discuss and identify the behavioral, psychological/cognitive-expectational, and physiological components of specific addictive behaviors. Prerequisite: Completion of ADDN 1010.

### **ADDN 2970** (4 cr.) **Addictionology Internship**

Students gain work experience in the field and apply knowledge acquired in previous course work through assignment to a cooperating treatment agency/facility in the field. This 90-hour field experience will be scheduled, structured, and supervised by a certified or licensed professional. In addition to the field experience, students will meet in a weekly seminar. Students will be accepted in ADDN 2970 with documentation of not abusing alcohol or drugs for 18 months prior to enrollment. Prerequisite: Completion of ADDN 2010.

## Agriculture

### **AGRI 1010** (3 cr.) **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 cr.) **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 cr.) **Introduction to Rodeo**

Students will be 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 cr.) **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 2500 (2 cr.)****Rodeo Production I**

This course is designed to provide hands-on experience in the actual production of a rodeo event. Students gain information concerning the legal, financial, and promotional aspects of rodeo production. Students complete projects dealing with livestock procurement, advertising, sponsorship, and rodeo event financial reports. Prerequisites: Completion of AGRI 1500 and AGRI 1510.

**AGRI 2510 (2 cr.)****Rodeo Production II**

This course is the second in the series of rodeo production classes. Students acquire knowledge about advanced rodeo production methods including computerized rodeo entry systems, multimedia advertising, and computer-assisted rodeo secretarial methods. Prerequisites: Completion of AGRI 2500 and AGECE 2020.

## Agriculture – Agricultural Economics

**AGEC 1010 (3 cr.)****Agriculture Economics I**

A study of the basic economic principles of a free enterprise society with emphasis on the place of agriculture in society. Prerequisites: Completion of DVST 0520 or ENGL 0520 and DVST 0630 or ENGL 0630 (or equivalent placement test scores). (Equivalent to ECON 1010.)

**AGEC 1020 (3 cr.)****Agriculture Economics II**

A study of agriculture as a business and its place in the general economy including farm production functions, marketing, costs, agricultural policy, and consumption. Prerequisite: Completion of AGECE 1010. (Equivalent to ECON 1020)

**AGEC 2010 (3 cr.)****Farm-Ranch Business Records**

A course in economic principles, business methods and science as applied to organization and operations. Farm budgets, cost accounting, and record analysis are included as are measurements of size of business and rate and efficiency of operation. Prerequisite: Completion of DVST 0900 or MATH 0900 (or equivalent placement test score).

**AGEC 2020 (4 cr.)****Farm-Ranch Business Management**

A course describing the tools of management decision-making as applied to the problems of farm and ranch management and resource acquisition and use. Land use planning and income tax returns are covered. Prerequisites: Completion of AGECE 2010 and AGRI 1010.

**AGECE 2395 (3 cr.)****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. The students select a farm/ranch property, secure public information, then develop the business plan for a complete year's operation. The students present their project to the landowner for their review upon completion of the capstone project. Prerequisites: Students graduating from the agriculture program and approval of their advisor.

**AGECE 2400 (3 cr.)****Farm Credit and Finance**

A practical introduction to agriculture and personal finance. The analysis of financial conditions, control of costs, and the computation of interest. Includes a study of the sources of credit available for agriculture. Prerequisites: Completion of DVST 0520 or ENGL 0520 and DVST 0900 or MATH 0900 (or equivalent placement test scores).

**AGECE 2500 (3 cr.)****Agricultural Trade Policy**

This course introduces 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 will consider multicultural differences and their effect on agricultural trade and policy along with alternative public policy options and opinions. Prerequisite: Completion of AGECE 1020 or POLS 1000.

## Agriculture – Agroecology

**AECL 1000 (4 cr.)****Agroecology**

Students examine ecological interactions that affect food-producing (agricultural) systems. Through lectures and laboratory exercises, they gain knowledge of the various biological components and the science of sustainable agricultural production. In particular, students examine differences between developed and developing countries and explore crises and challenges facing agriculture and global society.

**AECL 2010 (4 cr.)****The Ecological Web: Soils**

An introduction to soil science including soil ecology, the formation of soils, the biological properties of the soil affecting plant growth, and the different compositions of fertilizers and their interactions with soils and plants. This course typically consists of three hours of lecture and two hours of laboratory weekly. Prerequisites: Completion of DVST 0520 or ENGL 0520 and DVST 0900 or MATH 0900 (or equivalent placement test scores).

**AECL 2025 (4 cr.)****Ecological Web: Horticultural Science**

A course examining the propagation, growth, development, and utilization of horticultural plants. Students gain an understanding of plant classification, anatomy, interactions with the environment, and genetic improvement through lecture presentations and laboratory experiences. This course fulfills requirements for a science laboratory course. Prerequisite: Completion of BIOL 1000 or BIOL 1010.

## Agriculture – Animal Science

**ANSC 1010 (4 cr.)****Livestock Production**

A course introducing students to the scope of the livestock industry, and management of beef cattle, sheep, dairy cattle, horses, swine, and poultry. Students acquire introductory knowledge of breeding, genetics, reproduction, and nutrition of domestic animals in addition to wool, meat, dairy, and poultry products.

**ANSC 1100 (2 cr.)****Artificial Insemination**

A study of breeding principles and their value to the livestock producer. Each student in this course will be given instruction in A.I. technology including heat detection and disease control.

**ANSC 1200 (2 cr.)****Livestock Fitting and Showing**

A course defining scope of livestock fitting and showing. It is designed to give the student the ability to fit and show cattle and sheep. Students are involved with the actual fitting practices and entries for show as well as the show ring, and they participate in breaking and training of livestock for show. The course is primarily a laboratory experience.

**ANSC 1210 (2 cr.)  
Livestock Judging I**

A study of the selection of domestic livestock based on type, conformation, breeding performance, and production records. Development of and emphasis on oral communication skills will be stressed.

**ANSC 1220 (2 cr.)  
Livestock Judging II**

Continuation of ANSC 1210. Prerequisite: Completion of ANSC 1210.

**ANSC 1260 (2 cr.)  
Livestock Merchandising**

Students gain experience in organizing and managing a livestock auction through hands-on experiences. Students work with consigners to advertise, set up sale facilities, and facilitate proper transport regulations pertaining to interstate and intrastate travel for livestock.

**ANSC 2020 (4 cr.)  
Feeds and Feeding**

A study of nutrition fundamentals and proper livestock management, including balancing rations and field maps to provide information and techniques of formulating feeds advised for production needs of the community. Prerequisites: Completion of DVST 0520 or ENGL 0520, DVST 0630 or ENGL 0630, and DVST 0900 or MATH 0900 (or equivalent placement test scores).

**ANSC 2230 (2 cr.)  
Livestock Judging III**

A continuation of ANSC 1220. Prerequisite: Completion of ANSC 1220.

**ANSC 2300 (3 cr.)  
Plant and Animal Genetics**

A study of the principles of genetics and their application to livestock and crop production. Applications of reproduction, selection, inbreeding, and crossbreeding in livestock production are studied. Students plan and evaluate an improvement program designed to direct genetic changes in livestock. The course introduces students to methods of manipulating reproduction within livestock management systems. Prerequisites: Completion of DVST 0520 or ENGL 0520 and DVST 0900 or MATH 0900 (or equivalent placement test scores).

**ANSC 2320 (3 cr.)  
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 USDA and AVMA 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 – Crop Science

**CROP 1151 (3 cr.)  
Pests and Pesticides**

A course in the management and physiological principles involved in the control of economically important farm, ranch, and range weeds and pests. Structure, activity, and behavior of pesticides and growth regulations are included. Prerequisites: Completion of DVST 0520 or ENGL 0520 and DVST 0900 or MATH 0900 (or equivalent placement test scores).

**CROP 2000 (4 cr.)  
Plants, Agriculture, and Civilization**

A course in plant identification; the control of common weeds, plants, and other undesirables; and a thorough study of agriculture chemicals and their proper uses. The distribution, botany, and culture of legumes and cereals are included. Prerequisites: Completion of DVST 0520 or ENGL 0520 and DVST 0630 or ENGL 0630 (or equivalent placement test scores).

**CROP 2200 (3 cr.)  
Forage Crop Science**

Production, presentation, and quality of principal hay, silage, and pasture crops are studied as well as effects of environmental factors such as physiology, development, and yield of important forage crops. The importance of forage as supplements to livestock enterprises, as soil-improving crops, irrigated and dry land forages, and production with emphasis on characteristics of important grasses and legumes are included. Prerequisites: Completion of DVST 0520 or ENGL 0520 and DVST 0900 or MATH 0900 (or equivalent placement test scores).

## Agriculture – Range Management

**RGMG 2000 (3 cr.)  
Principles of Range Management**

A study of the basic principles and practices of range management as they apply to the western and northwestern regions. The relationship of range management to livestock production, wildlife management, and forage production and their impact as inherent land use are covered. Management principles for private and public rangelands are important to plants and rangeland communities. Prerequisites: Completion of DVST 0520 or ENGL 0520, DVST 0630 or ENGL 0630, and DVST 0900 or MATH 0900 (or equivalent placement test scores).

## Air Force

**AIR 2010 (1.5 cr.)  
The Evolution of Air and Space Power I**

Students examine the history of air and space power in the US with a particular focus on leadership, learn the Air Force Core Values, and continue to develop their communication skills. Leadership Laboratory is an additional component of the course. Prerequisites: Completion of AIR 1010 and AIR 1020.

**AIR 2020 (1.5 cr.)  
The Evolution of  
Air and Space Power II**

This course is a continuation of AIR 2010 The Evolution of Air and Space Power I. Students examine the history of air and space power in the US with a particular focus on leadership, learn the Air Force Core Value, and continue to develop their communication skills. Leadership Laboratory is an additional component of the course. Prerequisite: Completion of AIR 2010 or instructor approval.

## American Studies

### AMST 2010 (3 cr.)

#### 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 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 1001 or ENGL 0700 (or equivalent placement test scores). Completion of ENGL 1010 is recommended.

### AMST 2110 (3 cr.)

#### 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 0520 (or equivalent placement test scores).

## Anthropology

### ANTH 1100 (3 cr.)

#### 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.

### ANTH 1200 (3 cr.)

#### Introduction to Cultural Anthropology

An introductory course in cultural anthropology in which students acquire and demonstrate knowledge of the basic concepts of social and cultural anthropology including ecological-economic systems, social and political organization, language, magico-religious beliefs, and culture change.

### ANTH 1300 (3 cr.)

#### 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 0700 (or equivalent placement test scores).

### ANTH 2210 (3 cr.)

#### 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.

### ANTH 2395 (1 cr.)

#### Capstone Course for Anthropology Majors

A course for anthropology majors who are in or near their final semester and have taken all required anthropology courses. Students reflect over the anthropology courses they have taken and summarize their learning experiences. In addition, students prepare a PowerPoint presentation documenting major themes of anthropology, including the main topics covered within ethnology, archaeology, physical anthropology, and North American Indian cultures; they present their work to an audience of their peers and instructors. Finally, students prepare for and complete a final anthropology exit exam given to all graduating anthropology majors at LCCC. Instructor approval required.

## Art

### ART 1000 (3 cr.)

#### 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. Prerequisites: Completion of DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement scores).

### ART 1010 (3 cr.)

#### General Art: History

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. Prerequisites: Completion of DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement test scores).

### ART 1050 (3 cr.)

#### 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 1060 (3 cr.)

#### 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 1110 (3 cr.)

#### Foundation: Two Dimensional

A course exploring the principles of art structure taught through a series of exercises in the visual organization of line, plane, value, mass, texture, shape, space, movement, and color. Emphasis on studio problems and individual solutions. Prerequisites: Completion of DVST 0520 or ENGL 0520 and DVST 0630 or ENGL 0630 (or equivalent placement test scores).

### ART 1120 (3 cr.)

#### Foundation: Three Dimensional

A continuation of ART 1110. A course exploring the principles of art structure taught through a series of exercises in the visual organization of line, plane, value, mass, texture, shape, space, movement, and color. Emphasis on studio problems and individual solutions. Prerequisite: Completion of ART 1110.

- ART 1250 (3 cr.)**  
**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 cr.)**  
**Water-based Media II**  
 In this continuation of ART 1250, students gain knowledge about color theory and experiment with color palettes to produce desired effects. The historically significant works of contemporary painters and old masters are reflected in student projects. Prerequisite: Completion of ART 1250.
- ART 1490 (3 cr.)**  
**Exhibition Technology**  
 Students gain a general understanding of the nature of galleries and museums, their programs, personnel, philosophies, and methodologies. Students acquire experience in the development of an exhibition theme or concept, identification of the audience and the objectives of the exhibit, and collection and research of artifacts that support the exhibit theme. Preparation of the physical installation of the exhibit and the coordination of publicity for the exhibit will be included.
- ART 1510 (3 cr.)**  
**Handbuilt Ceramics**  
 An introductory course in basic ceramic techniques for sculpture production designed especially for nonmajors. 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 figurative sculpture, a series of multiple form sculptures, and an independent project. (This course does not fulfill LCCC's humanities/fine arts requirement.)
- ART 2010 (3 cr.)**  
**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. Prerequisites: Completion of DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement test scores).
- ART 2020 (3 cr.)**  
**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. Prerequisites: Completion of DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement test scores).
- ART 2050 (3 cr.)**  
**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 cr.)**  
**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 2065 (3 cr.)**  
**Life Drawing III**  
 As a continuation of ART 2060, this course allows students further opportunity to translate the three-dimensional human form into two-dimensional compositions by improving their abilities in the areas of accurate proportions and forms, illusion of light, and the addition of details. Students are encouraged to use additional media to become more expressive in their individual styles and to analyze their strengths and weaknesses. Prerequisite: Completion of ART 2060. Instructor approval required.
- ART 2075 (3 cr.)**  
**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 cr.)**  
**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 cr.)**  
**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 will include relief printing and monoprinting.
- ART 2210 (3 cr.)**  
**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 cr.)**  
**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 cr.)**  
**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 cr.)**  
**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. Drawing and painting skills are required.

**ART 2260** (3 cr.)  
**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 cr.)  
**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 cr.)  
**Sculpture II**  
A course in the study of three-dimensional form building upon knowledge gained in ART 2310. Investigation continues in the varied techniques of sculpture including welded metal, stone carving, and clay working. Students manipulate the form and imagery in representational and nonrepresentational art work. Emphasis is on current sculptural applications and the work of contemporary sculptors. Prerequisite: Completion of ART 2310.

**ART 2350** (3 cr.)  
**Metals I**  
An introductory course in basic jewelry-making techniques. Students acquire technical skills in cutting, piercing, finishing, soldering, bezel stone setting, and texturing metal with an emphasis on design.

**ART 2360** (3 cr.)  
**Metals II**  
A continuation of ART 2350. Students gain knowledge and technical skill in fabrication, chain making, hinges and casting techniques used in jewelry design. Prerequisite: Completion of ART 2350.

**ART 2370** (3 cr.)  
**Metals III**  
A continuation of ART 2360. Students acquire technical skill in repousse, chasing and forging. Students also develop skills in metal working and jewelry design. Prerequisite: Completion of ART 2360.

**ART 2390** (1 cr.)  
**Tile Making I**  
An intensive investigation into the historical, technical, and aesthetic production of handmade ceramic tiles. Through lectures, slide exhibits, and research into historical trends and individual tile makers, students acquire technical knowledge about mold-making for production and fine art tiles. Knowledge about aesthetic issues concerning tile use and functions are demonstrated by the students in the form of final projects and a journal.

**ART 2391** (1 cr.)  
**Tile Making II**  
An intensive investigation into production tile making. Following lecture, slide exhibits, and research, students produce molds. The focus is on the creation of a finished tile installation plan, including murals, floors, and architectural ceramics. Prerequisite: Completion of ART 2390.

**ART 2410** (3 cr.)  
**Ceramics I**  
Students learn the fundamentals of pottery construction, glazing, and firing techniques. Students apply skills to hand-building, wheel-throwing and surface methods. An emphasis is on the formative stages of the clay-working process.

**ART 2420** (3 cr.)  
**Ceramics II**  
Students focus on wheel-throwing pottery and evaluation of completed clay forms. Students explore technical information concerning clays, glazes and firing processes as well as historical trends in pottery. Prerequisite: Completion of ART 2410.

**ART 2430** (3 cr.)  
**Ceramics III**  
A continuation of ART 2420 with emphasis on the development of pottery form and a vocabulary that can be utilized in discussing ceramics. Students become knowledgeable about contemporary clay-working artists. Prerequisite: Completion of ART 2420.

**ART 2440** (3 cr.)  
**Ceramics IV**  
Students focus on the study of raw materials and formulating working clay bodies and glazes in this advanced ceramic course. Students identify use of chemicals as applied to pottery and engage in study of kiln firing techniques and glaze effects. Students also practice glaze making and kiln firing. Prerequisite: Completion of ART 2430.

## Astronomy

**ASTR 1050** (4 cr.)  
**Survey of Astronomy**  
Students gain an 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 0920 (or equivalent placement test scores) and ENGL 0630 (or equivalent placement test scores).

## Automotive Body Repair

**AUBR 1500** (3 cr.)  
**Auto Body Hand/Hydraulic Tools**  
This course is an introduction into the auto body repair field, focusing on hand, power, and hydraulic tools common to the trade. Students identify different tools available for repairs and demonstrate their proper and safe usage through various shop projects including vehicle trim and hardware identification and removal, as well as exterior panel replacement. Students gain skill in determining the proper selection and use of personal protection equipment required for hazardous materials found in body/paint shops.

**AUBR 1510** (3 cr.)  
**Introduction to Auto Body Repair**  
An introductory course in auto body repair. Students develop knowledge of basic procedures used in auto body repair. Students gain skill in and knowledge of shop safety, tools and equipment, metal straightening basics, welding basics, trim and accessories, and painting and refinishing procedures.

**AUBR 1520** (3 cr.)  
**Collision Damage Appraising**  
Students acquire and demonstrate knowledge of different estimating systems, manuals, and procedures used in the auto body repair field. Students prepare both handwritten estimates and computer-generated estimates using P-page logic and abbreviations. Students gain knowledge in all aspects of the estimating process including customer service, visual analysis, supplements, organization, and insurance influences.

- AUBR 1540 (3 cr.)**  
**Auto Body Welding**  
 Students gain the knowledge and skills necessary to identify the different types of metal used in today's vehicle construction and determine the limitations of different alloys. Students explore the different welding equipment and techniques available to repair shops and gain skill in performing the weld styles common to body repair and panel replacement.
- AUBR 1550 (3 cr.)**  
**Auto Body Repair I**  
 Students examine the fundamentals of collision repair, straightening nonstructural steel, and moveable glass replacement. Students gain skill in identifying the characteristics of different metals and plastic fillers and demonstrate industry repair procedures for dent removal.
- AUBR 1560 (3 cr.)**  
**Auto Body Repair II**  
 This course is a continuation of AUBR 1550. Students gain the knowledge and skills necessary to identify and demonstrate repair procedures for the different types of plastics and aluminum used in today's vehicle construction. Students also explore the use of techniques for adhesive bonding.
- AUBR 1570 (3 cr.)**  
**Auto Body Repair III**  
 This course is a continuation of AUBR 1560. Students continue to gain knowledge and skill development in repair procedures for damaged automotive sheet metals and plastics. In addition, students explore new vehicle materials and designs, safety features, park-assist systems, collision warning systems, and alternative fuel systems. Prerequisite: Completion of AUBR 1560.
- AUBR 1580 (3 cr.)**  
**Auto Body Repair IV**  
 This course is the last in the Auto Body Repair series of courses. Students explore safe working procedures for auto body repairs on high voltage vehicles. Students also gain knowledge and skill in identifying different foam applications and their intended purpose in modern vehicles. Prerequisite: Completion of AUBR 1570.
- AUBR 1600 (3 cr.)**  
**Auto Body Upholstery**  
 Students use 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 cr.)**  
**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 cr.)**  
**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 1820 (3 cr.)**  
**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 cr.)**  
**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 (3 cr.)**  
**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 (3 cr.)**  
**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 cr.)**  
**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 pinstriping brushes. Students are required to provide their own dual-action airbrush.
- AUBR 1950 (1-15 cr.)**  
**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.
- AUBR 2500 (3 cr.)**  
**Advanced Auto Body Upholstery**  
 A continuation of AUBR 1600, emphasizing advanced techniques of automotive interior re-upholstering. Students demonstrate procedures for the care and maintenance of upholstery equipment. Students demonstrate pattern construction and re-upholstering techniques for seats, door panels, interior trim panels and headliners. Prerequisite: Completion of AUBR 1600.

## Automotive Technology

- AUTO 1500 (3 cr.)**  
**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.
- AUTO 1510 (4 cr.)**  
**Engine System Fundamentals**  
 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.

**AUTO 1600 (3 cr.)****Fuel Systems I**

This is an intensive study of automotive fuels and carburetion systems such as single, double, and four-barrel carburetors, and carburetor circuits. Students learn emission control as it applies to the fuel system. Emphasis is on the shop procedure necessary in determining the nature of troubles developed in the fuel and emission system of the automobiles causing air pollutants. There is also troubleshooting on the fuel and emission systems providing a full range of testing, adjusting, tune-up, and replacing experiences.

**AUTO 1690 (3 cr.)****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.

**AUTO 1730 (4 cr.)****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.

**AUTO 1740 (3 cr.)****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.

**AUTO 1760 (3 cr.)****Heating and Air Conditioning**

Students learn basic heating and air conditioning theory. Students diagnose, repair, and recharge air conditioning systems to OEM specifications. Students diagnose and repair heating and air conditioning automatic systems.

**AUTO 1765 (4 cr.)****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.

**AUTO 2550 (4 cr.)****Auto Alignment and Suspension**

Students learn suspension and alignment theory. Suspension systems will be 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.

**AUTO 2560 (3 cr.)****Automotive Ignition Systems**

Students learn ignition theory and diagnosis and repair of various computerized and noncomputerized ignition systems. Emphasis is placed on developing a comprehensive understanding of all electrical components and systems with special emphasis on problem diagnosis.

## Aviation

**AVTN 2510 (3 cr.)****Private Pilot Ground School**

Students prepare for the Federal Aviation Administration (FAA) airplane private pilot written knowledge examination. Topics include aerodynamics, flight instruments, aircraft performance, airspace, weather, navigation, regulations, weight and balance computation, physiological factors, and communication.

**AVTN 2600 (3 cr.)****Airplane Instrument Rating**

Students prepare for the Federal Aviation Administration (FAA) airplane instrument rating written knowledge examination. Students gain knowledge in instruments, instrument scan techniques, partial panels, enroute navigation, IFR terminal arrival and departure procedures, instrument approaches, IFT emergencies, ATC system, physiological/psychological factors, meteorology, regulations, and communications.

## Biology

**BIOL 0900 (2 cr.)****Introduction to Biology**

A preparatory science course in which students learn the skills necessary to complete transfer/college-level biology, zoology, or molecular biology classes. Skills to be mastered include critical and analytical analysis of scientific information, an understanding of scientific methods, and a review of basic chemistry and biology. Prerequisite: Completion of DVST 0630 or ENGL 0630 (or equivalent placement test scores).

**BIOL 1003 (4 cr.)****Current Issues in Biology**

In this one-semester course intended for non-science majors, students examine central themes of biology—cell biology, genetics, evolution, ecology—and scientific methodology by focusing on current issues in biology and their relation to humans and the environment. Each week students participate in three hours of lecture/discussion and one three-hour session devoted to laboratory explorations. Students cannot receive duplicate credit for BIOL 1010 or BIOL 1000. Prerequisite: Completion of DVST 0900 or MATH 0900 (or equivalent placement test score).

**BIOL 1010 (4 cr.)****General Biology**

Students study the fundamental concepts of biology primarily at the cellular level. Students acquire knowledge of 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 a weekly three hour laboratory session and demonstrate a working knowledge of the scientific method. Prerequisites: Completion of MATH 0920 (or equivalent placement test scores) and DVST 0520 or ENGL 0520, DVST 0630 or ENGL 0630.

**BIOL 1390 (4 cr.)****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) or instructor consent.

**BIOL 2022 (4 cr.)****Animal Biology**

Students gain knowledge of the evolution, anatomy, physiology, and ecology of animals. Students demonstrate the ability to compare, contrast, and classify animals based upon shared derived characteristics. Students dissect preserved specimens using safe procedures. This course has lecture plus three hours of lab time and fulfills a lab science requirement. Prerequisite: Completion of BIOL 1010.

**BIOL 2023 (4 cr.)****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 economically important to humans. Students also contrast and classify plants and fungi and related organisms. This course fulfills requirements for a science laboratory course. This course is offered during fall semesters. Prerequisite: Completion of BIOL 1010.

**BIOL 2320 (4 cr.)****Tropical Ecology**

Students develop an understanding of ecological principles on a global scale through field exercises, group discussions, research projects, and written assignments. Employing the scientific method in collaboration with students and instructors from another country, students examine tropical ecology as they engage in real 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, students pay fees that may include but are not limited to airfare, room and board, classes, local tours, and other activities. Prerequisite: Completion of DVST 0900 or MATH 0900 (or equivalent placement test score).

**BIOL 2390 (4 cr.)****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.

**BIOL 2400 (3 cr.)****General Ecology**

Ecology is the study of organisms and their interactions with other individuals, species, and their environment through space and time. In this introductory course, students develop a foundation in the theoretical, empirical, and analytic study of ecology. Students demonstrate an understanding of ecological principles through assigned readings, group discussions, review of current literature, exams, and written assignments. This course is offered during fall semesters. Prerequisite: Completion of BIOL 1010.

**BIOL 2410 (2 cr.)****Introduction to Field Ecology**

A field course in ecology. Students gain experience in the fundamental methods, techniques, and tools in ecological research including developing testable ecological hypotheses, experimental design, field sampling, data collection, and analysis. Students demonstrate knowledge gained through participation in field studies, readings, group discussions, and oral and written assignments. This course is offered during fall semesters. Prerequisite: Completion of BIOL 2400 (may be concurrently enrolled) or consent of instructor.

**BIOL 2465 (1-3 cr.)****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 cr.)****Field Methods in the Biological Sciences**

A field trip study of the biological characteristics of various locations. Students identify plants, animals, fungi, and/or protists native to the ecosystem as well as these organisms' adaptation to the ecosystem under study. Students utilize the scientific method and access primary literature to complete self-selected research projects. Besides tuition, students pay fees that may include but are not limited to airfare, room and board, classes, local tours, and other activities. Prerequisite: Completion of ENGL 0520, ENGL 0630, and MATH 0920 (or equivalent placement test scores).

**BIOL 2485 (1 cr.)****Biology Seminar**

A seminar in which students meet with faculty members in order to review current topics in biology. Students gain a working knowledge and proficiency regarding a previously agreed upon topic. Students demonstrate their understanding of the seminar topic through group discussions, review of current literature, written and oral assignments, and laboratory reports. Prerequisite: Completion of BIOL 1010.

**Botany****BOT 2100 (3 cr.)****Principles of Forest Management**

A survey course in which students explore a wide range of forestry and wood science topics, including the laws affecting forest management, methods of harvesting wood from forests, fire and insect management, the effects of disturbances on stream flow and nutrient cycling, and the challenges of developing management plans for forests. This course is offered during spring semesters. Prerequisite: Completion of ENGL 0520, ENGL 0630, and MATH 0920 (or equivalent placement test scores).

**Business****BUSN 2000 (3 cr.)****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 DVST 0520 or ENGL 0520 (or equivalent placement test score).

**Business Administration****BADM 1000 (3 cr.)****Introduction to Business**

A study of the role of business in the American economy including ownership, organization, and management of business firms and an introduction to the basic functional areas of marketing, finance, production, and personnel. Consideration is given to the interrelationships among significant business activities. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**BADM 1020 (3 cr.)****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 1021 (1 cr.)****Customer Service I**

This introductory course will cover topics relevant to customer service such as response time, professional appearance and attitude, communications, telephone skills, and postal services.



**BADM 1022** (1 cr.)  
**Customer Service II**

This course is an advanced customer service class. The major emphasis of the course will be studying the various types of customers and how to deal with them through written and oral communication. Prerequisite: Completion of BADM 1021.

**BADM 2010** (3 cr.)  
**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 DVST 0520 or ENGL 0520 (or equivalent placement test score).

**BADM 2020** (3 cr.)  
**Business Law II**

A course in which students become knowledgeable about the basic principles of agency, employment and labor relations, forms of business ownership, partnership, limited partnership, joint-venture, corporations, security regulation, and administrative and consumer law. Prerequisite: Completion of BADM 2010.

**BADM 2030** (3 cr.)  
**Business Ethics**

Students examine the nature of ethical behavior in business and its broader implications for society. They gain knowledge of the history of ethics in business, factors that impact the ethical decision-making process in business, and the global aspect of business ethics. Students also gain 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 BADM 1000 or advisor approval.

**Certified Public Manager**

**CPM 1000** (3 cr.)  
**Introduction to Certified Public Management**

Students summarize the requirements of the Certified Public Manager (CPM) program, describe the CPM core abilities, and identify the effects of these abilities as a positive influence in their respective work environments. Students complete the Myers-Briggs Type Indicator and integrate findings into a personal leadership development plan. Furthermore, students identify best practices for successful interactions based on knowledge gained about personality traits and styles. Students are also introduced to project management concepts. They identify the features and attributes of a project and the steps and variables of the project management process. Students describe the parameters of their capstone project for the CPM program. In addition, students examine the principles of public policy and managing in the public sector. They explore and debate public policy issues and discuss the impact of public policy on individuals and society. There is an application process for admission to the program.

**CPM 1100** (3 cr.)  
**Financial, Process, and Personnel Management**

In part two of the CPM program, students gain knowledge in public finance, budgets, organizational culture, and diversity. They develop a mock budget proposal that is delivered to a panel of current and former Wyoming legislators. In addition, students apply practical leadership skills in progress discussions and reviews. They recognize differences in generations, cultures, and genders in the workplace and the impact of diversity of an organization. Students also examine the principles and process of Continuous Quality Improvement (CQI). Finally, they debate the pros and cons of CQI as a means of assessing knowledge, the appropriateness of its use, and the consistency of its purpose. Prerequisite: Completion of CPM 1000.

**CPM 1200** (3 cr.)  
**Law, Ethics, Conflict, Safety, and Change**

Students discuss and debate the vast array of federal and state laws governing the employer/employee relationship and explore the basic principles and issues involved in human resource management in the public sector. They list key concepts in all aspects of human resource management, including hiring, employee motivation and discipline, and termination. In addition, they discuss critical issues in employment law, including discrimination in the workplace and theories of liability. They analyze other legal issues that guide conduct in the public sector, such as grants management, the legal responsibilities of non-profit boards, and public records laws. Finally, students explore issues of conflict resolution, ethical behavior, workplace safety, change leadership, and situational leadership. Prerequisite: Completion of CPM 1100.

**CPM 1300** (3 cr.)  
**Coaching, Negotiation, and Professional**

Students explore and analyze multiple sectors in coaching, including team leadership, coaching for success, coaching for improvement, and managing performance problems. Students develop skills in negotiation and meeting management as well as professional communication. Prerequisite: Completion of CPM 1200.

**CPM 1400** (4 cr.)  
**Partnerships, Decision Making, and Capstone Project**

Students identify their role in establishing alliances among work groups, management, and the public they serve. They learn how to establish effective partnerships to meet customer needs by developing strategies for gaining commitment from partners to work together. They also differentiate between different types of decisions and decision-making processes and determine which process to use in various situations. They apply these skills to make timely, quality decisions. Through the CPM capstone project, students demonstrate the knowledge and skills gained during the entire CPM program. In creating this major project, students must incorporate CPM competencies, support their agency's goals, and make a positive impact on their organization. Prerequisite: Completion of CPM 1300.

## Chemistry

### **CHEM 1000** (4 cr.) **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. Prerequisites: Completion of DVST 0520 or ENGL 0520, DVST 0630 or ENGL 0630, and MATH 0920 (or equivalent placement test scores.)

### **CHEM 1020** (4 cr.) **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 MATH 1400 or concurrent enrollment (or equivalent placement test scores), completion of CHEM 1000 or one year high school chemistry is strongly recommended.

### **CHEM 1030** (4 cr.) **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 2110** (1 cr.) **Glassblowing I**

A course introducing students to the basic techniques of glassblowing. Students fabricate T-joints, butt joints, and ring seals; repair scientific glassware; and complete a glassblowing project.

### **CHEM 2320** (3 cr.) **Organic Chemistry I**

A first-semester course of a two-semester sequence for science and chemistry majors. Students draw molecular orbitals and discuss bonding within molecules; name and write structures and reaction products for alkanes, alkenes, conjugated dienes, and radicals; discuss and distinguish stereoisomers; calculate free-energy changes and apply equilibrium concepts to chemical reactions; write the products of substitution and elimination reactions; and interpret spectra. Prerequisite: Completion of CHEM 1030.

### **CHEM 2325** (1 cr.) **Organic Chemistry Lab I**

A first-semester course of a two-semester laboratory sequence for science and chemistry majors. Students 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. Corequisite: CHEM 2320. Prerequisite: Completion of CHEM 1030.

### **CHEM 2340** (3 cr.) **Organic Chemistry II**

A second-semester course of a two-semester sequence for science and chemistry majors. Students name and write structures and reaction products for 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 interpret spectra. Prerequisite: Completion of CHEM 2320.

### **CHEM 2345** (1 cr.) **Organic Chemistry Lab II**

A second-semester course of a two-semester laboratory sequence for science and chemistry majors. Students synthesize and characterize a number of molecules containing a variety of functional groups; operate the laboratory instruments which include nmr spectrometer, FT-ir spectrometer, gas-chromatograph-mass spectrometer, and uv-vis spectrometer; and handle chemicals in a safe manner while performing experiments. Corequisite: CHEM 2340. Prerequisite: Completion of CHEM 2325.

## College Success

### **COLS 1000** (3 cr.) **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 1010** (3 cr.) **Public Speaking**

Students develop skills to construct and effectively deliver speeches in a variety of contexts. Prerequisite: Completion of ENGL 0700 (or equivalent placement test scores).

### **CO/M 1030** (3 cr.) **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 0700 (or equivalent placement test scores).

### **CO/M 1040** (3 cr.) **Introduction to Human Communication**

A course introducing students to the various forms of human communication. Topics include intra- and interpersonal communication, group communication, intercultural communication, mass communication, and organizational communication. Prerequisites: Successful completion of DVST 0520 or ENGL 0520 (or equivalent placement test score) and ENGL 1010 with a grade of C or better.

### **CO/M 2060** (3 cr.) **Forensics Practicum**

Student speakers enhance their speaking, competitive, and interpersonal skills. The Laramie County Community College forensics team consists of students enrolled in this course. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score). May be repeated for up to 12 credit hours.

### **CO/M 2120** (3 cr.) **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. Prerequisites: Completion of ENGL 0700 (or equivalent placement test scores).

# Computer Applications

## **CMAP 0900 (1 cr.)**

### **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 1500 (1 cr.)**

### **Computer Keyboarding**

Students become familiar with basic computer keyboarding, keyboard by touch, and key straight copy at a speed of 25 words a minute or more on a three-minute timing. (This course does not fulfill LCCC's computer literacy requirement.) (S/U grade only)

## **CMAP 1503 (3 cr.)**

### **Introduction to Computer Applications**

An introductory course in computer applications. Students develop knowledge of basic skills in computer applications. Students gain skill and knowledge of software use, Windows, word processing, spreadsheet, presentation graphics, and database applications. This course serves as a prerequisite for CMAP 1705, CMAP 1755, and CMAP 1805.

## **CMAP 1610 (1 cr.)**

### **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 0520 (or equivalent placement test score.)

## **CMAP 1615 (3 cr.)**

### **Operating Systems**

This course introduces students to popular operating systems (OS) and helps prepare them to support some OS functions, specifically preparing the student to take the A+ operating system exam. Topics covered include the startup process, device drivers, hard disk setup, and the Microsoft Windows family—setup and upgrade, Linux setup, and DOS basics.

## **CMAP 1650 (1 cr.)**

### **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 1685 (1 cr.)**

### **Using Computers In:**

A course in which students acquire knowledge about current computer concepts, terminology, and software. Word processing, spreadsheet, and database applications focus on a specified curriculum, which may vary with each offering.

## **CMAP 1700 (1 cr.)**

### **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 1705 (1 cr.)**

### **Word Processing II:**

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. Prerequisites: Completion of DVST 0520 or ENGL 0520 and MATH 0920 (or equivalent placement test score).

## **CMAP 1710 (1 cr.)**

### **Word Processing III:**

Students acquire advanced word processing skills including creating online forms; writing macros; developing master documents, indexes, and tables of contents; and integrating with other applications. Prerequisite: Completion of CMAP 1705 or instructor approval.

## **CMAP 1750 (1 cr.)**

### **Spreadsheet Applications I:**

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. Prerequisites: Completion of DVST 0520 or ENGL 0520 and MATH 0920 (or equivalent placement test score).

## **CMAP 1755 (1 cr.)**

### **Spreadsheet Applications II:**

This course provides students with a more thorough understanding of spreadsheet applications. Topics covered include advanced printing, graphics and functions, data tables, data query, file operations, and macros. Prerequisite: Completion of CMAP 1750 or equivalent preparation.

## **CMAP 1760 (1 cr.)**

### **Spreadsheet Applications III:**

Students develop advanced skills, beyond skills taught in CMAP 1755, to create spreadsheets. Emphasis is on business applications. Students learn to create advanced data tables, modeling using scenario manager, solve complex problems, import data from other applications, create and use advanced macros, and write simple Visual Basic for applications. Prerequisite: Completion of CMAP 1755 or equivalent preparation.

## **CMAP 1800 (1 cr.)**

### **Database Applications I:**

A study of the techniques used in file organization, storage, and retrieval using a popular database management system. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

## **CMAP 1805 (1 cr.)**

### **Database Applications II:**

Students develop intermediate skills used in creating and using database applications. Emphasis is on business applications. Prerequisite: Completion of CMAP 1800 or instructor permission.

## **CMAP 1810 (1 cr.)**

### **Database Applications III:**

Students develop advanced skills used in creating and using database applications. Emphasis is on business applications. Prerequisite: Completion of CMAP 1805 or instructor permission. (Cross-listed as DBMS 1810.)

## **CMAP 1886 (1 cr.)**

### **Microsoft Outlook**

This course introduces students to the popular Microsoft Office Outlook software. Students develop the ability to customize Outlook, use email 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 (3 cr.)**

### **Computer Hardware Maintenance**

A course designed to provide students with the skills necessary to install and troubleshoot hardware devices. Topics include system setup, RAM, hard and floppy drives, data buses, power supplies, I/O cards, and diagnostic tools.

## **CMAP 2471 (1 cr.)**

### **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 cr.)  
**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 cr.)  
**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 2550** (3 cr.)  
**Visual Basic Programming**  
 Students acquire knowledge and skills about programming techniques in the current version of Microsoft Visual Basic, an event-driven programming language. Topics include designing Windows applications using forms and controls and accessing databases and files. Prerequisite: Completion of COSC 1010 or equivalent experience.

**CMAP 2560** (3 cr.)  
**Introduction to Linux/UNIX**  
 This course introduces students to the Linux/UNIX operating system using a dedicated server as host. Students acquire basic knowledge of, and skills in, the use of a multi-user, multitasking operating system. Topics include the command structure, user accounts, file systems, directories, text editors and mail systems. Students utilize Linux commands to accomplish input/output, file manipulation, standards programming structures, scripting, and system administration tasks. Prerequisite: Completion of COSC 1010.

**CMAP 2580** (3 cr.)  
**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, XML, and other current Web programming concepts. Prerequisites: Completion of any programming course and INET 1581 or equivalent experience.

**CMAP 2630** (1 cr.)  
**Presentation Graphics: Microsoft PowerPoint**  
 This course introduces students to a presentation graphics program. Students develop skills in creating slide and outline presentations, utilizing clip art in presentations, and importing graphs and tables into presentations.

**CMAP 2810** (1 cr.)  
**Scripting In:**  
 Students acquire scripting skills in a specific language, which may vary with each offering. Students apply basic language commands and structures to a project in their area of interest. Prerequisite: Completion of COSC 1010 or equivalent.

**CMAP 2835** (3 cr.)  
**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 cr.)  
**Cisco: Internetworking I**  
 Students acquire knowledge and skills about network fundamentals. Students develop skills in hardware for a local area network, the OSI model, wiring standards, design, topologies, network classes, and an introduction to routed protocols. Students install network cabling and apply standards in selecting equipment locations. This is the first of four courses designed to guide the student toward a Cisco Certified Network Associate (CCNA) certification. Prerequisite: Completion of CMAP 1615 or instructor approval.

**CSCO 2010** (3 cr.)  
**Cisco: Advanced Internetworking I**  
 Students acquire knowledge and skills about router configuration and associated hardware and software. They develop skills in the OSI model, LAN devices, IP addressing, router and routing protocols, router modes, and access lists. This is the second of four courses designed to guide the student toward a CCNA (Cisco Certified Network Associate) certification. Prerequisite: Completion of CSCO 2000 or instructor approval.

**CSCO 2020** (3 cr.)  
**Cisco: Advanced Internetworking II**  
 Students acquire knowledge and skills about advanced virtual local area networks and LAN design. They develop skills in advanced IP addressing techniques, intermediate routing protocols, and command-line interface configuration of switches. This is the third of four courses designed to guide the student toward a CCNA (Cisco Certified Network Associate) certification. Prerequisite: Completion of CSCO 2010.

**CSCO 2025** (3 cr.)  
**Cisco: Advanced Internetworking III**  
 Students acquire knowledge and skills for configuring WANs and remote access. Students configure protocols such as Frame Relay, Network Address Translation (NAT), and Point-to-Point Protocol (PPP). They also perform advanced techniques for IP addressing and basic communications security. This is the fourth of four courses designed to guide the student toward a CCNA (Cisco Certified Network Associate) certification. Prerequisite: Completion of CSCO 2020.

**CSCO 2050** (3 cr.)  
**CCNP I: Advanced Router Configuration**  
 Students acquire the knowledge and skill necessary for configuring and maintaining advanced routing protocols. Students explore advanced routing protocols, network growth issues and solutions, and security. In this course, students prepare for the first of four certification exams required to earn the Cisco Certified Networking Professional designation. Prerequisite: Completion of CSCO 2025 or CCNA certification.

**CSCO 2060** (3 cr.)  
**CCNP II: Building Remote Access Networks**  
 Students gain the knowledge and skills for the identification, selection, and configuration of appropriate technologies to enable users to connect to sites using remote access. Students configure such technologies as dial-on-demand routing, point-to-point protocol, network address translation, and queuing strategies. In this course, students prepare for the second of four certification exams required for the Cisco Certified Professional designation. Prerequisite: Completion of CSCO 2025 or CCNA certification.

**CSCO 2070** (3 cr.)  
**CCNP III: Multi-Layer Switched Networks**  
 Students acquire the knowledge and skills to install, maintain, and configure appropriate switching technologies and hardware to enable users to connect to a LAN. Students configure such technologies as the switch block, redundant links, virtual LANs (VLANs), multi-layer switching, and switch security. In this course, students prepare for the third of four certification exams required for the Cisco Certified Networking Professional designation. Prerequisite: Completion of CSCO 2025 or CCNA certification.

## Computer Applications – Computer Security

### **CSEC 1500** (3 cr.) **Network Security Fundamentals**

An introductory course in general security concepts. Students gain knowledge in access control technologies including MAC, DAC, and RBAC; and authentication methods including CHAP, Kerberos, Certificates, Tokens, and Passwords. Students also examine methods to counteract various security attacks including Replay, TCP/IP hijacking, social engineering, password guessing, and malicious code attacks. Prerequisite: Completion of CSCO 2000 or MSFT 2578 or instructor approval.

### **CSEC 1510** (3 cr.) **Network Defense Principles**

Students gain knowledge and skills to identify elements of firewall design, types of security threats, and responses to security attacks; use best practices to design, implement, and monitor a network security plan; demonstrate system security skills through firewall implementation and testing; use system tools, practices, and relevant technologies to implement a security plan; evaluate practices, tools, and technologies to identify security breaches, sources of attacks, and protect mission critical systems; establish an appropriate level of security based on an analysis of security logs; and use relevant tools to secure a network. Prerequisite: Completion of CSCO 2000 or MSFT 2578 or instructor approval.

### **CSEC 1520** (3 cr.) **Network Attack Principles**

Students gain knowledge and skills to identify tools and methods used by attackers and learn what kinds of attacks can occur and what evidence they can leave behind. Students also gain understanding of special vulnerabilities of Windows NT/2000, UNIX/Linux, and Web Servers. In addition, students examine and apply methods of keeping up with the latest security information and dissect some past attacks to analyze how they were successful and how they could have been prevented. Prerequisite: Completion of CSCO 2000 or MSFT 2578 or instructor approval.

### **CSEC 1530** (3 cr.) **Computer Forensics**

An in-depth study of system forensics including methodologies used for analysis of computer security breaches. The Students gather and evaluate evidence to perform postmortem analysis of a security breach. Students also gain knowledge and skills to identify computer investigation issues, collect evidence, evaluate network traffic, evaluate recovered remnant or residual data, and compile lessons learned for future strategies. Prerequisite: Completion of CSCO 2000 or MSFT 2578 or instructor approval.

## Computer Applications – Internet Technology

### **INET 1550** (1 cr.) **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 1581** (1 cr.) **Web Page Authoring I**

Students create web pages using a simple authoring tool and the fundamentals of HTML and CSS. Students publish their work to a secure server via the ftp process and create a portfolio collection of guided pages and an original home page. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test scores).

### **INET 1582** (1 cr.) **Web Page Authoring II**

Students acquire the knowledge and skills to create more advanced web pages in eXtensible HyperText Markup Language (XHTML) including the use of links, tables, image maps, and frames. Prerequisite: Completion of INET 1581.

### **INET 1583** (1 cr.) **Web Page Authoring III**

Students acquire the knowledge and skills to create more advanced web pages in eXtensible HyperText Markup Language (XHTML) including the use of forms, style sheets, and basic scripting. Prerequisite: Completion of INET 1582.

### **INET 1640** (3 cr.) **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 cr.) **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. Prerequisites: Completion of INET 1640, INET 2620, or instructor approval.

### **INET 2620** (3 cr.) **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 1583.

## Computer Applications – Linux

### **LINX 2500** (4 cr.) **Linux Administration I**

Students develop the knowledge and skills necessary to install and administer Linux systems. They examine the basic concepts of Linux/UNIX operating systems. Topics covered include installation, boot managers, Linux desktop, help resources, system management, file and directory structure, shells and scripting, user administration, command line administration, processes, network configurations, and Linux security basics. Upon successful completion of the course, students will be able to install, configure, and administer a Linux system. This course also provides a base from which students can study to pass the CompTIA Linux+ certification. Prerequisites: Completion of CMAP 1615 and MSFT 2578 or instructor approval.

**LINX 2510 (4 cr.)****Linux Administration II**

Students gain the knowledge and skills necessary to implement and administer Linux servers and related services. They explore advanced administrative concepts of Linux/UNIX server environments. Topics covered include network configurations, network services, backups and recoveries, and troubleshooting. Upon completion of the course, students should be able to install, configure, and administer a Linux server. This course provides in-depth coverage of network services including DNS, DHCP, email, FTP, file, Web, and print servers. This course contributes to the knowledge base needed to help prepare students for the Linux Red Hat Engineer certification exams. Prerequisites: Completion of LINX 2500 and concurrent enrollment in COSC 1010 or instructor approval.

**LINX 2600 (4 cr.)****Linux Networking**

Students interested in becoming a Linux systems/network administrator or engineer gain the knowledge and skills necessary to design, build, and manage a Linux-based network infrastructure. They explore advanced Linux networking topics, including an in-depth knowledge of the Linux TCP/IP stack and IP version 6 as well as the configuration and management of IP subnetting, network interfaces, NFS, NIS, VNC, network security, and network monitoring/troubleshooting. Upon successful completion of the course, students are able to design and manage Linux-based networks. This course contributes to the knowledge base needed to help prepare students for the Linux Red Hat Engineer certification exams. Prerequisite: Completion of LINX 2510 or instructor approval.

**LINX 2610 (4 cr.)****Linux Security**

Students preparing to become professional Linux systems/network engineers develop the knowledge and skills necessary to design and manage secure Linux systems. Topics covered include security concepts, secure communication, infrastructure security, cryptography, defense against hackers and crackers, password security, port and service security, as well as monitoring security. In addition, they develop a working knowledge of firewalls, VPN, and packet filtering as components in a layered security environment. This course contributes to the knowledge base needed to help prepare students for the Linux Red Hat Engineer certification exams. Prerequisites: Completion of LINX 2510 and LINX 2600 or instructor approval.

**LINX 2620 (4 cr.)****Linux Scripting**

Students pursuing a career in system/network engineering develop the knowledge and skills necessary for designing and managing Linux-based shell scripts. Students navigate through Linux command shell and file structure as well as develop, execute, and debug Linux-based shell scripts. They evaluate various external scripting languages and utilize advanced scripting concepts and practices including scheduled and remote administrative scripts. Prerequisite: Completion of LINX 2500 and COSC 1010 or instructor approval.

**LINX 2700 (4 cr.)****Linux and Windows Integration**

Students interested in becoming Linux system/network engineers gain the knowledge and skills needed to design and manage the interoperation of Linux and Microsoft systems. They prepare to plan, implement, troubleshoot, and manage mixed Linux and Microsoft environments. Topics covered include Linux and Microsoft directory services, user account management, network shares and trusts, samba, and account security. Upon successful completion of the course, students are able to design and manage a mixed Linux and Microsoft network environment. This course contributes to the knowledge base needed to help prepare students for the Linux Red Hat Engineer certification exams. Prerequisites: Completion of LINX 2510, LINX 2600, and MSFT 2700, or instructor approval.

## Computer Applications – Microsoft Technology

**MSFT 2578 (4 cr.)****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 cr.)****Implementing Microsoft Windows Desktop Environment**

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. Prerequisite: Completion of MSFT 2578 or instructor approval.

**MSFT 2700 (4 cr.)****Managing and Maintaining Microsoft Servers**

Students develop the knowledge and skills necessary to install, maintain, configure, monitor, and administer Microsoft server environments. They configure and manage domain accounts, server roles, security, backups, and group policy objects. They also manage and secure network resources and distributed file systems. The course is intended for systems and network administrators who work in Microsoft environments. Prerequisite: Completion of MSFT 2600 or instructor approval.

**MSFT 2710 (4 cr.)****Microsoft Active Directory**

Students develop the knowledge and skills necessary to design, implement, and manage a Microsoft Active Directory environment. They configure, manage, and troubleshoot domain accounts, system security, group policy infrastructure, directory services and recovery as well as other needs associated with the current Microsoft Active Directory Exam. Prerequisite: Completion of MSFT 2700 or instructor approval.

**MSFT 2720 (4 cr.)****Microsoft Network Infrastructure**

Students develop the knowledge and skills necessary to design, implement, and maintain a Microsoft network infrastructure. Students install and configure Microsoft servers and network infrastructure services, including DHCP, DNS, RRAS, and develop skills needed to maintain the health of the network. By completing this course, students prepare to take the current Microsoft Network Infrastructure exam. Prerequisite: Completion of MSFT 2700 or instructor approval.

**MSFT 2730** (4 cr.)  
**Microsoft Application Servers**  
Students develop the knowledge and skills necessary to design, implement, configure, and manage Microsoft Application Servers. They deploy file service roles including IIS services, Web applications, terminal services, network applications, and high availability technologies. By completing this course, students prepare to take the current Microsoft Application Server exam. Prerequisite: Completion of MSFT 2700 or instructor approval.

**MSFT 2800** (4 cr.)  
**Microsoft Virtual Servers**  
Students develop the knowledge and skills necessary to design, implement, and manage Server Virtualization in Microsoft environments. They design, deploy, and configure virtual server environments, including Microsoft Virtual PC, Microsoft Virtual Server, Microsoft Hyper-V, Virtual Box, and VMWare. Prerequisite: Completion of MSFT 2700 or instructor approval.

## Computer Science

**COSC 1010** (4 cr.)  
**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 cr.)  
**Computer Science I**  
Students acquire algorithmic problem-solving skills applying the principles of structured programming and object-oriented design. Algorithms are implemented in a high-level, object-oriented programming language (C++). Programming exercises and experimentation with software in a closed laboratory supplement the discussion. Prerequisite: Completion of COSC 1010 or equivalent.

**COSC 1200** (3 cr.)  
**Computer Information Systems**  
A course providing the level of basic computer literacy necessary to properly adapt to our automated society. It includes an introduction to computer hardware and software, business information systems, and the use of the computer to solve problems. Hands-on training with microcomputers includes electronic spreadsheets, database management, and word processing. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**COSC 2030** (4 cr.)  
**Computer Science II**  
A study of 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.

## 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 cr.)  
**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 cr.)  
**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 CRMJ 2120 or consent of instructor.

**CRMJ 1320** (3 cr.)  
**Criminal Investigation II**  
A detailed study of 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 CRMJ 1310 or consent of instructor.

**CRMJ 1510** (3 cr.)  
**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 2004 (3 cr.)****Homeland Security and Law Enforcement**

Students receive an introduction to terrorism using a criminological or criminal justice framework for studying 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 ENGL 0700 or ENGL 1001 or placement into ENGL 1010, or concurrently enrolled in ENGL 1010. (Cross-listed as HSEC 2004.)

**CRMJ 2120 (3 cr.)****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 0520 and ENGL 0700 (or equivalent placement test scores).

**CRMJ 2210 (3 cr.)****Criminal Law I**

An introduction to criminal law as an institution and as a formal means of social control. Students view criminal law from the perspective of criminal justice, law, anthropology, sociology, and psychology. For both non-majors and majors in law enforcement, corrections and pre-law. Prerequisite: Completion of CRMJ 2120 or consent of instructor.

**CRMJ 2220 (3 cr.)****Criminal Law II**

An introduction to 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. Students study: 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 CRMJ 2210 or consent of instructor.

**CRMJ 2350 (3 cr.)****Introduction to Corrections**

A course dealing with the development and philosophy of the many attempts to change the lawbreaker. Treatment and punishment are discussed for adults and juveniles in both community and institutionally-based alternatives. For both nonmajors and majors in criminal justice. Prerequisite: Completion of CRMJ 2120 or consent of instructor.

**CRMJ 2380 (3 cr.)****Probation and Parole**

A study of 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 CRMJ 2120 or consent of instructor.

**CRMJ 2400 (3 cr.)****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 as SOC 2400 Criminology.

**CRMJ 2420 (3 cr.)****Juvenile Justice**

A study of 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 CRMJ 2120 or consent of instructor.

## Decision Science

**DSCI 2210 (3 cr.)****Production and Operations Management**

An introductory course in production and operations management. Students gain knowledge and skills about operations strategy, quality management, facilities location, facilities layout, forecasting, inventory management, production planning, scheduling, and project management. Students apply these decision-making strategies to typical management situations. Prerequisites: Completion of MATH 2355, STAT 2010, COSC 1200 or equivalent skills.

## Dental Hygiene

**DHYG 1110 (3 cr.)****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 (3 cr.)****Preventive Dentistry**

Students examine and demonstrate an understanding of the oral disease process, healthy vs. diseased tissue, plaque control methods, and fluorides. Students evaluate patient education and motivation methods and gain practical experience in assessment of individual patient learning needs and planning teaching strategies to meet those needs. Prerequisite: Acceptance into the Dental Hygiene program.



- DHYG 1200** (2 cr.) **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 1410** (6 cr.) **Dental Hygiene Principles**  
Students identify theory, principles, and procedures necessary for the performance of dental hygiene services. Through didactic, laboratory, pre-clinical, and service-learning experiences, they demonstrate appropriate ergonomics, infection control procedures, and professional behavior. Students also assess medical/dental histories, intra- and extra-oral structures, and hard and soft tissue deposits. In addition, they identify dental hygiene instruments and practice instrumentation, therapeutic stain removal, and fluoride application skills. Using the dental hygiene process of care model, students identify the rationale for dental hygiene intervention and develop basic dental hygiene diagnoses and treatment plans. Students also assess their skills and reflect on their progress. Prerequisite: Acceptance into the Dental Hygiene program.
- DHYG 1420** (3 cr.) **Dental Hygiene Seminar I**  
Students prepare for clinical experience by practicing supplemental instrumentation and adjunctive pain management techniques, interpreting patient assessment data, and designing culturally sensitive dental hygiene care plans for the medically compromised, geriatric, and special needs clients. Students apply skills and techniques in DHYG 1425 Clinic I. Prerequisite: Completion of the first term of the LCCC Dental Hygiene Program.
- DHYG 1425** (3 cr.) **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 1685** (1 cr.) **Computer Applications in Dental Hygiene**  
Students explore current computer concepts, software, and dental technology. Students focus on presentation, word processing, database, and practice management applications while examining the impact on client confidentiality and the role of technology in dentistry. Prerequisite: Acceptance into the Dental Hygiene program.
- DHYG 2200** (3 cr.) **General and Oral Pathology**  
Students demonstrate an understanding of the fundamentals of general pathology and disease processes. Also covered is oral pathology with an emphasis on the recognition and identification of frequently seen oral conditions. Prerequisite: Completion of DHYG 1110.
- DHYG 2250** (2.5 cr.) **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.
- DHYG 2260** (3 cr.) **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** (3 cr.) **Periodontology II**  
Students demonstrate knowledge of the classifications and etiology of gingival and periodontal diseases including both local and systemic factors. They explore the hygienist's role in disease recognition, prevention, therapeutic procedures, and maintenance. Students practice assessment skills and develop recommendations for appropriate treatment of selected cases. Prerequisite: Completion of DHYG 1310.
- DHYG 2400** (2 cr.) **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 cr.) **Practice Management**  
Students explore issues of practice management, legal and ethical aspects of practice, licensure, career planning, interpersonal communication, and current topics of interest to dentistry. Prerequisite: Acceptance into the Dental Hygiene program.
- DHYG 2430** (2 cr.) **Dental Hygiene Seminar II**  
Students continue preparation for clinical experience through the development of advanced clinical practice skills using state-of-the-art modalities and equipment to provide dental hygiene care. Instruction includes use of power scalers and polishers, the use of area specific and supplemental hand instruments, and instrument sharpening. Techniques learned in class will be practiced in DHYG 2435. Prerequisite: Completion of first two terms of program.
- DHYG 2435** (5 cr.) **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** (2 cr.) **Dental Hygiene Seminar III**  
Students explore various dental specialty practices, increase proficiency in supplemental clinical skills, and present a periodontal case study initiated in DHYG 2330. Students focus on personal assessment of competency, review the process of dental hygiene licensing, and practice national board exam skills. Prerequisite: Completion of first three terms of program.

**DHYG 2445** (5 cr.)**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 cr.)**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 2451** (1 cr.)**Dental Radiology Interpretation**

Students develop a further understanding of the evaluation of radiographs. Students practice identifying, describing, and locating dental materials, normal anatomy, and clinically significant deviations on intraoral and extraoral radiographs. Prerequisite: Completion of DHYG 2450.

**DHYG 2460** (3 cr.)**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.

**Developmental Studies****DVST 0890** (3 cr.)**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. The students may repeat this course for a total of six credits. Placement in this course is by advisor only.

**DVST 0898** (2 cr.)**Developmental MATH I**

This course is designed for the student who needs additional time and instruction to master basic MATH skills. It is the equivalent to half of MATH 0900, up to the applied areas (see MATH 0900–Pre-Algebra). Upon completion, the student will proceed to DVST 0899 to demonstrate other concepts taught in MATH 0900, beginning algebra, applied area skills, and a consumer MATH area of study skills. The student is scheduled for two hours of lecture and two required hours of lab weekly. After finishing DVST 0898 and DVST 0899, the student is prepared for MATH 0920–Elementary Algebra. The two semesters of DVST 0898 and 0899 are the equivalent of the one-semester course, MATH 0900. Prerequisite: MATH placement score in Level A.

**DVST 0899** (2 cr.)**Developmental MATH II**

DVST 0899 is a continuation of DVST 0898 and is comparable to the applied portion of MATH 0900 (see MATH 0900–Pre-Algebra). This course is designed for students who need additional time and instruction to master basic MATH skills. Students gain and demonstrate knowledge in measurement systems, consumer math, and basic geometry and algebra. Prerequisite: Completion of DVST 0898.

**Diagnostic Medical Sonography****IMAG 2205** (3 cr.)**Introduction to Diagnostic Medical Sonography**

Students learn about the field of Diagnostic Medical Sonography. Students explore the duties and functions of the diagnostic medical sonographer as well as the historical background and context of the sonographer as a member of the health care team. Students examine the other imaging modalities as they relate to sonography. Prerequisite: Admission to the Diagnostic Medical Sonography program.

**IMAG 2210** (2 cr.)**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. Prerequisites: Completion of IMAG 2205 and IMAG 2212.

**IMAG 2212** (3 cr.)**Cross-Sectional Anatomy**

Students identify internal structures including organs and vasculature important to the objectives of Diagnostic Medical Sonography (DMS). Students develop cross-sectional, anatomic recognition skills and skill in correlating images from other imaging modalities. Prerequisite: Acceptance into the Diagnostic Medical Sonography program.

**IMAG 2215** (4 cr.)**Abdominal Sonography I**

Students identify abdominal anatomy and pathology and its sonographic appearances. Students learn to perform ultrasound examinations of the abdominal organs including liver, pancreas, gallbladder, biliary tree, kidneys, aorta, and spleen. Course is only offered fall semester. Prerequisites: Completion of IMAG 2205 and IMAG 2212.

**IMAG 2220** (3 cr.)**OB/GYN Sonography I**

Students perform ultrasound exams of the nongravid uterus and the first trimester pregnancy. Students explore the anatomy, physiology, and pathology of the female reproductive system as well as intrauterine and ectopic pregnancies. Prerequisite: Completion of IMAG 2205 and IMAG 2212.

**IMAG 2240** (2 cr.)**Ultrasound Physics II**

Students build on skills learned in IMAG 2210. 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 2210.

**IMAG 2245 (3 cr.)**  
**Abdominal Sonography II/Small Parts**  
 This course is a continuation of Abdominal Sonography I. Students perform ultrasounds of the abdominal organs including the liver, gallbladder, pancreas, kidneys, urinary bladder, spleen, and the retroperitoneum. Emphasis is placed on performing the entire abdominal ultrasound in sequence and recognizing the anatomy and pathology of the abdominal organs. Students also investigate superficial structure imaging and integrate clinical and diagnostic procedures such as thyroid, breast, male reproductive system, and superficial structures common and specific to each organ. This course is only offered spring semester. Prerequisite: Completion of IMAG 2215.

**IMAG 2250 (3 cr.)**  
**OB/GYN Synography II**  
 Students analyze and perform ultrasounds of the second and third trimester pregnancy. Students explore the anatomy, physiology, and pathology of the female pelvis and the developing fetus. Students recognize interventional procedures related to pregnancy. Course only offered in the spring semester. Prerequisite: Completion of IMAG 2220.

**IMAG 2252 (3 cr.)**  
**Introduction to Vascular Sonography**  
 Students are introduced to the uses of vascular sonography. Students explore the differences from the general concentration of ultrasound. Learners outline the components of vascular exams and learn to compare and contrast results with other diagnostic procedures. Prerequisite: Completion of IMAG 2210.

**IMAG 2254 (6 cr.)**  
**DMS Beginning Clinical Experience**  
 This course is a beginning supervised clinical experience in an ultrasound imaging department. Students observe, perform, and correlate theory to practice on examinations of the abdomen, gravid and nongravid pelvis, and small parts. Students demonstrate knowledge of anatomic structures by correctly operating the sonography equipment. Students identify pathological processes of disease and normal anatomic variants. Participation in this course takes place at a hospital or clinic. Prerequisite: Completion of IMAG 2245.

**IMAG 2255 (11 cr.)**  
**Sonography Clinical Experience I**  
 This is a supervised clinical experience in an ultrasound imaging department. Students perform and correlate theory to practice on examinations of the abdomen, gravid and nongravid pelvis, and small parts. Students demonstrate the requested anatomic structures by correctly manipulating the equipment and proper transducer usage. Students identify pathological processes of disease and normal anatomic variants. Participation in this course will take place at a hospital or clinic. Prerequisite: Completion of IMAG 2254.

**IMAG 2260 (13 cr.)**  
**Sonography Clinical Experience II**  
 Students continue the clinical experience in an ultrasound imaging department. Students enhance their scanning and employee skills through clinical practice. Students apply and relate theory by scanning independently of the sonographer (with minimal supervision) on studies of the abdomen, gravid and nongravid pelvis, and small parts examinations. Prerequisite: Completion of IMAG 2255.

**IMAG 2265 (1 cr.)**  
**Registry Review I**  
 Students participate in a comprehensive review of abdominal and OB/GYN course content in preparation for the certifying examination of the American Registry of Diagnostic Medical Sonographers. Prerequisite: Successful completion of program courses or approval of instructor.

**IMAG 2270 (1 cr.)**  
**Registry Review II**  
 This is a continuation of IMAG 2265. Students participate in a comprehensive review of second and third trimester OB and superficial structures in preparation of the certifying examination of the American Registry of Diagnostic Medical Sonographers. Prerequisite: Completion of IMAG 2265.

## Diesel Technology

**DESL 1500 (3 cr.)**  
**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 1540 (5 cr.)**  
**Diesel Electrical**  
 This course introduces students to fundamental electrical theories that relate to diesel engines. Students acquire knowledge about and develop skills in reading and interpreting wiring diagrams and diagnosing and repairing individual electrical systems, which consist of batteries, starting and charging mechanisms, instruments, lights, horns, electric windows, power seats, electric defrosters, and other electrical components.

**DESL 1610 (5 cr.)**  
**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.

**DESL 1650 (5 cr.)**  
**Diesel Fuel Systems and Tuning I**  
 This course will cover diesel fuel systems theory. The student learns to remove, recondition, test, install, and time various diesel engine injectors and injector pumps.

**DESL 1700 (5 cr.)**  
**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.

**DESL 1755 (5 cr.)**  
**Heating, Air Conditioning, and Refrigeration**  
 This course introduces students to 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.

**DESL 1990 (1-12 cr.)**  
**Advanced Engine Performance**  
 Students learn advanced engine performance pertaining to both automotive and diesel applications. The course is designed to cover original equipment ignition timing controls, advanced emissions systems, turbochargers, superchargers and naturally aspirated performance enhancements. Prerequisite: DESL 1540 or DESL 1765.

**DESL 2950 (5 cr.)****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).

**Economics****ECON 1000 (3 cr.)****Survey of Economics**

A survey of basic economic principles in a free enterprise society including contemporary economic policies, problems, and issues. For students in terminal programs and those seeking a basic orientation in the broad field of economics. Prerequisites: Completion of DVST 0520 or ENGL 0520 and MATH 0920 or concurrent enrollment (or equivalent placement test scores).

**ECON 1010 (3 cr.)****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 0930 or MATH 1000 (or equivalent test scores).

**ECON 1020 (3 cr.)****Principles of Microeconomics**

A continuation of ECON 1010. A theoretical analysis of competitive and imperfectly competitive markets. Antitrust policy and the regulation of industry are reviewed. Theories of income distribution and alterations to patterns of income distribution are also presented. Prerequisite: Completion of ECON 1010.

**ECON 1200 (3 cr.)****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. Prerequisites: Completion of MATH 0920, ENGL 0700 or ENGL 1001 (or equivalent placement test scores) or instructor approval.

**Education****EDUC 2100 (3 cr.)****Public School Practicum**

Pre-service students demonstrate emerging practical teaching skills and are assigned to an elementary school, junior or senior high school under the supervision of a classroom teacher. Students meet in a weekly seminar with the course instructor and work with the assigned cooperating teacher for a minimum of 30 hours. A background check is required for this course. Prerequisite: Completion of, or concurrent enrollment in, EDFD 2100 and a GPA of 2.5 or better.

**Education – Curriculum and Instruction****EDCI 2490 (1-2 cr.)****Topics in Early Childhood Education**

Students investigate and gain knowledge and skills in a variety of topics related to early childhood education and relevant to working with young children, birth through age eight. A developmental approach to such topics as classroom management, guidance and discipline, curriculum, administration, and methods and materials is utilized. Students may repeat this course and receive credit for each different topic. (articulated course)

**Education – Early Childhood****EDEC 1020 (3 cr.)****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 1030 (3 cr.)****Infant and Toddler Care/Lab**

Students focus on developmental stages of children from conception to three years of age. Students examine the major areas of prenatal development; physical, social-emotional, and cognitive growth; developmentally and culturally appropriate environments; family partnerships; and the caregiver's role.

**EDEC 1100 (3 cr.)****Observation and Guidance of Young Children/Lab**

Students explore effective methods of observation and guidance to meet the children's needs individually and in groups with an emphasis on promoting a positive and constructive climate in the early childhood setting. Students develop skills to plan effective environments and classroom management, prepare materials and equipment, develop schedules, utilize assessment tools and promote parent-teacher communication. The course serves as a bridge between theory and application through student experiences.

**EDEC 1200 (3 cr.)****Administration in Early Childhood Programs**

Successful students acquire knowledge and develop skills related to the business and human relations components of administering centers for young children. Students examine procedures in establishing early childhood centers, including fiscal management; selection, development, and motivation of staff; parent and community involvement; and program regulations and evaluations.

**EDEC 1300** (3 cr.)  
**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.

**EDEC 1482** (1 cr.)  
**Skill for the Child Development Associate (CDA)**  
This is an initial course designed for students seeking the Child Development Associate (CDA). Students demonstrate an understanding of the CDA competency goals. Successful students complete their initial portfolio and complete their CDA application.

**EDEC 1484** (1 cr.)  
**Skill for the Completion of the Child Development Associate (CDA)**  
This is the second part of a two-class sequence designed to meet the content requirement for the CDA credential. Students demonstrate the academic requirements necessary for the CDA. The assessment instrument from the Council for Professional Recognition will be utilized. Students make their own arrangements for a CDA-qualified advisor to complete the Assessment Observation Instrument if they are working in an early childhood program outside of Laramie or Albany Counties in Wyoming.

**EDEC 2200** (3-5 cr.)  
**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 classroom management skills. Students focus on current issues and trends in the field of early childhood education. Prerequisites: Successful completion of EDEC 1020 and completion of, or concurrent enrollment in, EDEC 1100 or permission of instructor. Students seeking a Child Development Associate (CDA) should enroll for five credits.

## Education – Educational Foundations

**EDFD 1010** (2 cr.)  
**Introduction to Teaching**  
Students explore career options within the teaching profession through observations, discussions, and research. Prerequisite: Completion of ENGL 0700 (or equivalent placement test score).

**EDFD 2020** (3 cr.)  
**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 ENGL 0700 (or equivalent placement test scores).

**EDFD 2100** (3 cr.)  
**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.

**EDFD 2330** (2 cr.)  
**Child Abuse and Neglect**  
An examination of the tragic problem of child abuse. Students learn and demonstrate introductory knowledge of the nature, extent, and causes of child abuse; the types, indicators, symptoms, and effects of child abuse; the school's role in identification and investigation; reporting laws; therapeutic and medical programs/services; and the legal perspective and system. Presentations are conducted by professionals with special expertise about the child abuse problem. (S/U grade only)

## Education – Educational Studies

**EDST 2450** (3 cr.)  
**Human Life Span Development**  
Students explore human development holistically from conception through late adulthood and death and dying. Students examine the physical, cognitive, social, and emotional aspects of being human and inquire into how goals, interests, and roles in life change over time. Prerequisite: Completion of ENGL 1010 with a grade of C or better.

## Education – Elementary Education

**EDEL 1410** (1 cr.)  
**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 cr.)  
**Seminar in Life Science**  
Pre-service teachers explore basic concepts, curricular activities, and materials appropriate for the elementary school setting as they relate to the biological sciences. It is recommended that this course be taken concurrently with a biology course.

**EDEL 1440** (1 cr.)  
**Physical Science in the Elementary School**  
A selection of basic physical science concepts, materials, and curricula appropriate for elementary schools. The preservice elementary education teacher develops knowledge of the fundamental concepts of physical science and inquiry skills. In addition, the preservice elementary education teacher develops positive attitudes toward teaching science. This course parallels the content of the University of Wyoming's CHEM/PHYS 1090 or any LCCC physical science course and should be taken concurrently. Prerequisite: Successful completion of ENGL 1010 with a grade of "C" or higher.

**EDEL 1450** (1 cr.)  
**Earth Science in the Elementary School**  
Students explore basic earth science concepts, materials, and curricula applicable to teaching in the elementary classroom. Students investigate various topics including meteorology, astronomy, geography, and geology. It is recommended that this course be taken concurrently with an earth science lab course.

**EDEL 2410** (1 cr.)  
**Elementary School Mathematics Seminar II**  
This course parallels the content of MATH 2120. Students experience exploratory and hands-on learning of the topics from MATH 2120 so that they can model this method of learning in their future classrooms. Students must be concurrently enrolled in MATH 2120.

## Education – Exceptional Children

### **EDEX 1060** (2 cr.) **Introduction to Gifted and Talented Education**

Students examine the characteristics, identification processes, and unique needs of the gifted learner. Students compare educational theories, programs, and best practices in teaching gifted and talented learners.

### **EDEX 2484** (3 cr.) **Introduction to Special Education**

Students explore what special education is and how it fits into educational environments. Students examine effective intervention models, models of instruction and behavior techniques for special needs students within an inclusion setting or other continuum of special education options that meet the least restrictive environment. Students develop knowledge and understanding in the concept of direct instruction, the collaboration model, laws and legislation, definitions of the range of exceptionalities, incidence, and etiology. This course requires 5 hours of observation at assigned special education settings. Prerequisite: Successful completion (grade of C or better) of EDFD 1010.

## Education – Instructional Technology

### **ITEC 2360** (3 cr.) **Teaching With Technology**

This introductory course emphasizes effective use of technology for communication, support tools, and instruction. Students explore a variety of technologies and resources including the computer, Internet, and multimedia. Students design and develop technology-enriched learning activities and assessments and exhibit digital responsibility. This course is designed for pre-service teachers.

### **ITEC 2365** (1 cr.) **Teaching and Learning Online**

This course is designed for instructors who are interested in online teaching and learning practices. Learners develop strategies for designing online courses and for teaching and learning at a distance. They examine online course design, implementing best practices, designing and implementing learning communities, familiarization with LCCC online procedures, strategies for managing learning online, uses of technologies including LCCC's course management system, and methods for evaluating course quality. (S/U grade only)

## Emergency Medical Services—Paramedics

### **EMGT 2500** (7 cr.) **Paramedic Preparatory**

A study in the basic concepts that prepare an EMT I for national paramedic certification. Students gain knowledge and skills in EMS systems and their roles and responsibilities, the well-being of a paramedic, illness/injury prevention, medical/legal issues, ethics, principles of pathophysiology, pharmacology, venous access and medication administration. Prerequisites: Completion of or concurrent enrollment in ENGL 1010 and completion of MATH 0920 (or equivalent placement test score). Instructor consent required.

### **EMGT 2510** (2 cr.) **Paramedic Airway and Ventilation**

A study in the airway and ventilation concepts that prepare an EMT I for national paramedic certification. Students gain knowledge and skills in the mechanics of respiration, the exchange and transport of gases in the body, factors that influence blood oxygenation, regulation, airway obstruction, aspiration, airway evaluation, oxygen therapy, airway management, advanced airway procedures, and pharmacological adjuncts to airway management and ventilation. Prerequisites: Completion of or concurrent enrollment in ENGL 1010 and completion of MATH 0920 (or equivalent placement test score). Instructor consent required.

### **EMGT 2520** (4 cr.) **Paramedic Patient/ Management Assessment**

A study in the assessment concepts that prepare an EMT I for national paramedic certification. Students gain knowledge and skills in history taking, techniques of physical examination, patient assessment, clinical decision making, communications, documentation, and assessment-based management. Prerequisites: Completion of or concurrent enrollment in ENGL 1010 and completion of MATH 0920 (or equivalent placement test score). Instructor consent required.

### **EMGT 2530** (3 cr.) **Paramedic Trauma**

A study in the trauma concepts that prepare an EMT I for national paramedic certification. Students gain knowledge and skills in trauma system/ MOI, hemorrhage and shock, soft tissue trauma, burns, head and face trauma, spinal trauma, thoracic trauma, abdominal trauma, and musculoskeletal trauma. Prerequisites: Completion of or concurrent enrollment in ENGL 1010 and completion of MATH 0920 (or equivalent placement test score). Instructor consent required.

### **EMGT 2540** (5 cr.) **Paramedic Medical**

A study in the medical concepts that prepare an EMT I for national paramedic certification. Students gain knowledge and skills in pulmonology, neurology, endocrinology, allergies and anaphylaxis, gastroenterology, urology, toxicology, environmental conditions, infectious and communicable disease, behavioral/ psychiatric, gynecology, hematology, and obstetrics. Prerequisites: Completion of or concurrent enrollment in ENGL 1010 and completion of MATH 0920 (or equivalent placement test score). Instructor consent required.

### **EMGT 2550** (5 cr.) **Paramedic Cardiology**

A study in the cardiology concepts that prepare an EMT I for national paramedic certification. Students gain knowledge and skills in sinus mechanisms, various rhythms, electrical therapy, countershock, transcutaneous pacing, defibrillators, AV blocks, cardiovascular diseases, pacemakers, 12-lead, patient assessment, and life support. Prerequisites: Completion of or concurrent enrollment in ENGL 1010 and completion of MATH 0920 (or equivalent placement test score). Instructor consent required.

### **EMGT 2560** (2 cr.) **Paramedic Special Considerations**

A study in the special consideration concepts that prepare an EMT I for national paramedic certification. Students gain knowledge and skills in neonatology, pediatrics, geriatrics, abuse and assault, patients with special challenges, and acute interventions for chronic-care patients. Prerequisites: Completion of or concurrent enrollment in ENGL 1010 and completion of MATH 0920 (or equivalent placement test score). Instructor consent required.

### **EMGT 2580** (2 cr.) **Paramedic Operations**

A study in the operations concepts that prepare an EMT I for national paramedic certification. Students gain knowledge and skills in medical incident command, rescue A&O, HazMat incidents, and crime scene awareness. Prerequisites: Completion of or concurrent enrollment in ENGL 1010 and completion of MATH 0920 (or equivalent placement test scores). Instructor consent required.

**EMGT 2590** (2 cr.)  
**Paramedic Human Systems and Immunization**  
A study in the human systems/immunization concepts that prepare an EMT I for national paramedic certification. Students gain knowledge and skills in anatomy, physiology, and immunization. Prerequisites: Completion of or concurrent enrollment in ENGL 1010 and completion of MATH 0920 (or equivalent placement test score). Instructor consent required.

**EMGT 2600** (3 cr.)  
**Paramedic Clinical**  
This course is a hands-on clinical experience that prepares an EMT I for national paramedic certification. Students gain knowledge and skills in ED triage, emergency department, emergency department, burn center, neuro/trauma ICU, CCU, peds unit/ICU, labor and delivery, and nursery. Prerequisites: Completion of or concurrent enrollment in ENGL 1010 and completion of MATH 0920 (or equivalent placement test score). Instructor consent required.

**EMGT 2620** (7 cr.)  
**Paramedic Vehicular I**  
This course is a hands-on vehicular/clinical experience that prepares an EMT I for national paramedic certification. Students gain knowledge and skills in chest pain, respiratory distress, abdominal complaints, altered mental status, behavioral issues, obstetrics, trauma, pediatric and adult assessments, venous access, medication administration, ventilation and other additional skills. Prerequisites: Completion of or concurrent enrollment in ENGL 1010 and completion of MATH 0920 (or equivalent placement test score). Instructor consent required.

**EMGT 2630** (6 cr.)  
**Paramedic Vehicular II**  
This course is a hands-on vehicular/clinical experience that prepares an EMT I for national paramedic certification. Students gain knowledge and skills in chest pain, respiratory distress, abdominal complaints, altered mental status, behavioral issues, obstetrics, trauma, pediatric and adult assessments, venous access, medication administration, ventilation and other additional skills. Prerequisites: Completion of or concurrent enrollment in ENGL 1010 and completion of MATH 0920 (or equivalent placement test score). Instructor consent required.

## Emergency Medical Technology

**EMT 1500** (6 cr.)  
**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. Successful students are able to work in the field of pre-hospital emergency medicine as paid or volunteer providers after the completion of this course and after passing the state certification exam. Prerequisites: AHA Healthcare Provider CPR (or equivalent) and proof of required immunizations. Basic Emergency Care (BEC) certificate is helpful. Instructor consent required.

## Employment Orientation

A student may enroll in employment orientation for one credit hour. Students are exposed to current employment market information and techniques for gaining employment in their specific areas through résumé writing, letters of application, employment applications, and interviews.

## Engineering Science

**ES 1060** (3 cr.)  
**Introduction to Engineering Computing**  
A course introducing students to the use of computers for solving engineering problems. Students learn problem-solving techniques and the graphical representation of data utilizing various software including a spreadsheet and an equation solver. Use of a word processor and presentation software for report writing and technical presentations also is emphasized. Prior knowledge of computers is not necessary. Prerequisites: Completion of DVST 0520 or ENGL 0520, DVST 0630 or ENGL 0630, and MATH 1405 (or equivalent placement test scores).

**ES 2110** (4 cr.)  
**Statics**  
An introductory course describing the interaction of particles and rigid bodies to a system of applied forces. Students learn to mathematically model structures with free body force diagrams and vector analysis, apply equilibrium conditions, and recognize real life restrictions. One-hour problem session each week. Prerequisite: Completion of or concurrent enrollment in MATH 2200.

**ES 2120** (4 cr.)  
**Dynamics**  
A course involving a complete study of the motion of particles and rigid bodies. Students learn to recognize imbalanced forces on bodies and acquire the ability to do vector analysis to fully describe the resulting motion; develop various techniques switching from one type of coordinate system to another; recognize the differences between kinetics of particles and kinematics; and develop a total dynamic analysis for particles as well as rigid bodies. One-hour problem session each week. Prerequisites: Completion of ES 2110, MATH 2205, and PHYS 1310.

**ES 2210** (4 cr.)  
**Electric Circuit Analysis**  
A study of electric circuits and their theoretical base. Students acquire knowledge about electric circuit theory including network theorems, dependent sources, first and second order circuits, and phasor analysis of AC circuits. Accompanying laboratory will reinforce electric circuit principles and introduce digital and analog electronic circuits. Prerequisite: Completion of MATH 2205.

**ES 2310** (4 cr.)  
**Thermodynamics I**  
A study of the thermodynamics of macroscopic systems. Students acquire knowledge about energy and its various forms, real and ideal gases, reversible and irreversible processes; and state variables and state equations; and they apply the first and second laws of thermodynamics to perform complete thermodynamic analysis of heat engines and refrigeration systems. One-hour problem session each week. Prerequisites: MATH 2210 or concurrent enrollment, CHEM 1020, and PHYS 1310.

**ES 2330** (3 cr.)  
**Fluid Dynamics**  
A course covering the incompressible flow of real and ideal fluids. Students acquire knowledge about methods of solution for essential concepts such as potential and stream functions and gain the ability to analyze real fluid flow problems including flow in open channels, pipes, pipe networks, porous material, waves on fluid surfaces, buoyancy and stability of floating and submerged objects, and the operation of fluid machinery. Not offered every year. Prerequisites: Completion of ES 2120 and MATH 2210 or concurrent enrollment.

**ES 2410** (3 cr.)  
**Mechanics of Materials**  
A study of stresses inside deformable bodies. Students apply the forces and analysis and equilibrium techniques studied in Statics and apply them to deformable bodies to solve for the maximum stress. Mohr's circle also will be applied to find maximum stress in order to perform stress analysis in the design of real structures. Prerequisite: Completion of ES 2110.

## Engineering Technology

**ENTK 1080** (4 cr.)  
**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 nonscience majors, who plan to pursue careers as technicians. Prerequisites: Completion of DVST 0520 or ENGL 0520 and MATH 1000 or higher (or equivalent placement test scores). (Cross-listed as PHYS 1080.)

**ENTK 1515** (3 cr.)  
**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 0930 (or equivalent placement test score).

**ENTK 1520** (3 cr.)  
**Drafting II**  
The second course in a two-semester sequence where students develop drafting skills in auxiliaries, sections, obliques, isometrics, and descriptive geometry. Prerequisites: Completion of ENTK 1515 and MATH 0930 (or equivalent placement test score).

**ENTK 1560** (3 cr.)  
**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. Prerequisite: Completion of ENTK 1515.

**ENTK 1570** (3 cr.)  
**Inking for Drafters**  
A course where students acquire and demonstrate manual inking skills on polyester film utilizing technical ink pens and mechanical lettering devices. Prerequisite: Completion of ENTK 1520.

**ENTK 1740** (3 cr.)  
**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. Prerequisites: Completion of, or concurrent enrollment in, ENTK 1515 and ENTK 2500.

**ENTK 2500** (3 cr.)  
**Computer-Aided Drafting I**  
An introductory course in CAD. Students learn how to create a drawing, make changes, and output to paper. Prerequisites: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score) and ENTK 1515 or concurrent enrollment.

**ENTK 2505** (3 cr.)  
**Computer-Aided Drafting II**  
A continuation of ENTK 2500 using advanced CAD skills. Prerequisites: Completion of ENTK 2500 and DVST 0520 or ENGL 0520 (or equivalent placement test score).

**ENTK 2510** (3 cr.)  
**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 space plotting, and AutoLISP. The course is for practicing professionals (engineers and technicians). Prerequisites: ENTK 2505 and six months' full-time AutoCAD experience.

**ENTK 2520** (3 cr.)  
**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 1520.

**ENTK 2540** (3 cr.)  
**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.

**ENTK 2550** (3 cr.)  
**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 1520.

**ENTK 2555** (3 cr.)  
**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.

**ENTK 2560** (3 cr.)  
**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 2500.

**ENTK 2570** (3 cr.)  
**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. Prerequisite: Completion of ENTK 2505.



**ENTK 2580** (3 cr.)  
**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 DVST 0520 or ENGL 0520 (or equivalent placement test score).

**ENTK 2585** 2 cr.  
**MicroStation II**  
Students develop advanced knowledge and skills of the application for creating and constructing working mechanical drawings, making modifications to existing drawings, and performing paper output through printing techniques. Students practice advanced construction techniques of complex objects and perform proper drafting protocol. The course is designed for students seeking employment at state engineering institutions. Prerequisite: Completion of ENTK 2580.

**ENTK 2590** (2 cr.)  
**MicroStation III**  
Students develop knowledge and skills for creating and modeling 3-D objects, making modifications to existing objects, and performing paper output through rendering techniques. Students practice basic 3-D construction techniques of objects and prepare drawings to be printed to industry standards. The course is designed for students seeking employment at state engineering institutions. Prerequisite: Completion of ENTK 2585.

**ENTK 2598** (2 cr.)  
**MicroStation 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 MicroStation tools such as GeoPak Civil, InRoads, TriForma, Structural, HVAC, and Descartes. Prerequisite: Completion of ENTK 2585.

**ENTK 2610** (3 cr.)  
**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 ENTK 2500.

**ENTK 2660** (3 cr.)  
**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.

**ENTK 2990** (1-3 cr.)  
**Topics in Engineering Technology**  
A course designed to provide students an opportunity to develop knowledge of and/or "hands-on" skills in contemporary engineering technology topics. Possible topics areas include computer application upgrades, program introductions, new technology products, and/or industry requested training. The course may be repeated up to a total of six semester hours for degree credit. A lab fee may be added for each topic to offset the college's cost for supplies. Students in area public schools who are taking the course as concurrent credit must have a recommendation from the high school technology instructor and permission of college instructor.

## English

**ENGL 0520** (3 cr.)  
**Fundamentals of Reading**  
Students develop strategic comprehension skills for reading non-fiction, college-level texts in a variety of genres. Emphasis is placed on awareness of a text's audience, purpose, and development, distinguishing main ideas from supporting details, and improving background knowledge. (S/U grade only.) Prerequisite: Reading placement test score at Level I or Level II.

**ENGL 0630** (3 cr.)  
**Grammar and Writing Improvement**  
Students improve grammar and writing skills and develop correctly written and punctuated sentences and paragraphs. (S/U grade only) Prerequisite: Writing placement test score at Level I.

**ENGL 0700** (3 cr.)  
**Fundamentals of English**  
Students develop the writing skills necessary for success in college writing situations. Emphasis is placed on the principles of structure, organization, and development needed to write effective compositions. Much of the concentration is on the academic essay. Prerequisites: Concurrent enrollment in or completion of ENGL 0520, and completion of ENGL 0630 or writing test score in Level II. (S/U grade only)

**ENGL 1010** (3 cr.)  
**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 DVST 0510 or ENGL 0510, or DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement test scores).

**ENGL 1020** (3 cr.)  
**English II**  
ENGL 1020 is the second semester freshman English course. Students carefully read and critically analyze the following types of serious literature: fiction, poetry, and drama or film. Students also write several essays about literature. Prerequisites: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score) and ENGL 1010.

**ENGL 1050** (3 cr.)  
**Literature and Film—1940 to Present**  
Focuses on the visual and verbal elements of films and the interrelationships between films and their literary origins. In their answers to factual questions on in-class exams, students demonstrate, orally and in writing, their ability to analyze, compare, and evaluate novels and narrative films. Prerequisites: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score), and ENGL 1010.

**ENGL 2005** (3 cr.)  
**Writing in Technology and the Sciences**  
Students analyze audience and purpose to create various written communications specifically for technological and scientific fields of study. Students read and discuss readings, write for the appropriate audiences and purposes, learn and apply the appropriate in-text and bibliographical formats, and apply evaluation tools to their own and others' papers. Prerequisite: Completion of ENGL 1010.

**ENGL 2030** (3 cr.)  
**Critical Reading and Writing**  
Students analyze a variety of rhetorical modes in this advanced composition course, which involves the complementary activities of writing and reading. Prerequisite: Completion of ENGL 1020.

- ENGL 2040 (3 cr.)**  
**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. This course may be repeated for up to 9 hours credit. Prerequisite: Completion of ENGL 1010.
- ENGL 2041 (3 cr.)**  
**Creative Writing: Nonfiction and Poetry**  
 In this scholarly course, students develop tools based in the tradition of creative writing, tools with which they 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. Students are introduced to and expected to participate in writing workshops. This course may be repeated for up to 9 hours credit. Prerequisite: Completion of ENGL 1010.
- ENGL 2042 (3 cr.)**  
**Creative Writing: Fiction and Drama**  
 A workshop course in fiction and drama writing. Students analyze and practice these two literary genres and pay particular attention to the relationship between them. May be repeated for up to 9 hours of credit. Prerequisite: Completion of ENGL 1010 or instructor approval.
- ENGL 2095 (3 cr.)**  
**Writing Your Life**  
 This course focuses on one genre of writing—the autobiography. Students have the opportunity to put in writing the stories that have shaped their lives. Our stories teach us profound lessons about ourselves, others, and our world. Students will understand and utilize the following process for developing an autobiographic essay: selecting a topic, generating ideas, focusing, structuring, and revising the essay. Prerequisite: Completion of ENGL 1010.
- ENGL 2100 (1-2 cr.)**  
**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 six credits.) Prerequisite: Approval of instructor.
- ENGL 2140 (3 cr.)**  
**World Literature I**  
 A course based upon major literary works representing significant periods and forms in literary history from the ancients through the Renaissance. Students read and discuss major works, then develop writings about relevant issues, themes, and styles based upon those readings. Prerequisites: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score), and ENGL 1020.
- ENGL 2150 (3 cr.)**  
**World Literature II**  
 A course based upon major literary works representing significant periods and forms in literary history from the Renaissance period to the present day. Students read and discuss major works, then develop writings about relevant issues, themes, and styles based upon those readings. Prerequisites: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score), and ENGL 1020.
- ENGL 2210 (3 cr.)**  
**English Literature I**  
 A survey of English literature from ancient times through the Restoration. Students analyze readings in fiction, poetry, drama, and the essay. Writings are based on literary texts. Prerequisites: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score), and ENGL 1020.
- ENGL 2220 (3 cr.)**  
**English Literature II**  
 A survey of English literature from the romantics through the moderns. Students analyze readings in fiction, poetry, drama, and the essay. Writings are based on literary texts. Prerequisites: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score), and ENGL 1020.
- ENGL 2230 (3 cr.)**  
**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 ENGL 1020 or instructor approval.
- ENGL 2270 (3 cr.)**  
**Modern Women Writers**  
 A literature course emphasizing women writers and issues that affect women and minorities in society. Students critically read and analyze texts featuring Latina, African American, and women writers of other diverse identities and ethnicities in a variety of literary forms and genres. Students apply literary criticism (particularly feminist criticism) and identify main ideas and literary themes as well as current and critical gender, ethnicity, and class issues. Students also write several essays about course content following Modern Language Association (MLA) guidelines. Prerequisite: Completion of ENGL 1020.
- ENGL 2310 (3 cr.)**  
**American Literature I**  
 A survey of the major figures and literary movements in the United States from the pre-colonial period to the Civil War. The course is divided into two major units: the literature of colonial America and the new republic and the literature of the American renaissance. Students gain an understanding of the historical, political, philosophical, and religious influences upon early American literature. Prerequisite: Completion of ENGL 1020.
- ENGL 2320 (3 cr.)**  
**American Literature II**  
 A survey of the major figures and literary movements in the United States from the Civil War to the present, including the 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 ENGL 1020.
- ENGL 2330 (3 cr.)**  
**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. Prerequisites: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score), and ENGL 1010. (Cross-listed as HUMN 2330.)

**ENGL 2340** (3 cr.)  
**Native American Culture and Literature**  
A study of contemporary Native American literature including Sherman Alexie, N. Scott Momaday, Leslie Silko, and Luci Tapahonso. Students address the way Native American identity grows out of the borderland between oral and written traditions and western and Native American spirituality and culture. Prerequisite: Completion of ENGL 1020 or instructor approval.

**ENGL 2420** (3 cr.)  
**Literary Genres:**  
Studies specific genres of literature. Emphasis will vary from semester to semester, depending on curricular needs. May be repeated for up to nine hours credit. Prerequisite: Completion of ENGL 1020.

**ENGL 2450** (3 cr.)  
**Literary Genres: Screenwriting**  
As the foundation upon which a film is constructed, screenwriting is a form of creative writing concerned less with creating a world than proposing a world to be created by directors, actors, and others. Through critique sessions of numerous films, students analyze and scrutinize films from the point of view of construction. Using round robin screenwriting workshops, students compose their own original screenplays in full awareness of the significance of character, dialogue, motif, narrative convention, and progress. Prerequisite: Completion of ENGL 1010 (or equivalent placement test score).

**ENGL 2492** (3 cr.)  
**Topics:**  
A course designed to present a variety of significant topics in literature. May be repeated for up to 9 hours credit. Prerequisite: Completion of ENGL 1020.

## English as a Second Language

**ESL 0120** (3 cr.)  
**Oral Communication I**  
A high-beginning listening and speaking course for non-native English speakers in which students develop speaking and listening skills necessary for participating in classroom discussions with an emphasis on clarification through rewording and asking questions. Students expand vocabulary and improve pronunciation, grammar, and listening skills through class materials, discussions, videos, guest speakers, and interaction with native English speakers. Prerequisite: Placement in Level A of the Listening ESL COMPASS test.

**ESL 0130** (3 cr.)  
**Academic Reading and Vocabulary I**  
A beginning reading course for non-native English speakers in which students begin to develop academic reading skills. Students read literature and academic texts with an emphasis on vocabulary development and critical reading skills to improve proficiency in academic reading. Prerequisite: Placement in Reading Level 1 on the ESL COMPASS test.

**ESL 0135** (3 cr.)  
**Academic Writing I**  
Students apply grammar structures necessary for writing activities, choose language appropriate for writing activities, demonstrate understanding of a paragraph's structure, and use the writing process to complete multiple writing activities. Open only to non-native speakers of English.

**ESL 0140** (3 cr.)  
**American Culture**  
A course for non-native English speakers in which students investigate basic characteristics of American values, style of communication, customs, and holidays, especially those of the western United States. Students also examine basic history of the United States and Wyoming. Students participate in discussions on assigned readings, field trips, and writing activities. Prerequisites: Placement in Level A on any component of the ESL COMPASS test.

**ESL 0150** (1-3 cr.)  
**Oral Skills**  
This course is offered to non-native English speakers working to improve their speaking and pronunciation skills. Students participate in pronunciation drills, increase vocabulary, learn about American English stress and intonation patterns. Students improve pronunciation, oral grammar, and listening skills through class lecture, discussion, videos, interaction with native and non-native English speakers, and other activities. May be repeated for credit up to 12 hours. Prerequisite: Placement in Level A of the Listening ESL COMPASS test.

**ESL 0220** (3 cr.)  
**Oral Communication II**  
A low-intermediate listening and speaking course for non-native English speakers in which students continue to develop speaking and listening skills necessary for participating in classroom discussions with an introduction to oral presentation and critical listening skills. Students continue to expand vocabulary and improve pronunciation, grammar, and listening skills through class discussions, videos, guest speakers, and interaction with native English speakers. Prerequisite: Successful completion of ESL 0120 or equivalent placement test score.

**ESL 0230** (3 cr.)  
**Academic Reading and Vocabulary II**  
An intermediate reading course for non-native English speakers in which students continue to develop academic reading skills. Students read literature and academic texts with an emphasis on vocabulary development and improving critical reading skills necessary for college classes. Prerequisite: Successful completion of ESL 0130 (or equivalent placement test scores).

**ESL 0235** (3 cr.)  
**Academic Writing II**  
Students apply grammar structures necessary for writing activities, choose varied language appropriate for writing activities, demonstrate understanding of a paragraph's structure and of an essay's structure, use sufficient details to develop and support the writing's controlling idea, and use the writing process to complete multiple writing activities. Open only to non-native speakers of English. Prerequisites: Successful completion of ESL 0135 (or equivalent placement test scores).

**ESL 0320** (3 cr.)  
**Oral Communication III**  
A high-intermediate listening and speaking course for non-native English speakers in which students continue to develop communication, organization, and pronunciation skills necessary for effective academic presentation and discussion emphasizing oral presentation, critical listening, and note-taking skills. Students listen to college lectures, give short oral presentations, and participate in class discussions. Prerequisite: Successful completion of ESL 0220 or equivalent placement test score.

**ESL 0330 (3 cr.)  
Academic Reading and Vocabulary III**

An advanced reading course for non-native English speakers in which students continue to develop academic reading skills. Students read literature and academic texts with an emphasis on vocabulary development and enhancement of critical reading skills necessary for college classes. Prerequisite: Successful completion of ESL 0230 (or equivalent placement test scores).

**ESL 0335 (3 cr.)  
Academic Writing III**

Students apply grammar structures necessary for writing activities, choose varied language appropriate for writing activities, demonstrate understanding of a paragraph's structure and of an essay's structure, use sufficient details to develop and support the writing's controlling idea, limit the scope and organize writing in a coherent manner, and use the writing process to complete multiple writing activities. Open only to non-native speakers of English. Prerequisite: Successful completion of ESL 0235 (or equivalent placement test scores).

**ESL 0420 (3 cr.)  
Advanced Oral Communication**

An advanced listening and speaking course for non-native English speakers in which students continue to develop advanced communication, organization, and pronunciation skills necessary for effective academic presentation and discussion. This course emphasizes oral presentation critical listening skills. Students listen to advanced college lectures, give oral presentations, and participate in class and group discussions. Prerequisite: Successful completion of ESL 0320 or equivalent placement test score.

**Entrepreneurship****ENTR 1500 (2 cr.)  
Successful Entrepreneurship**

An introductory course focusing on identification of the business skills, personal traits, and characteristics necessary to succeed as an entrepreneur. Students analyze and determine how to obtain the skills needed to own, operate, and manage a small business successfully. Through guided self-analysis, students assess their own alignment with the passion, creativity, and innovation that typifies entrepreneurial success. In addition, students explore the role of small business in both the U.S. and global economy; examine a variety of industries, businesses, entrepreneurial ventures; and create a personal business preference profile. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**ENTR 1510 (2 cr.)  
Analyzing Business Opportunities**

An introductory course that explores the small business climate and the forces that create business opportunity. Students gain observation and trend analysis skills for the determination of unmet market needs, opportunity timelines, and resource assessment to act on identified opportunities. Students determine the market and industry research necessary to fully define the scope of a business opportunity. Students also identify what information cannot be readily determined and the associated decision-making risk. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**ENTR 1520 (2 cr.)  
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 1510.

**ENTR 1530 (2 cr.)  
Accounting for Entrepreneurs**

An introductory course that focuses on small business accounting literacy, financial statement literacy, and decision-making. Students identify the function-based origin of revenue and expense information that businesses track to build income statements, balance sheet, and statement of cash flows with emphasis on the critical nature of accurate and recognized accounting processes for producing reliable information for business planning, tax ramifications, and decision making. Students also identify their strengths and weaknesses and determine a feasible plan for handling the accounting functions within a small business. Prerequisites: Completion of DVST 0520 or ENGL 0520 and MATH 0920 (or equivalent placement test scores).

**ENTR 1540 (2 cr.)  
Marketing for Entrepreneurs**

An introductory course that focuses on the unique marketing challenges of a new venture small business. Students conduct research; determine the target market; and develop a marketing strategy for the pricing, promotion, and distribution or "marketing mix" for their specific product. Students further investigate the attractiveness of promotion tactics such as direct mail, public relations, direct response, Internet marketing, and others that meet the needs of their specific businesses. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**ENTR 1550 (2 cr.)  
Creativity: The Business Tool**

Students explore creativity as an essential tool in today's business world. Students strengthen their abilities to see things in new ways, to overcome obstacles, to creatively problem solve, and to generate and harvest new and useful ideas. They examine readings and discuss the major themes of and trends in creativity research and hands-on experiments using an array of creative tools.

**ENTR 1590 (1-2 cr.)  
Entrepreneurial Leadership I**

College credit earned for hands-on experience in entrepreneurial leadership activities. Students have the option to choose among small business internships, free enterprise team activities, developing their small business in the student innovation center, participating in entrepreneurship competition events and/or other advisor-approved activities. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**ENTR 2500** (2 cr.)  
**Small Business Operations Management**  
 Students develop skills for introducing new products and services, quality management, process design, job design, technology management, and related business design decisions. Students also develop operations decision-making skills for inventory, materials, scheduling, and planning specific to the needs of a small business as it progresses through the business life cycle. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**ENTR 2520** (2 cr.)  
**Legal Issues for Entrepreneurs**  
 A course focusing on the legal start-up, growth, management, and exit strategies of small business. Students identify and analyze the legal and tax implications of the forms of business ownership. In addition, students examine the process of forming the various types of corporations. Students investigate human resource laws, contracts, reporting requirements, bankruptcy, collections, and small claims court topics. Students also determine how to protect their business innovations with copyright, trademark, patents, and intellectual property law. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**ENTR 2530** (2 cr.)  
**Funding Sources for Entrepreneurs**  
 A course that focuses on the unique funding challenges of new ventures and small business. Students develop the information and techniques to fund a small business and to position their individual finances to produce favorable conditions for access to funding. Students also investigate methods for raising both start-up funding and operating funds such as SBA loan, bank financing, and personal financing. In addition, students gain experience in creating and presenting a funding proposal. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**ENTR 2540** (2 cr.)  
**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 ENTR 1530 or advisor approval.

**ENTR 2550** (2 cr.)  
**Social and Internet Technologies for Business**  
 Students explore the current social and Internet mediums as they relate to business in today's world. They examine venues such as Web 2.0 and digital mediums. Students analyze the issues with which marketers wrestle today through this new series of tools and challenges, including blogs, social networking, user-generated content, and the transformation of video on the Web, among many others.

**ENTR 2590** (1-2 cr.)  
**Entrepreneurial Leadership II**  
 College credit earned for continued hands-on experience in entrepreneurial leadership activities. Students have the option to choose among small business internships, free enterprise team activities, developing their small business in the student innovation center, participating in entrepreneurship competition events and/or other advisor-approved activities. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

## Equine Studies

**EQST 1505** (2 cr.)  
**Basic Horsemanship**  
 Students explore the fundamentals of stable management including basics of English or western riding. For students with no previous riding experience or those wishing to improve their riding skills. No one under age 16 admitted to the course. Students must provide their own horse. Please call 307.778.1152 for further information.

**EQST 1515** (4 cr.)  
**Equine Science I**  
 A study of the anatomy and physiology of the horse. Students acquire knowledge about the evolution, behavior, and anatomy of the horse including the skeletal system, muscular system, joints, articulation, and causes of unsoundness and lameness. Students demonstrate a basic working concept of these principles in a weekly laboratory session.

**EQST 1516** (3 cr.)  
**Equine Science II**  
 A continuation of EQST 1515 with emphasis on the internal anatomy and physiology including a study of the digestive system, respiratory system, circulatory system, nervous system, endocrine system, urinary system, skin, and hair. Prerequisite: Completion of EQST 1515 or permission of instructor.

**EQST 1535** (2 cr.)  
**Basic Horse Care**  
 A course where students learn appropriate methods of horse care. Students demonstrate a knowledge of stabling facilities, pasture management, nutrition, conformation, diseases, vaccinations, lameness, hoof care, wound management, restraint, reproduction, and pregnant mare and foal care.

**EQST 1550** (3 cr.)  
**Equine Evaluation I**  
 A course geared to the evaluation of a horse's conformation and performance including terms used in horse judging, evaluation of conformation, and evaluation of performance.

**EQST 1565** (2 cr.)  
**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 cr.)  
**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 1600** (2 cr.)  
**Equine Fitting and Showing Techniques**  
 Students develop basic skills needed for training, preparing, and exhibiting horses in halter, western horsemanship, western pleasure, western riding, and reining. Techniques are presented in a lecture/lab setting, both in the classroom and animal science lab using demonstration animals.

**EQST 1615** (2 cr.)  
**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 1620** (2 cr.)  
**Introduction to Jumping**  
 Students develop basic jumping skills. Students enrolling for this class should have prior background in hunt seat equitation. Students are required to demonstrate proper jumping and hunt seat equitation techniques. Suitable helmet with harness and boots required. Horses must be serviceably sound.

- EQST 1625 (2 cr.)**  
**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 cr.)**  
**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 1710 (2 cr.)**  
**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 cr.)**  
**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 cr.)**  
**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 cr.)**  
**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 1735 (2 cr.)**  
**Introduction to Rough Stock/Timed Events**  
 An introductory course in rodeo rough stock and timed events. Students acquire basic knowledge about individual rodeo events. They gain an understanding of safety procedures, events rules, mental and physical preparation, horse and livestock handling procedures, and proper equipment usage. A livestock fee will be charged each student. Enrollment is by consent of instructor.
- EQST 1740 (2 cr.)**  
**Rodeo Timed Events I**  
 This course is designed as an initial preparatory course in the rodeo timed events. Students acquire basic knowledge in the individual events so they can compete effectively at NIRA-sponsored events. They demonstrate mechanical consistency, substantial improvement in their mental and physical preparation, safety procedures, and events rules. A livestock fee will be charged to each student. Enrollment by consent of instructor.
- EQST 1750 (2 cr.)**  
**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 cr.)**  
**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 cr.)**  
**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 cr.)**  
**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 1900 (4 cr.)**  
**Basic Management and Training**  
 Students acquire knowledge and skills in basic horsemanship, including equitation and training techniques, greenbreaking, and basic hoof care. A two-year-old colt is provided to each student to gently train, and care for according to established training objectives. Additional application and interview process is required for enrollment in this course.
- EQST 1920 (2 cr.)**  
**Basic Training Techniques**  
 Students are introduced to training methods used by area professional trainers. The students demonstrate proficiency in western and English pleasure, reining, trail, and halter. Other topics covered include nutrition, breeding, and health care. Prerequisite: Students must provide their own horses for this course.
- EQST 2235 (2 cr.)**  
**Equine Evaluation III**  
 A continuation of EQST 1650. Students examine breed and association standards for the judging of equine classes. Students also utilize proper terminology for the discussion of these equine classes. Equine classes examined in this course include trail, tie down calf roping, team roping-heading, team roping-heeling, working cow horse, cutting, and jumping. Prerequisites: Completion of EQST 1650 and consent of instructor.

- EQST 2500 (3 cr.) Equine Health Management**  
A study of the principles of feeds and nutrition including balancing rations and principles of health management including a study of common diseases and wounds, first aid, disease prevention, stable management, stable planning, and record keeping. Prerequisite: Completion of EQST 1516 or permission of instructor.
- EQST 2520 (3 cr.) Equine Breeding**  
A study of the anatomy and physiology of the stallion and mare, the hormones of reproduction, basic genetics, and breeding systems and methods, including artificial insemination. The student will also be introduced to breeding-farm management. Prerequisite: Completion of BIOL 1010.
- EQST 2525 (2 cr.) Show Management and Event Planning**  
Students explore the elements of managing recognized horse shows from licensing through execution and evaluation. Students learn the basics of managing equine sporting events. Students examine topics that include safety and risk management, facilities management, marketing, conflict resolution, and show operations. At the culmination of this course, students participate in producing the annual Intercollegiate Horse Show Association show.
- EQST 2560 (4 cr.) Advanced Training Techniques**  
A course emphasizing basic handling, correction of bad habits, and advanced training techniques leading toward an area of specialization. Prerequisites: Completion of EQST 1900 and EQST 2825.
- EQST 2650 (2 cr.) Packing and Outfitting**  
A study of the principles of outfitting and packing the horse including hitches, knots, horse care, planning pack trips, and setting up camp. Students must provide their own horse for this course.
- EQST 2660 (3 cr.) Equine Sales and Service**  
Students gain experience in organizing and managing an equine auction, including how to hire personnel, prepare the sales catalog, organize and set up the sales facility, prepare advertising, and manage the sales barn. At the conclusion of the spring semester, students sell horses in a sale they produce. Prerequisites: Completion of EQST 2560.
- EQST 2700 (1 cr.) Equine Seminar**  
Students apply knowledge of contemporary topics related to the equine industry, including current market trends, controversial issues, recent research, marketing strategies, and training methods and equipment. They also gain skills in resume writing, job searching, and the application process.
- EQST 2730 (2 cr.) Alternative Rodeo Timed Events III**  
This is the third in a series of rodeo courses designed to further increase knowledge of and skills in barrel racing and/or goat tying to enhance competition levels at NIRA-sponsored events. Students demonstrate mechanical consistency, coordinate mental and physical consistency and preparation, and practice precise event rules and improved livestock handling. A livestock fee will be charged. Prerequisite: Completion of EQST 1765 or consent of instructor.
- EQST 2735 (2 cr.) Alternative Rodeo Timed Events IV**  
This is the fourth in a series of rodeo courses designed to demonstrate advanced knowledge and skills in barrel racing and/or goat tying to enhance competition levels at NIRA-sponsored events. Students demonstrate advanced livestock handling, refinement of rodeo event skills, advanced training techniques and application of NIRA rules. A livestock fee will be charged. Prerequisite: Completion of EQST 2730 or consent of instructor.
- EQST 2740 (2 cr.) Rodeo Rough Stock III**  
This course is the third in the series of rodeo rough stock classes. Students further enhance skills and knowledge in the individual events so competition levels are increased at NIRA-sponsored events. They are demonstrating mechanical consistency, coordinating mental and physical preparation, demonstrating appropriate safety procedures, and administering concise event rules. A livestock fee will be charged to each student. Enrollment by consent of instructor.
- EQST 2750 (2 cr.) Rodeo Rough Stock IV**  
This course is the fourth in the series of rodeo rough stock classes. Students further enhance skills and knowledge in the individual events so competition levels are increased at NIRA-sponsored events. They are performing mechanical consistency, executing mental and physical preparation, demonstrating appropriate safety procedures, and administering concise event rules. A livestock fee will be charged to each student. Enrollment by consent of instructor.
- EQST 2760 (2 cr.) Rodeo Timed Events III**  
This course is the third in the series of rodeo timed event classes. Students further enhance skills and knowledge in the individual events so competition levels are increased at NIRA-sponsored events. They are demonstrating mechanical consistency, coordinating mental and physical preparation, administering precise event rules, and improving livestock handling ability and advanced horse placement utilization. A livestock fee will be charged to each student. Enrollment by consent of instructor.
- EQST 2770 (2 cr.) Rodeo Timed Events IV**  
This course is the fourth in the series of rodeo timed event classes. Students are demonstrating skill and knowledge in the individual events so competition levels are increased at NIRA-sponsored events. They are performing mechanical consistency, executing mental and physical preparation, administering appropriate safety procedures, improving livestock handling ability and advanced horse placement utilization, and demonstrating precise event rule knowledge. A livestock fee will be charged to each student. Enrollment by consent of instructor.
- EQST 2780 (2 cr.) Intermediate Team Roping**  
Students learn the correct methods of team roping. Students demonstrate proper horse handling techniques in the box, approach to cattle, and setting cattle for the heeler. Handling livestock, use of equipment for team roping, and physical and mental preparation will be stressed. Students become familiar with the Professional Rodeo Cowboys Association (PRCA) rule book, and safety will be practiced at all times. A livestock fee will be charged to each student. Enrollment by consent of instructor. Prerequisite: Students must have the basic horsemanship skills required to rope and ride at the same time.

**EQST 2800 (1-3 cr.)****Fundamentals of Teaching Riding**

Students develop the basic skills necessary to become an effective teacher of riding. Through classroom and arena assignments, the student has the opportunity to gain confidence, learn methods of organization, and practice teaching techniques. Students serve as teaching assistants and learn techniques in teaching basic horsemanship skills.

**EQST 2805 (2 cr.)****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 cr.)****Advanced Horse Management and Training**

A continuation of EQST 1900, emphasizing advanced greenbreaking. Prerequisite: Completion of EQST 1900.

**EQST 2970 (4-6 cr.)****Internship**

Students demonstrate the ability to apply theoretical and practical knowledge gained in the classroom through work experience in an equine-related industry in a supervised environment. Students participate in any required seminars and produce documents describing and evaluating the internship experience. May be repeated once for a maximum of 12 credits. Prerequisites: Completion of EQST 1516, EQST 1550, and EQST 1900.

**EQST 2975 (4 cr.)****Individualized Training**

An alternative to participation in the internship program. Students train horses with minimal supervision, meeting objectives set by students and instructors. Prerequisites: Completion of EQST 1550, EQST 2520, and EQST 2560.

**EQST 2985 (3 cr.)****Equine Business Law**

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 cr.)****Child Growth and Development/Lab**

This course serves as a bridge between theory and application through observation of child growth and development from birth to 12 years of age. Students gain practical knowledge in the development and behavior of children. Prerequisites: Completion of PSYC 1000 and completion of or concurrent enrollment in PSYC 2300.

## Finance

**FIN 1001 (1 cr.)****Personal Financial Planning**

In this course, students examine the foundations of personal financial planning. Topics include the financial planning process, financial statements, taxes, and the management of basic assets such as cash and savings instruments, housing, and automobiles. Students also become knowledgeable about the key concepts and procedures used in sound personal financial planning and effective money management. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test scores).

**FIN 1002 (1 cr.)****Risk and Credit Management**

In this course, students examine credit management including the various types of open account borrowing and consumer loans. Topics include the managing and wise use of credit; ways to avoid credit problems; risk management as it deals with managing insurance needs; life, health care, and property insurance; and life cycle issues and their effect on insurance needs. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**FIN 1003 (1 cr.)****Investment/Retirement Planning**

In this course, students explore investments, including stocks, bonds, and mutual funds. Students become knowledgeable about making transactions in the securities market and the role personal computers play in the world of investing. Students also gain an understanding of the relationship between changing life cycles and investment portfolio, retirement plans and goals, retirement program regulations, and estate preservation through proper planning. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**FIN 2100 (3 cr.)****Managerial Finance**

Students gain a theoretical and practical framework for corporate financial management. Topics to be included are functions of financial management, financial analysis and forecasting, time value of money, risk and return, portfolio analysis, capital budgeting, financial assets, and cost of capital. Prerequisites: Completion of/or concurrent with ACCT 2020, MATH 2355, and STAT 2010.

## Fire Science

**FIRE 1501 (3 cr.)****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 cr.)****Firefighting Strategy and Tactics I**

Students examine in-depth 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 cr.)****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 0930 (or equivalent placement test score) or program manager approval.

**FIRE 1700 (3 cr.)****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 cr.)****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 cr.)****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. Prerequisite: Completion of FIRE 1501 or instructor approval.

**FIRE 1810 (4 cr.)****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 cr.)****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 cr.)****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. Instructor permission required.

**FIRE 2550 (3 cr.)****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 cr.)****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 (8 cr.)****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 (1-15 cr.)****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 "rookie" firefighters. Students observe and participate in actual emergent and non-emergent situations. Prerequisites: Completion of FIRE 1760, FIRE 1825, FIRE 2800 (or current FF Level II certification) and/or program manager approval.

## French

**FREN 1010 (4 cr.)****First Year French I**

A college-level introduction to beginning French. Lecture 4 hours, encouraged class participation to fit individual needs where possible.

**FREN 1020 (4 cr.)****First Year French II**

A continuation of FREN 1010. Prerequisite: Completion of FREN 1010.

**FREN 2030 (4 cr.)****Second Year French I**

The third semester of college-level French. A continuation of FREN 1020. Prerequisite: Completion of FREN 1020.

**FREN 2040 (4 cr.)****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 cr.)****World Regional Geography**

This course explores the topics of globalization and localization and how they affect world geography. Students gain knowledge on distribution, traits, and processes of people and landscapes within specific geographic regions as well as within an interconnected global community. Due to the number of written assignments, completion of or concurrent enrollment in ENGL 0700 is strongly recommended. Prerequisites: Completion of DVST 0520 or ENGL 0520 and DVST 0630 or ENGL 0630 (or equivalent placement test scores).

**GEOG 1010 (4 cr.)****Introduction to Physical Geography**

A systematic study of natural aspects of the geographic environment, including weather and climate, landforms, soils, and vegetation. Students examine atmospheric processes as well as the physical forces shaping the earth's crust, with special concentration on western regions of North America. Because many geography instructors require written assignments, ENGL 1010 or its equivalent is strongly recommended. This course satisfies the earth science requirement for the Associate of Arts and the Associate of Science degrees. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**GEOG 1016 (1 cr.)****Introduction to ArcGIS I**

This is an ESRI-authorized course in Geographic Information Systems (GIS). Students develop the foundation for becoming successful GIS users. Students acquire fundamental GIS concepts and become familiar with the range of functionality available with the software through course exercises. Problem-solving skills are applied using spatial information. Students earn an ESRI (Environmental Systems Research Institute) certificate upon completion. Prerequisite: Students should be familiar with Windows-based software.

**GEOG 1020 (3 cr.)****Human Geography**

An analysis of spatial patterns and interactions between the world's great cultural systems. Students evaluate topics in global resource utilization, population, language, religion, settlement, and agricultural land use. Because many geography instructors require written assignments, ENGL 1010 or its equivalent is strongly recommended. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**GEOG 1050** (3 cr.)  
**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 DVST 0520 or ENGL 0520 (or equivalent placement test score).

**GEOG 1100** (3 cr.)  
**Introduction to Geographic Information Systems**

An introductory Geographic Information Systems (GIS) course. Students explore the use of computers in displaying and analyzing spatial information and acquire skills in manipulating geographic data for a variety of uses, including natural resource management, planning, health care, Homeland Security, agriculture, etc. The course emphasizes active learning. Students should be familiar with Windows-based computer operating system.

**GEOG 1220** (3 cr.)  
**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 0520 (or equivalent placement test score) and familiarity with a Windows-based computer operating system.

**GEOG 2200** (3 cr.)  
**Wyoming Geography**

A study of Wyoming's geographic features. Students examine and acquire knowledge about the climate and landscape features, ecology, material resources, economic patterns, areal organization, and population configurations of Wyoming. Because geography instructors typically require written assignments, ENGL 1010 or its equivalent is recommended. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**Geology****GEOL 1035** (3 cr.)  
**Geology of Yellowstone National Park**

A study of Yellowstone's earth materials and processes including rocks, minerals, streams, glacial history, geologic structures, earthquakes, and plate tectonics. Students acquire scientific knowledge about the formation of Yellowstone's landscape, geothermal features, soils, and geologic hazards. Prerequisite: Completion of GEOL 1100, its equivalent, or permission of the instructor.

**GEOL 1100** (4 cr.)  
**Physical Geology**

A study of earth materials and processes including rocks and minerals, streams, glaciers, geologic structures, earthquakes, and plate tectonics. Students acquire scientific knowledge about the earth's formation, movement of crustal plates, modifications of landforms, water cycles and resources, soil preservation, and geologic hazards to mankind. Students use geologists' techniques and methods in the pursuit of scientific inquiry. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**GEOL 1200** (4 cr.)  
**Historical Geology**

A study covering evolution of the solar system and Earth's oceans and atmosphere. Students learn to infer geologic history through careful study of fossils, rocks, and geologic structures in North America. Students also acquire theory of the origin of life, organic evolution, modern plate tectonics, and absolute dating. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**German****GERM 1010** (4 cr.)  
**First Year German I**

A college-level introduction to beginning German. Lecture 4 hours, encouraged class participation to fit individual needs where possible. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**GERM 1020** (4 cr.)  
**First Year German II**

A continuation of GERM 1010. Prerequisite: Completion of GERM 1010.

**Greek****GRK 1010** (4 cr.)  
**First Year Greek I**

An introduction to the elementary principles of the ancient Greek language, starting from the very beginning. No prior knowledge on the part of the student is assumed. The students systematically acquire knowledge about the fundamentals of grammar and composition while reading classical Greek. Students develop skills in Classical (Attic) Greek, not Modern Greek. However, students successfully completing first year Greek should find the Greek of the New Testament and simple texts like Herodotus and Thucydides quite accessible.

**GRK 1020** (4 cr.)  
**First Year Greek II**

An intermediate, college-level course focusing on the review and mastery of major grammatical structures of the language, as well as the refinement of basic skills through reading based on works by Greek writers. Students demonstrate a command of complex grammar structures and idiomatic expressions, translate passages of increasing difficulty, and interpret Greek poetry and prose in cultural context. In addition, students develop recognition of the contributions of Greek to the English language while expanding their appreciation of Greek literature, thought, and expression. By the end of the semester, students move into Koine and read some Greek of the New Testament. Prerequisite: Completion of GRK 1010.

**GRK 2030** (4 cr.)  
**Second Year Greek**

An intermediate, college-level course focusing on the review and mastery of major grammatical structures of the language, as well as the refinement of basic skills through reading selections of Attic Greek prose and poetry. Students demonstrate a command of complex grammar structures and idiomatic expressions, translate passages of increasing difficulty, and interpret Greek poetry and prose in cultural context. In addition, students develop recognition of the contributions of Greek to the English language while expanding their appreciation of Greek literature, thought, and expression. Prerequisites: Completion of GRK 1020.

**GRK 2150** (4 cr.)  
**Selected Readings in Biblical Greek**  
 An intermediate, college-level course focusing on the essentials of Greek grammatical forms, syntax, and vocabularies for preparing students to read the New Testament in the original language. Students extend their grammatical education while engaging with original New Testament texts. In addition, students explore the use of grammars, dictionaries, synopses, concordances, and exegetical uses of biblical Greek. By the end of the semester, students have a degree of fluency in translation of the Gospels and can understand the text at a level unattainable through mere reading of English versions. Prerequisite: Completion of GRK 1020.

## Health Information Technology and Management

**HIT 1500** (4 cr.)  
**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 exemplary customer service, appropriate verbal and nonverbal communication, professional dress and behaviors.

**HIT 1510** (4 cr.)  
**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. Students also are introduced to and explore various medical office software as determined by current industry demand.

**HIT 1550** (3 cr.)  
**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.

**HIT 1600** (2 cr.)  
**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.

**HIT 2500** (2 cr.)  
**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. Students use the AHIMA virtual lab to apply the information from lecture to hands-on assignments. Prerequisite: Completion of HIT 1600.

**HIT 2550** (2 cr.)  
**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 HIT 2500.

**HIT 2600** (3 cr.)  
**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. Prerequisites: Completion of HIT 1510 and HIT 2500.

**HIT 2970** (2 cr.)  
**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 HIT 2500.

## Health Technology

**HLTK 1050** (2 cr.)  
**Survival Skills for Health Sciences**  
 In Survival Skills for Health Sciences, students develop study skills and an understanding of high-stake test taking processes. Students gain skill in time management, stress management, and professional communication that are necessary for survival in the time-intensive Health Sciences programs.

**HLTK 1200** (2 cr.)  
**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 cr.)  
**Human Body Systems**

This course involves the study of human anatomy and physiology as applied to non-clinical medical fields. Successful students acquire basic knowledge of the structure and function of the human body, common diagnostic values, body defenses, and supplements to improve health. This non-lab course is designed for students interested in clerical positions of medical coder, medical secretary, unit clerk, physician office clerk, skilled nursing facility clerk, or other medical-related positions.

**HLTK 1510** (3 cr.)  
**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 cr.)  
**Health Care Ethics**

An exploration of basic ethical issues embedded in health care. Students gain and demonstrate basic knowledge of practical application tools used to evaluate contemporary medical issues. In addition, students formulate and critically analyze health care issues and apply course material for further understanding to issues that arise in the clinical setting. Students also debate, lecture or present topics in the health care arena with emphasis on diversity of ethical analysis and non-judgmental collaboration. Prerequisite: Completion of ENGL 1010.

**HLTK 2510** (2 cr.)  
**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. Prerequisites: Completion of HLTK 1210 or ZOO 2010 or ZOO 2015. Prior completion of or concurrent enrollment in ZOO 2020 or ZOO 2025 recommended.

**Heating, Ventilation,  
and Air Conditioning****HVAC 1600** (3 cr.)  
**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 cr.)  
**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 cr.)  
**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 HVAC 1650 or instructor approval.

**HVAC 1630** (4 cr.)  
**Energy Efficient Residential Heating Systems**

Students explore the major types of heating systems in residential dwellings, including natural gas furnaces, oil furnaces, electric furnaces, and hot water boiler systems. Students analyze equipment types along with their efficiency ratings. Students use electronic test equipment to safely troubleshoot and adjust the various types of heating systems. Prerequisites: Completion of IST 1510, IST 1520, IST 1710, IST 1711, IST 1712, IST 1713, HVAC 1600, and HVAC 1610 or instructor approval.

**HVAC 1640** (3 cr.)  
**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. Prerequisites: Completion of HVAC 1630 and HVAC 1650 or instructor approval.

**HVAC 1650** (3 cr.)  
**Residential Air Conditioning Systems**

Students leak check, evacuate, recover refrigerant from and charge residential and light commercial air conditioning systems. They open and seal refrigeration systems using brazing and soldering techniques. They also examine Core, Type I, Type II, and Type III system characteristics as they prepare to take the Environmental Protection Agency (EPA) Refrigerant Handling Certification exams. Prerequisites: Completion of IST 1510, IST 1520, IST 1710, IST 1711, IST 1712, IST 1713, HVAC 1600, and HVAC 1610 or instructor approval.

**HVAC 1660** (3 cr.)  
**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. Prerequisites: Completion of HVAC 1610 and HVAC 1650 or instructor approval.

**HVAC 1670** (3 cr.)  
**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. Prerequisites: Completion of HVAC 1620, HVAC 1630, HVAC 1640, and HVAC 1660 or instructor approval.

**HVAC 1680** (3 cr.)  
**Energy Efficient Air Conditioning Units**  
Students examine the operation, maintenance, and repair of commercial heating, ventilation, and air conditioning systems. They discover how the components of a heat pump work to provide heating or cooling. Finally, students identify the different types of geothermal loops that are used in regions of the country as well as the unique maintenance and repair requirements for each type of loop. Prerequisites: Completion of HVAC 1620, HVAC 1640, and HVAC 1650 or instructor approval.

**HVAC 1690** (3 cr.)  
**Advanced Air Conditioning Skills**  
Students analyze operating conditions, compare results to the manufacturer's data, and predict potential effects to heating, ventilation, and air conditioning equipment. They interpret a system's sequence of operation, gather customer information, and use test equipment to troubleshoot mechanical and electrical faults. Students perform residential load and duct-sizing calculations. They also practice customer service techniques. Prerequisites: Completion of HVAC 1620, HVAC 1640, and HVAC 1650 or instructor approval.

**HVAC 1970** (4 cr.)  
**Energy Audit Skills**  
Students develop skills needed to inspect, measure, and test the energy efficiency of residential buildings for various factors, including the tightness of the structure, the insulation levels, and the energy consumption of the appliances. They also inspect and test for safety concerns such as carbon monoxide, asbestos, mold, and lead base paint, along with general hazards, including electrical, plumbing, and structural concerns. Students also develop skills to effectively communicate with owners to find critical information about a facility's history. They analyze the information for the most cost effective solutions and provide a report to the customer. Prerequisites: Completion of HVAC 1630 and HVAC 1650 or instructor approval.

## History

**HIST 1110** (3 cr.)  
**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. Prerequisites: Completion of ENGL 0700 or ENGL or placement into ENGL 1010.

**HIST 1120** (3 cr.)  
**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 0700 or placement into ENGL 1010.

**HIST 1130** (3 cr.)  
**Introduction to the Old Testament**  
A historical, archaeological, and literary survey of the Old Testament and its surrounding environment. During the course, students acquire knowledge of the process and development of the Old Testament with its history, cultural environment, and literary development. Prerequisite: Completion of ENGL 0700 or ENGL 1001 or placement into ENGL 1010, or concurrently enrolled in ENGL 1010. (Cross-listed as RELI 2110)

**HIST 1135** (3 cr.)  
**New Testament Survey**  
An introduction to the historical, religious, and political setting of the Near East from Alexander the Great to the end of second century C.E. The class investigates Judaism and Christianity in the Roman World. The New Testament will be viewed from within the context of the Greco-Roman civilization in which the early Christians lived. Prerequisite: Completion of ENGL 0700 or ENGL 1001 or placement into ENGL 1010, or concurrently enrolled in ENGL 1010. (Cross-listed as RELI 2150)

**HIST 1150** (3 cr.)  
**History and Philosophy of Islam**  
A general survey of the history and philosophy of the Islamic religion. Students acquire knowledge about and gain an understanding of Islamic history, Islamic principles and practices, Islamic law, Islamic relationship to other religions, and Islam in the context of the modern world. (Cross-listed as RELI 1150.)

**HIST 1211** (3 cr.)  
**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 0700 (or equivalent placement test scores).

**HIST 1221** (3 cr.)  
**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 0700 (or equivalent placement test scores.)

**HIST 1251** (3 cr.)  
**Wyoming History**  
A study of Wyoming's economic, political, constitutional, and social history from preterritorial days to the present. Students also gain an understanding of the constitutions of the United States and Wyoming. Prerequisite: Completion of ENGL 0700 or ENGL 1001 or placement into ENGL 1010, or concurrently enrolled in ENGL 1010.

**HIST 1290** (3 cr.)  
**History of the U.S. West**  
In this survey history course, students examine frontier life in the Far West focusing on the nineteenth century from the early explorations through the fur trade and including territorial expansion to the Pacific, the mining frontiers, the cattle trail and farming frontiers, and the Plains Indians. Students also explore current issues related to development of the West during the twentieth century. Prerequisite: Completion of ENGL 0700 or ENGL 1001 or placement into ENGL 1010, or concurrently enrolled in ENGL 1010.

**HIST 2020** (3 cr.)  
**U.S. Military History**  
A historical survey of major military campaigns of the United States armed forces from the colonial period through the Persian Gulf conflict. Students demonstrate knowledge of and will be able to analyze the various causes, actions, and consequences of U.S. military involvement. Prerequisite: Completion of ENGL 0700 or ENGL 1001 or placement into ENGL 1010, or concurrently enrolled in ENGL 1010.

**HIST 2060 (1-6 cr.)****Topics in History:**

A course to be offered based on sufficient demand from students and on the resources of the history program. In general, the courses are designed to increase student knowledge and understanding about how to think historically in order to develop a greater understanding of and appreciation for the institutions of society and for the forces at work in historical events and trends and will apply the “lessons” of history to the present world situation. Prerequisite: Completion of ENGL 0700 or ENGL 1001 or placement into ENGL 1010, or concurrently enrolled in ENGL 1010.

**HIST 2080 (3 cr.)****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. Prerequisite: Completion of ENGL 0700 or placement into ENGL 1010, completion of HIST 1120 or consent of instructor. Cross-listed as RELI 2080 Holocaust.

**HIST 2225 (3 cr.)****History of Christianity**

A survey of the history of Christianity from the end of the Apostolic era to 20th century developments in North America. Students acquire knowledge about and gain an understanding of the following topics: the patristic era, the expansion of Christianity, the monastic movement, the medieval Western Church, the Orthodox Church, the Great Schism, the Enlightenment and Reformation, the English Reformation, the growth of institutions, the church in North America, new denominations, the missionary and conciliar movements, the times of theological controversy, and 20th century developments in church life. Prerequisite: Completion of ENGL 0700 or ENGL 1001 or placement into ENGL 1010, or concurrently enrolled in ENGL 1010. (Cross-listed as RELI 2225.)

**HIST 2225 (3 cr.)****History of Christianity**

A survey of the history of Christianity from the end of the Apostolic era to 20th century developments in North America. Students acquire knowledge about and gain an understanding of the following topics: the patristic era, the expansion of Christianity, the monastic movement, the medieval Western Church, the Orthodox Church, the Great Schism, the Enlightenment and Reformation, the English Reformation, the growth of institutions, the church in North America, new denominations, the missionary and conciliar movements, the times of theological controversy, and 20th century developments in church life. Prerequisite: Completion of ENGL 0700 or ENGL 1001 or placement into ENGL 1010, or concurrently enrolled in ENGL 1010. (Cross-listed as RELI 2225.)

**HIST 2290 (3 cr.)****History of North American Indians**

Students study North American Indian history from the time of Columbus through present. Students examine how political, social, and economic change impacted the Indian people. Prerequisite: Completion of ENGL 1010.

**HIST 2389 (3 cr.)****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 as WMST 2389.)

**HIST 2390 (3 cr.)****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. Prerequisites: Completion of DVST 0520 or ENGL 0520 and DVST 0630 or ENGL 0630 (or equivalent placement test scores). (Cross-listed as HUMN 2395.)

**Home Economics****HOEC 1140 (2 cr.)****Nutrition**

A study of basic principles of normal nutrition, their application in food selection, and current issues in nutrition and weight maintenance. Students will analyze diets and eating patterns to improve nutritional status, evaluate nutritional claims of products, and apply nutrition principles to individuals throughout the lifespan and on selected special diets.

**Homeland Security****HSEC 1000 (3 cr.)****Introduction to Homeland Security**

Students focus on a comprehensive, up-to-date overview of homeland security from an all-hazards perspective. Students examine threats to homeland security, including natural and technological disasters, as well as intentional threats of domestic and international terrorism, including weapons of mass destruction. Students review the roles and responsibilities of government agencies, non-government organizations, and individual citizens in homeland security. Prerequisite: Completion of ENGL 0700 or ENGL 1001 (or equivalent placement test score), or placement into ENGL 1010 or currently enrolled in ENGL 1010.

**HSEC 1001 (3 cr.)****School Safety and Homeland Security**

Students focus on a specific set of skills to enhance security, preparation, and response to acts of terrorism as well as the full range of natural, technological, and man-made disasters at educational facilities. Students examine the interaction between schools and first responders with responsibilities for educational facilities in their jurisdiction. Students learn risk and threat assessment, school safety planning, strategies for safer schools, training, education, exercises, and the tools necessary to coordinate and facilitate a school safety program in an educational facility. Prerequisite: Completion of ENGL 1010 or concurrent enrollment in ENGL 1010.

**HSEC 1002 (3 cr.)****Terrorism and Counterterrorism**

Students analyze the roots of terrorist activities throughout the world and discuss national, regional, and global effects of historical and recent terrorist acts. Students examine new and growing threats including narco-terrorism, terrorist recruitment on the Internet, and genomic terrorism. They progress from the analysis of terrorism to the past, present, and future responses (counterterrorism) to national and international terrorism. Finally, students consider historical defenses as well as new concepts and innovations for the prevention and mitigation of terrorist attacks. Prerequisite: Completion of HSEC 1000.

**HSEC 1003 (3 cr.)****Homeland Security and First Responders**

Students examine the unique role of the local first responder in the war against terrorism. Students identify the common elements of a disaster response and the roles of each first responder discipline in the response and recovery. Course emphasis is on the actions and procedures “at the scene” where decisions are made using the Incident Command System rather than the concepts and policies applied by officials physically removed from the incident. Prerequisite: Completion of HSEC 1000.

**HSEC 1015 (3 cr.)****Homeland Security and Critical Infrastructure: Facilities and Networks**

Students receive a comprehensive, in-depth examination of threats to critical facility and network infrastructure from an all-hazards perspective. Students examine the preparation for premeditated acts of terrorism and the full range of natural, technological, and man-made disasters. Students develop risk and threat assessments, safety plans, and strategies for safer facilities and networks. Students also research the processes for implementing training, education, exercises, and evaluations. Students analyze the seven general challenges in infrastructure protection: vastness, command, information sharing, knowledge, interdependencies, inadequate tools, and asymmetric conflict. Prerequisite: Completion of HSEC 1000.

**HSEC 1025 (3 cr.)****Homeland Security and Emergency Management Partnerships**

Students focus on the partnerships between emergency management and homeland security at the federal level and the impact of these changes at the state and local level. Students look briefly at various focus areas in the emergency management field that should be examined by individuals entering the homeland security field of study. After a summary of each focus area, students examine sources of detailed information including existing college courses, public domain reference materials, and online training available free of charge from the federal government. Students receive a broad understanding of the emergency management discipline and the knowledge that must be brought forward to function effectively in the homeland security discipline. Prerequisite: Completion of HSEC 1000.

**HSEC 2001 (3 cr.)****Homeland Security Legal, Policy, and Privacy Issues**

Students receive an overview of major federal laws and their impact on the development of policies, strategies, and plans for dealing with various threats to homeland security. Students review the roles and responsibilities of government agencies, non-government organizations, and individual citizens for U.S. national security. In addition, strategic planning is addressed, including the National Response Plan and the National Incident Management System. Students discuss various policy and strategy issues, including balancing security, civil liberties, and privacy. Prerequisite: Completion of HSEC 1000.

**HSEC 2004 (3 cr.)****Homeland Security and Law Enforcement**

Students receive an introduction to terrorism using a criminological or criminal justice framework for studying 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 HSEC 1000. (Cross-listed as CRMJ 2004.)

**HSEC 2006 (3 cr.)****Terrorism and Weapons of Mass Destruction**

Students examine the proliferation of weapons of mass destruction (WMD): Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE) weapons that could cause massive casualties if used for terrorist attacks. Students examine the vulnerability of the U.S. populace to such weapons. Students explore strategies of how to prevent, limit, defend, and/or deter the use of weapons of mass destruction by terrorists. Finally, students examine the spread of CBRNE weapons and the threat of black market CBRNE weapons from the former Soviet arsenal. Prerequisites: Completion of HSEC 1000.

**HSEC 2010 (3 cr.)****Cyber-Terrorism**

Students explore how the information revolution and America’s increasing utilization and reliance upon computers has affected societal infrastructure. Students examine the critical infrastructure composed of those systems and assets—both physical and cyber in nature—that are so vital that incapacitation or destruction would have a debilitating impact on national security, economic security, and/or public health and safety. Students look at how a “networked” world has bred new crimes and new responses and investigate how the computer has become a tool, target, and place of criminal activity and national security threats, as well as a mechanism of response. Finally, students examine the convergence of existing laws, equities, and variables in this multidisciplinary area, along with the economic, cost-benefit conflicts that are created as a result of various competing concerns. Prerequisite: Completion of HSEC 1000.

## Human Development

**HMDV 1000 (1 cr.)****Freshman Seminar**

The freshman seminar is designed to enhance student success at Laramie County Community College and in other life experiences. Students develop life skills and strategies for achieving their degrees, as well as other educational and life goals.

**HMDV 1050 (3 cr.)****Study Skills**

Students gain skills and techniques essential for being a successful student. Students develop skills in time management, note taking, test taking, memory, and stress management. Students learn to process information from web sources and from textbooks. They learn basic computer skills by accessing internet sources and web-based resources and by using electronic communication tools effectively and appropriately.

**HMDV 1275 (1 cr.)****Foundations of Leadership**

Foundations of Leadership approaches leadership and social change from both theoretical and practical perspectives. Students explore leadership in relation to individuality, group dynamics, social justice, and community engagement. Through readings, case studies, reflection exercises and group work, students examine leadership as an inclusive, relational process through which individuals, organizations, and systems create social change. Prerequisite: Interest or experience in campus student leadership positions.

## Human Services

**HMSV 1010 (3 cr.)****Orientation to Human Services**

Students explore the broad field of human service. Students also discuss the history, organizational structures, procedures, and legal and ethical issues in the human service system. Prerequisites: Completion of DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement test scores).

**HMSV 1060 (3 cr.)****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 cr.)****Ethics for Helping Professions**

Students examine historical and legal decisions that affect client rights and service provisions. Students discuss issues concerning due process, least restrictive environment, right to treatment; dual relationships, client advocacy and professional responsibility. Students apply professional standards while analyzing case studies.

**HMSV 1200 (3 cr.)****Field Experiences in Human Services I**

In this initial experience for human services majors, students integrate previous academic learning in a supervised experience in a human services agency. Students meet in a seminar format in addition to the 90 hours spent working in an approved setting. Prerequisites: Completion of HMSV 1060 and HMSV 1110.

**HMSV 2000 (3 cr.)****Human Services Administration**

Students examine and acquire knowledge of human service agencies including organizational types, inter-organization relationships, and administrative structures and functions. Students discuss the agency role and function in the context of the services provided, clients served and program goals. Students analyze the function of supervision and the role of middle management personnel in the design and delivery of services to clients. Prerequisite: Completion of HMSV 1010.

**HMSV 2110 (4 cr.)****Field Experiences in Human Services II**

This course represents the culmination of preparation for an entry-level student majoring in human services. Students participate in supervised practice of human service knowledge, values, and skills learned in the classroom. In addition to meetings in a seminar setting, students complete 135 hours of field experience in a human services setting. Prerequisite: Completion of HMSV 1200.

## Humanities

**HUMN 1010 (3 cr.)****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 0520 and ENGL 0700 (or equivalent placement test scores.)

**HUMN 1020 (3 cr.)****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 0520 and ENGL 0700 (or equivalent placement test scores.)

**HUMN 1080 (3 cr.)****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. Processes and activities of women in such areas as labor force, art, literature, and politics are investigated. Prerequisites: Completion of DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement test scores). (Cross-listed as SOC 1080.)

**HUMN 2330 (3 cr.)****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. Prerequisites: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score), and ENGL 1010. (Cross-listed as ENGL 2330.)

**HUMN 2395 (3 cr.)****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. Prerequisites: Completion of DVST 0520 or ENGL 0520 and DVST 0630 or ENGL 0630 (or equivalent placement test scores). (Cross-listed as HIST 2390.)

## Independent Studies

A student may enroll for specialized study in most departments. Independent studies is closely supervised by the instructor, and courses must be pertinent to the student's goals.

Course numbers ending in section .000 denote independent study.



## Information Management

### **IMGT 2400** (3 cr.) **Introduction to Information Management**

Students gain and demonstrate the knowledge and skills necessary to understand the role of information systems in managing organizations. Students apply information systems to make organizations more competitive and efficient. Specific topics include strategies and competitive opportunities, data warehouses, electronic commerce, information technology infrastructure, decision analysis, network basics and building e-portfolios. Prerequisite: Completion of COSC 1200 and 18 credit hours in business course work or permission of instructor.

## Integrated Systems Technology

### **IST 1500** (1 cr.)

#### **Introduction to Industrial Math**

Students add, subtract, multiply, divide, and convert decimals, percentages, and fractions; and solve for unknown quantities with a focus on how they can use these mathematical principles and operations in an industrial setting. Students complete all course outcomes in an open-entry/open-exit, self-paced format. They must successfully complete this course or score at least 80 percent on the pretest before attempting any of the core courses in the Integrated Systems Technology certificate program.

### **IST 1510** (1 cr.)

#### **Introduction to Industrial Tools**

Students identify, explain, and demonstrate the safe handling and use of industrial hand and power tools. They also select and install industrial fasteners. Students complete all course outcomes in an open-entry/open-exit, self-paced format. They must successfully complete this course or score at least 80 percent on the pretest before attempting any of the core courses for the Integrated Systems Technology certificate program.

### **IST 1520** (1 cr.) **Introduction to Industrial Safety**

Students identify sources of, organize, and describe safety rules, regulations, and practices related to job-site hazards, personal protective equipment, aerial work, hazard communication, and electrical safety. They complete all course outcomes in an open-entry/open-exit, self-paced format. This course is a core requirement of the Fundamentals of Integrated Systems Technology certificate program. Prerequisite: Completion of or score at least 80 percent on the pretest for IST 1500 and IST 1510.

### **IST 1522** (1 cr.)

#### **Introduction to Lifting and Crane Operations**

Learners explore the safety rules, regulations, and practices related to rigging hardware, slings, hoists, and cranes. They complete all outcomes in an online environment.

### **IST 1530** (1 cr.)

#### **Introduction to Effective Workplace Skills**

Students interpret information and instructions, communicate effectively, assess personal strengths and development needs, and describe the concept of continuous learning in order to increase performance and improve personal success in today's workplace. They explore reading, writing, listening, speaking, computer, and relationship skills as well as discuss how to address workplace issues. They complete all course outcomes in an open-entry/open-exit, self-paced format. This course is a core requirement for the Integrated Systems Technology certificate program. Prerequisite: Completion of or score at least 80 percent on the pretest for IST 1500 and IST 1510.

### **IST 1540** (1 cr.)

#### **Introduction to Industrial Prints and Computer-Aided Drafting**

Students identify and explain the types of plans, prints, drawings, and specifications designed for industrial equipment and facilities. They also interpret and use AutoCAD software commands to create components, symbols, and dimensions. They complete all course outcomes in an open-entry/open-exit, self-paced format. This course is a core requirement for the Integrated Systems Technology certificate program. Prerequisite: Completion of or score of at least 80 percent on the pretest for IST 1500 and IST 1510.

### **IST 1550** (1 cr.)

#### **Fundamentals of Industrial Piping Systems**

Students identify safety rules, regulations, selection criteria, preparation requirements, and maintenance actions for metal pipe, plastic pipe, metal tubing, and related equipment. They complete all course outcomes in an open-entry/open-exit, self-paced format. Students can concurrently enroll in IST 1551 to apply the topics of this course in a hands-on environment. Prerequisite: Completion of or score at least 80 percent on the pretest for IST 1500 and IST 1510.

### **IST 1551** (1 cr.)

#### **Industrial Piping Systems**

Students select, prepare, and install metal pipe, plastic pipe, and metal tubing. Participants must have a thorough understanding of the knowledge related to these skills before attempting to perform any maintenance actions. They complete all course outcomes in an open-entry/open-exit, self-paced format. Prerequisite: Completion of, concurrent enrollment in, or score at least 80 percent on the pretest for IST 1550.

### **IST 1600** (1 cr.)

#### **Fundamentals of Fluid Power**

Students identify and explain safety rules, regulations, precautions, test procedures, common components, and operating principles for hydraulic and pneumatic systems. They complete all course outcomes in an open-entry/open-exit, self-paced format. Students can concurrently enroll in IST 1601 to apply the topics of this course in a hands-on environment. Prerequisite: Completion of or score at least 80 percent on the pretest for IST 1500 and IST 1510.

### **IST 1610** (1-2 cr.)

#### **Fluid Power**

Learners identify, explain, describe, and predict changes to hydraulic and pneumatic systems. In this course they increase their knowledge of the basic components found in industrial fluid-powered systems. They complete some outcomes in an online environment and can choose to add additional outcomes in a classroom environment. Participants can concurrently enroll in IST 1611 to apply the topics of this course in a hands-on environment.

### **IST 1611** (1 cr.)

#### **Fluid Power Circuits**

Learners 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. Participants must have a thorough understanding of the knowledge related to these skills before attempting any maintenance actions. They complete all course competencies in a lab environment.

### **IST 1650** (1 cr.)

#### **Fundamentals of Mechanical Drives**

Students identify and explain the safety rules, regulations, test procedures, installation, removal, and operation of belt drives, chain drives, and mechanical couplings. They complete all course outcomes in an open-entry/open-exit, self-paced format. Students can concurrently enroll in IST 1651 to apply the topics of this course in a hands-on environment. Prerequisite: Completion of or score at least 80 percent on the pretest for IST 1500, IST 1510, and IST 1520.

- IST 1651 (1 cr.)**  
**Mechanical Drive Installations**  
 Students install belt drives, install chain drives, and install/remove mechanical couplings. Participants must have a thorough understanding of the knowledge related to these skills before attempting to perform any maintenance actions. They complete all course outcomes in an open-entry/open-exit, self-paced format. Prerequisite: Completion of, concurrent enrollment in, or be able to score at least an 80 percent on the pretest for IST 1650.
- IST 1652 (1 cr.)**  
**Mechanical Drive Bearings**  
 Students identify and explain safety rules, regulations, designations, installation/removal techniques, and test procedures related to mechanical drive system bearings. They must have a firm understanding of the fundamental operating requirements for mechanical drives. They complete all course outcomes in an open-entry/open-exit, self-paced format. Students can concurrently enroll in IST 1653 to apply the topics of this course in a hands-on environment. Prerequisite: Completion of or score at least 80 percent on the pretest for IST 1650.
- IST 1653 (1 cr.)**  
**Mechanical Drive Bearing Installation and Removal**  
 Students install and remove plain, ball, and roller bearings. Participants must have a thorough understanding of the knowledge related to these skills before attempting to perform any maintenance actions. They complete all course outcomes in an open-entry/open-exit, self-paced format. Prerequisite: Completion of, concurrent enrollment in, or score at least 80 percent on the pretest for IST 1652.
- IST 1660 (1-2 cr.)**  
**Mechanical Drives**  
 Learners identify and explain the safety rules, regulations, test procedures, installation, removal and operation of belt drives, chain drives, mechanical couplings, shafts and bearings. They complete some outcomes in an online environment and can choose to add additional outcomes in a classroom environment. Participants can concurrently enroll in IST 1661 to apply the topics of this course in a hands-on environment.
- IST 1661 (1 cr.)**  
**Mechanical Drive Assemblies**  
 Learners practice electrical and mechanical safety while installing belt drives, chain drives, gears, couplings, and bearings. Participants must have a thorough understanding of the knowledge related to these skills before attempting any maintenance actions. They complete all course competencies in a lab environment.
- IST 1700 (1 cr.)**  
**Fundamentals of DC Electricity**  
 Students identify and explain safety rules, regulations, concepts, and operating characteristics of direct current (DC) electrical circuits. They also identify the selection, inspection, use and maintenance requirements for common electrical test equipment. They complete all course outcomes in an open-entry/open-exit, self-paced format. Students can concurrently enroll in IST 1701 to apply the topics of this course in a hands-on environment. Prerequisite: Completion of or score at least 80 percent on the pretest for IST 1500 and IST 1510.
- IST 1702 (1 cr.)**  
**Fundamentals of AC Electricity**  
 Students identify and explain safety rules, regulations, concepts, operating characteristics, and testing procedures for common alternating current (AC) electrical circuits. They complete all course outcomes in an open-entry/open-exit, self-paced format. Students can concurrently enroll in IST 1703 to apply the topics of this course in a hands-on environment. Prerequisite: Completion of or score at least 80 percent on the pretest for IST 1700.
- IST 1710 (1-2 cr.)**  
**DC Electricity**  
 Learners identify and explain electrical safety rules, concepts, and operating characteristics of direct current (DC) electrical circuits. They also identify the operation and use of common electrical test equipment. They complete some outcomes in an online environment and can choose to add additional outcomes in a classroom environment. Participants can enroll in IST 1711 to apply the topics of this course in a hands-on environment.
- IST 1711 (1 cr.)**  
**DC Electrical Circuits**  
 Learners practice electrical safety, soldering, circuit calculation, and circuit measurement skills. They construct their own digital multimeter and use that meter to explore DC circuit operation. Participants must have a thorough understanding of the knowledge related to these skills before attempting any maintenance actions. They complete all course competencies in a lab environment.
- IST 1712 (1-2 cr.)**  
**AC Electricity**  
 Learners identify and explain electrical safety rules, concepts, and operating characteristics of alternating current (AC) electrical circuits. They also identify the operation and use of common electrical test equipment. They complete some outcomes in an online environment and can choose to add additional outcomes in a classroom environment. Participants can concurrently enroll in IST 1713 to apply the topics of this course in a hands-on environment.
- IST 1713 (1 cr.)**  
**AC Electrical Circuits**  
 Learners practice electrical safety, soldering, circuit calculation, and circuit measurement skills. They construct their own function generator and use it, along with other test equipment, to explore AC circuit operation. Participants must have a thorough understanding of the knowledge related to these skills before attempting any maintenance actions. They complete all course competencies in a lab environment.
- IST 1730 (2 cr.)**  
**Introduction to Electrical Fundamentals**  
 Students examine direct current theories and apply those to the electrical system and related equipment. Students explore basic DC circuit calculations and analyze basic alternating current theories while applying those theories to electrical systems and related equipment. Students practice various methods of producing a voltage, studying essential generator and motor design, and construction and operating principles. Instructor consent required.
- IST 1750 (1 cr.)**  
**Fundamentals of Electric Motors**  
 Students identify and explain safety rules, regulations, and operating characteristics of direct current and alternating current motors. They complete all course outcomes in an open-entry/open-exit, self-paced format. Students can concurrently enroll in IST 1751 to apply the topics of this course in a hands-on environment. Prerequisite: Completion of or score at least 80 percent on the pretest for IST 1700 and IST 1702.
- IST 1751 (1 cr.)**  
**Electric Motor Circuits**  
 Students configure, install, and operate direct current and alternating current motors. They also select, inspect, use, and maintain electrical test equipment. Participants must have a thorough understanding of the knowledge related to these skills before attempting to perform any maintenance actions. They complete all course outcomes in an open-entry/open-exit, self-paced format. Prerequisite: Completion of, concurrent enrollment in, or score at least 80 percent on the pretest for IST 1750.
- IST 1770 (1-2 cr.)**  
**Motor Controls**  
 Learners identify and explain safety rules, regulations, precautions, test procedures, common components, and operating principles for electrical motor controls. They complete some outcomes in an online environment and can choose to add additional outcomes in a classroom environment. Participants can concurrently enroll in IST 1771 to apply the topics of this course in a hands-on environment.

- IST 1771 (1 cr.)**  
**Motor Control Circuits**  
 Learners practice mechanical and electrical system safety, build motor control circuits, and measure the operating characteristics of those motor control circuits. Participants must have a thorough understanding of the knowledge related to these skills before attempting any maintenance actions. They complete all course outcomes in a lab environment.
- IST 1780 (2 cr.)**  
**Electric Motors**  
 Students identify, explain, and classify the safety rules, regulations, and operating characteristics of direct current and alternating current motors as they learn to predict how changes affect how a motor operates. Learners complete all competencies in a combination of self-paced online materials and classroom activities. Students can concurrently enroll in IST 1781 to apply the topics of this course in a hands-on environment.
- IST 1781 (1 cr.)**  
**Electric Motor Circuits**  
 Learners configure, install, and operate direct current and alternating current motors. They also select, inspect, use, and maintain electrical test equipment. Participants must have a thorough understanding of the knowledge related to these skills before attempting to perform any maintenance actions. They complete all course outcomes in an industrial maintenance laboratory environment.
- IST 1800 (1 cr.)**  
**Fundamentals of Programmable Logic Controllers**  
 Students identify and explain the basic components, operating characteristics, common programming languages, input/output interfacing, and troubleshooting of programmable logic controllers (PLCs). They complete all course outcomes in an open-entry/open-exit, self-paced format. Students can concurrently enroll in IST 1801 to apply the topics of this course in a hands-on environment. Prerequisite: Completion of or score at least 80 percent on the pretest for IST 1500 and IST 1510.
- IST 1801 (1 cr.)**  
**Programmable Logic Controller Circuits I**  
 Students connect, operate, and troubleshoot programmable logic controllers (PLCs). They use PLC hardware and software to interface input and output modules with industrial system components while creating their own computer programs to control system operation. Participants must have a thorough understanding of the knowledge related to these skills before attempting to perform any maintenance actions. They complete all course outcomes in an open-entry/open-exit, self-paced format. Prerequisite: Completion of, concurrent enrollment in, or score at least 80 percent on the pretest for IST 1800.
- IST 1810 (1-2 cr.)**  
**Programmable Logic Controllers**  
 Learners explore the hardware and software used to control automated industrial equipment. They identify, classify, and predict the operational characteristics of fixed and modular programmable logic controllers. They complete some outcomes in an online environment and can choose to add additional outcomes in a classroom environment. Participants can concurrently enroll in IST 1811 to apply the topics of this course in a hands-on environment.
- IST 1811 (1 cr.)**  
**PLC Circuits I**  
 Learners connect, program, and operate programmable logic controllers (PLCs). They use PLC hardware and software to interface input and output modules with industrial system components while creating their own computer programs to control system operation. Participants must have a thorough understanding of the knowledge related to these skills before attempting to perform any maintenance actions. They complete all outcomes in a laboratory environment.
- IST 1830 (2 cr.)**  
**Introduction to Mechanical Fundamentals**  
 Students explore the mechanical concepts commonly found in a plant setting and examine piping systems including dimensions, connections, blinding, and other concepts. Students operate common hand tools and define terminology found in many plants. Students examine steam traps, strainers and their applications, and are also introduced to common pumps and drivers, compressors and fans, and heat exchangers. Instructor consent required.
- IST 1850 (1 cr.)**  
**Fundamentals of Cooling**  
 Students identify the basic vocabulary, technician requirements, career progression, and common components for industrial cooling systems. They also identify and explain the key concepts of operation for these systems. They complete all course outcomes in an open-entry/open-exit, self-paced format. Prerequisite: Completion of or score at least 80 percent on the pretests for IST 1500, IST 1510, and IST 1520.
- IST 1852 (1 cr.)**  
**Refrigerant Handling**  
 Students identify and explain the Environmental Protection Agency (EPA) refrigerant handling requirements in preparation for taking the EPA-mandated Universal License examination. They complete all course outcomes in an open-entry/open-exit, self-paced format. Students can concurrently enroll in IST 1853 to apply the topics of this course in a hands-on environment. Prerequisite: Completion of or score at least 80 percent on the pretest for IST 1850.
- IST 1853 (1 cr.)**  
**Refrigerant Leak Detection, Recovery, Evacuation and Charging**  
 Students detect leaks on, recover refrigerant from, evacuate, and charge industrial cooling systems. They also select, inspect, use, and maintain refrigerant handling equipment. Participants must have a thorough understanding of the EPA refrigerant handling requirements related to these skills before attempting to perform any maintenance actions. They complete all course outcomes in an open-entry/open-exit, self-paced format. Prerequisite: Completion of or concurrent enrollment in IST 1852, or possess an EPA Universal refrigerant handling card.
- IST 1860 (1 cr.)**  
**Fundamentals of Heating**  
 Students identify and explain safety rules, regulations, terms, concepts, components, and operation cycle for forced-air furnaces. They also identify the maintenance requirements for oil, gas, and electric heating systems. Students complete all course outcomes in an open-entry/open-exit, self-paced format. Prerequisite: Completion of or score at least 80 percent on the pretests for IST 1500, IST 1510, and IST 1520.

**IST 2800** (1 cr.)  
**Data Acquisition**  
Learners explore the measurement of variables common in industrial environments. They apply the economic aspect of measuring instruments, the social aspect of presentation of information, and the feedback of control data to a variety of industrial scenarios. They complete all outcomes in an online environment.

## Japanese

**JAPN 1010** (4 cr.)  
**First Year Japanese I**  
An introductory course focusing on conversation, vocabulary development and the fundamentals of grammatical structure, composition and reading. Students develop a command of basic conversational Japanese and learn to read and comprehend basic Japanese scripts, focusing on everyday words, phrases and expressions.

**JAPN 1020** (4 cr.)  
**First Year Japanese II**  
This course continues focusing on useful everyday conversations, vocabulary development, and the fundamentals of grammatical structure, composition, and reading. Students demonstrate a command of conversational Japanese as well as use of Japanese scripts with an emphasis on everyday words, phrases, and expressions. Prerequisite: Completion of JAPN 1010.

## Latin

**LATN 1010** (4 cr.)  
**First Year Latin I**  
An introductory, college-level course focusing on vocabulary development and the fundamentals of grammatical structure, composition, and reading. Students demonstrate a command of basic grammatical structures and will be able to read and comprehend excerpts from ancient authors. Students also will be able to recognize the contributions of Latin to the English language while expanding their appreciation of Roman literature, thought, and expression. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**LATN 1020** (4 cr.)  
**First Year Latin II**  
A continuation of an introductory, college-level course focusing on vocabulary development and the fundamentals of grammatical structure, composition, and reading. Students demonstrate a command of more complex grammatical structures and will be able to read and comprehend excerpts from ancient authors. Students also will be able to recognize the contributions of Latin to the English language while expanding their appreciation of Roman literature, thought, and expression. Prerequisite: Completion of LATN 1010.

**LATN 2030** (4 cr.)  
**Second Year Latin**  
An intermediate, college-level course focusing on the review and mastery of major grammatical structures of the language, as well as the refinement of basic skills through readings based on works by Latin writers. Students demonstrate a command of complex grammar structures and idiomatic expressions, translate passages of increasing difficulty, and interpret Latin poetry and prose in cultural context. In addition, students develop a recognition of the contributions of Latin to the English language while expanding their appreciation of Roman literature, thought, and expression. Prerequisite: Completion of LATN 1020.

**LATN 2110** (4 cr.)  
**Vergil, *The Aeneid* I**  
This course is designed to cover the second-year sequence in Latin within one semester, and thus prepares students for upper division classes the following semester. Students review syntactical principles, and they acquire rapid reading ability through the study of Vergil's *Aeneid*. Students survey the main interpretative issues surrounding Vergil's *Aeneid*. In addition, students develop an understanding and appreciation of the formal structure of the Latin language and also the ability to scan and read Latin hexameters out loud. Prerequisite: Completion of LATN 2030.

## Library Science

**LIBS 2280** (3 cr.)  
**Literature for Children**  
Students read and analyze children's literature and demonstrate its use to teach all academic subjects. Students evaluate works within the genres of children's literature and report on, develop, and model the use of children's books in elementary classrooms. Prerequisite: Concurrent enrollment in or completion of ENGL 1020.

## Management

**MGT 1000** (3 cr.)  
**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 DVST 0520 or ENGL 0520 (or equivalent placement test score).

**MGT 1010** (1 cr.)  
**Employment Orientation I**  
A preparation for the job search and suggestions for career progression. Included are current employment market information, resumes, employment applications, and interviews.

**MGT 1200** (3 cr.)  
**Human Resources Management**  
Students obtain knowledge of the components of human resource management. Major areas of focus will be 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 MGT 1000 or MGT 2100.

**MGT 1500** (3 cr.)  
**Leadership Essentials**  
Students develop performance-based competencies and skills needed to prepare for leadership positions in today's workplace. Topics explored include leadership communication, conflict resolution, employee and self-development, change management, coaching, managing performance problems, and team building. Students develop action plans for transitioning the skills discussed during class into the workplace. (This course is not intended for transfer.)

**MGT 1501** (3 cr.)  
**Practical Workplace Management**  
Students gain skills focused on creating efficiency and productivity in the workplace. Students examine and apply tools that support time management principles, project management concepts, and effective performance processes. Students utilize flowcharts, check sheets, cause-and-effect diagrams, pareto charts, and interrelationship diagrams to understand, improve, and measure processes. (This course is not intended for transfer.)

**MGT 1502 (3 cr.)**  
**Career Assessment and Portfolio:  
Creating the Total Package**

Students explore skills and tools demanded for successfully securing employment and/or advancing into leadership roles. Students assess career skills and certifications in order to develop an in-depth and comprehensive career portfolio, which cumulates all relevant work experiences and additional training gained during enrollment in this program. Students are evaluated on the thoroughness with which the portfolio has been compiled, assembled, and organized. Career portfolios are assessed by members of a learning assessment team. (This course is not intended for transfer.)

**MGT 1590 (1-2 cr.)**  
**Entrepreneurial Leadership I**

In this course, students gain hands-on experience in entrepreneurial leadership activities. This course is for current Rotaract participants or students wishing to join Rotaract and take a leadership role in the community. Prerequisite: Completion of ENGL 0520 and permission of instructor.

**MGT 2100 (3 cr.)**  
**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 rolls and responsibilities of modern managers in an organization. Prior completion of BADM 1000 is encouraged but not required.

**MGT 2460 (1-4 cr.)**  
**Topics in Business and Management**

Students will be provided an opportunity to develop knowledge and skills necessary for personal and professional improvement in business and management. Prepared topics include business decision-making models for use with PCs, small business IRS tax planning, entrepreneur's financial plan, labor laws, performance appraisal system, and employee development programs. May be repeated for up to six hours of credit. Prerequisite: Permission of instructor.

**MGT 2475 (1-6 cr.)**  
**Management Internship**

Students apply learned theory under the supervision of a professional manager in a cooperating organization. The student, professional manager, and advisor will develop a project with appropriate educational objectives for the student to apply his or her knowledge in completing an actual business management project. One to six semester hours of credit will be granted based on the developed Internship Action Plan. (May be repeated for up to six credit hours.) Prerequisite: Advisor approval.

**MGT 2590 (1-2 cr.)**  
**Entrepreneurial Leadership II**

In this course, students gain hands-on experience in entrepreneurial leadership activities. Students build on the concepts and practices developed in MGT 1590. This course is for current Rotaract participants or students wishing to join Rotaract and take a leadership role in the community. Prerequisite: Completion of ENGL 0520 and permission of instructor.

## Marketing

**MKT 1000 (3 cr.)**  
**Sales**

Students acquire skills and knowledge necessary to achieve success in the sales profession. Students develop knowledge and an understanding of consumer behavior and the fundamentals of persuasive selling. Major emphasis will be given to the need-satisfaction sales approach. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**MKT 1300 (3 cr.)**  
**Advertising**

Students acquire knowledge of the four elements of the promotional blend. Students understand the role of advertising relative to a firm's profit or nonprofit marketing strategy. The focus will be on market segment identification, consumer appeals, media planning, and promotion budgets. Prerequisite: Completion of BADM 1000 or equivalent preparation.

**MKT 2100 (3 cr.)**  
**Principles of Marketing**

An introduction to marketing with emphasis on the principles, practices, and problems of the total marketing process. Prerequisite: Completion of BADM 1000.

## Mass Media/Multimedia

**MMMM 1000 (3 cr.)**  
**Introduction to Mass Media**

A general survey course of the mass media and their role in modern society. Topics include books, magazines, newspapers, film, radio, recordings, television, new electronic media, advertising, public relations, regulation and law, and ethics and social responsibility. Students trace historical development of each medium and analyze its impact upon American culture. Prerequisites: Completion of DVST 0520 or ENGL 0520 and DVST 0630 or ENGL 0630 (or equivalent placement test scores).

**MMMM 1111 (3 cr.)**  
**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. Prerequisites: Completion of DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement test scores), some keyboarding skills required.

**MMMM 1370 (3 cr.)**  
**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 cr.)**  
**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 cr.)****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 cr.)****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 cr.)****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 DVST 0520 or ENGL 0520 and DVST 0630 or ENGL 0630 (or equivalent placement test scores), MMMM 1111, and some keyboarding skills.

**MMMM 2222 (3 cr.)****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 2224 (1 cr.)****Digital Video Editing Basics**

This course uses entry-level digital video editing software that is more user friendly and more automated, allowing students to focus more on the creative rather than technical aspects of creating a video. Students practice basic editing techniques; digitize, import, and export files; manipulate video and audio files and still images; and compose an original video presentation that is aesthetically pleasing and communicates clearly to an audience. This class is also suitable for the intermediate editor as well as professionals who want to distribute video on the Internet, into an MP3, or through a DVD. Prerequisite: A working knowledge of computers, including copying, moving, and deleting files.

**MMMM 2310 (3 cr.)****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 cr.)****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 cr.)****Computer Graphics**

This course introduces students to a sophisticated computer graphics software package. Using a variety of electronic tools, students master creating, drawing, editing, and manipulating 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. Prerequisites: Keyboarding required. Windows knowledge recommended.

**MMMM 2326 (3 cr.)****Interactive Media**

Students create interactive media projects for use in multimedia presentations, television productions, and Web pages. Students integrate audio, video, animation, and interactive symbols such as buttons to create digital portfolios, slideshows, quizzes, forms, galleries, and games. Windows knowledge is recommended.

**MMMM 2327 (3 cr.)****3D Computer Animation**

Students create 3D computer animation for use in multimedia and television productions. Students practice techniques in object modeling and texturing and develop skills in scene composition and layout. Examples of 3D animation will be explored in film, television and multimedia. Students work on the same animation systems used in major production studios.

**MMMM 2370 (3 cr.)****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 cr.)****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 cr.)****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 cr.)****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 cr.)****Introduction to Photography**

A quality-oriented introductory photography course emphasizing artistic and journalistic methods. The course offers students hands-on experiences with shooting, film processing, printing, mounting for exhibition, and preparation for publication. Students pay for black-and-white film and paper; a 35mm manual single-lens reflex (SLR) camera is also required. College cameras are available. Prerequisites: Completion of DVST 0520 or ENGL 0520, DVST 0630 or ENGL 0630, and DVST 0900 or MATH 0900 (or equivalent placement test scores).

**MMMM 2401 (1 cr.)****Fiber-base Printing**

An intermediate photography course building on the lessons of MMMM 2400—Introduction to Photography. Students produce black and white archival negatives and prints illustrating formative and comparative qualities of light. Prerequisite: Completion of MMMM 2400 or permission of instructor.

**MMMM 2402 (1 cr.)****Flash Photography**

An intermediate photography course building on the lessons of MMMM 2400—Introduction to Photography. Students produce black and white prints and slide sequences using the basic principles of flash photography, including but not limited to, auto and manual exposures, the Guide Number Formula, on-camera flash, bounce flash or off-camera flash, fill flash, and painting with flash. Prerequisite: Completion of MMMM 2400 or permission of instructor.

**MMMM 2403 (1 cr.)****Special Effects Photography**

An intermediate photography course building on the lessons of MMMM 2400—Introduction to Photography. Students produce a wide variety of special effects prints and slides using the effects of color temperatures of light on transparency (slide) films, hand-coloring of black and white prints, color printing techniques, and toning. Prerequisite: Completion of MMMM 2400 or permission of instructor.

**MMMM 2405 (1-3 cr.)****Darkroom Production**

In Darkroom Production, experienced students work in the darkroom on an individual basis, receiving periodic feedback from the instructor. Each student sets goals for the semester that might include improvement in printing technique, broadened understanding of camera operations, and/or enrichment of a special project or personal body of work. Prerequisite: Completion of MMMM 2400 or instructor approval.

**MMMM 2406 (1 cr.)****Digital Camera Basics I**

Students shoot photographs with a digital camera, experimenting with zoom lenses, exposure modes, flash and image quality. Students develop their skills in composing and taking photographs. Then they use a basic image editing software program to crop, manipulate and improve their images. Students also prepare images for printing and email distribution. Prerequisites: A digital camera and a working knowledge of computers, including email, Web browsing, and copying, moving, and deleting files.

**MMMM 2407 (1 cr.)****Digital Camera Basics II**

In this continuation course, students demonstrate their skills in setting advanced options on a digital camera and photographing close-up and small objects. They also develop additional skills in a basic image editing software program to convert images to grayscale, duotone, and other "false" colors and to create montages and panoramic photos. Then using an image management software program, students organize, find, and view their photographs. Prerequisites: Completion of MMMM 2406, and students need a working knowledge of computers, including email, Web browsing, and copying, moving, and deleting files.

**MMMM 2408 (3 cr.)****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.

**MMMM 2410 (3 cr.)****Introduction to Multimedia**

Students create multimedia projects from concept to delivery on mobile media and the Internet. Students design informative, interactive multimedia presentations that integrate text, graphics, video, audio, and compelling storytelling. Taking advantage of technologies now used by many businesses to generate sales such as blogs, podcasts, social media, and other new media, students develop a rich user experience and build a community for their target markets. Keyboarding skills and Windows knowledge are recommended.

**MMMM 2491** (3 cr.)  
**Topics in Journalism**

A course offering a variety of topics in journalism such as advertising, layout, and public relations. A maximum of 12 hours may be applied toward a degree in journalism. Prerequisites: Completion of ENGL 0700 or ENGL 1001 (or equivalent placement test scores).

## Mathematics

**MATH 0900** (3 cr.)  
**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. Prerequisite: MATH placement score in Level B.

**MATH 0920** (3 cr.)  
**Elementary Algebra**

This course involves the study of real numbers, algebraic expressions, and algebraic linear equations. Successful students acquire knowledge and develop skills that enable them to perform operations with signed numbers, simplify algebraic expressions, solve and graph linear equations and inequalities, evaluate expressions with exponents, and evaluate and factor polynomials. Students may not receive credit for both MATH 0920 and MATH 0921. Prerequisite: Completion of DVST 0900 or MATH 0900 (or equivalent placement test score).

**MATH 0921** (3 cr.)  
**Algebra I**

This course involves a study of algebraic expressions and algebraic equations. Successful students acquire knowledge and develop skills that enable them to simplify algebraic expressions, solve linear equations and inequalities, graph linear equations, use the rules of exponents, perform operations on polynomials, and factor polynomials. Students may not receive credit for both MATH 0920 and MATH 0921. Prerequisite: Required MPE score or ACT score or a grade of C or better in MATH 0900.

**MATH 0925** (3 cr.)  
**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.

**MATH 0930** (3 cr.)  
**Intermediate Algebra**

This course involves the study of real numbers, algebraic expressions, and algebraic equations. Successful students acquire knowledge and develop skills that enable them to evaluate and simplify rational and radical expressions, solve rational and radical equations, solve quadratic equations, solve systems of equations, identify functions, and use function notation. Prerequisite: Completion of MATH 0920 or MATH 0921 (or equivalent placement test score).

**MATH 0960** (4 cr.)  
**Integrated Statistics Statway I**

Students explore statistical concepts and methods with an emphasis on data analysis. Students analyze and interpret statistical studies that includes analyzing and interpreting statistical studies, an overview of the data analysis process, procedures to follow in summarizing data both graphically and numerically, strategies used in reasoning about bivariate numerical data in specifying linear relationships and about bivariate categorical data, modeling nonlinear relationships and an introduction to probability. MATH 0960 is the first course in the Statway sequence. This course is recommended to students who are planning to continue the Statway sequence by enrolling in STAT 2060 after successfully completing this course.

**MATH 1000** (3 cr.)  
**Problem Solving**

This course involves a study of the methods, processes, and strategies of problem solving. Successful students acquire knowledge and develop skills that enables 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. Prerequisite: Completion of MATH 0920 or MATH 0921 (or equivalent placement test score). MATH 1000 will not meet a prerequisite for MATH 1400.

**MATH 1100** (3 cr.)  
**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. Students must be concurrently enrolled in EDEL 1410. Prerequisite: Concurrent enrollment in MATH 0930 or Level 3 on the Math Placement Exam or a Math ACT of 21 or Math SAT of 600.

**MATH 1105** (3 cr.)  
**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, they predict the chance of future events. Using algebra, they generalize and communicate patterns. Prerequisite: Completion of MATH 1100 with a grade of C or better.

**MATH 1400** (4 cr.)  
**Pre-Calculus Algebra**

This course involves the study of elementary functions by numeric, graphic, and symbolic methods. Successful students acquire knowledge and develop skills to investigate linear, quadratic, polynomial, rational, exponential and logarithmic functions; solve equations by graphing; and understand and use function notation. Students receiving credit for MATH 1450 may not receive credit for this course. A specific calculator is required for this course. See a MATH instructor for acceptable models. Prerequisite: Completion of MATH 0930 (or equivalent placement test score).



**MATH 1405 (3 cr.)****Pre-Calculus Trigonometry**

This course involves a study of trigonometric functions and their applications. Successful 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 may not receive credit for this course. A specific calculator is required for this course. See a MATH instructor for acceptable models. Prerequisite: Completion of MATH 1400 (or equivalent).

**MATH 1450 (5 cr.)****Pre-Calculus Algebra/Trigonometry**

This course involves a study of algebraic and trigonometric equations and functions and their applications. Successful students acquire knowledge and develop skills that enable them to identify functions and use functions notation; investigate polynomial, rational, exponential, and logarithmic functions; solve equations using numeric, graphic and analytic methods; define, evaluate, and graph trigonometric functions and their inverses; solve triangles; solve applications using vectors; and represent complex numbers in trigonometric form. This is an accelerated course including the information from both MATH 1400 and MATH 1405. This course will replace credit for MATH 1400 and/or MATH 1405. A specific calculator is required for this course. See a MATH instructor for acceptable models. Prerequisite: Place into MATH 1400 and have permission of instructor.

**MATH 1510 (3 cr.)****Technical Mathematics I**

This course involves the study of 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, and graphs, charts, and tables. Prerequisite: Completion of DVST 0900 or MATH 0900 (or equivalent placement test scores).

**MATH 2120 (3 cr.)****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. Students must be concurrently enrolled in EDEL 2410. Prerequisite: Completion of MATH 1100 with a grade of C or better.

**MATH 2200 (5 cr.)****Calculus I**

This course involves a study of elementary functions, the derivative, and the integral. Successful 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. A specific calculator is required for this course. See a MATH instructor for acceptable models. Prerequisite: Completion of MATH 1405 or equivalent.

**MATH 2205 (5 cr.)****Calculus II**

This course involves a study of integration and infinite series. Successful students acquire knowledge and develop skills that enable them to use various integration techniques; solve application problems using integration; and approximate elementary functions using Taylor and Fourier Series. A specific calculator is required for this course. See a MATH instructor for acceptable models. Prerequisite: Completion of MATH 2200 or equivalent.

**MATH 2210 (5 cr.)****Calculus III**

This course involves a study of vectors, vector fields, and differential and integral calculus of functions of several variables. Successful students acquire knowledge and develop skills that enable them to differentiate and integrate multivariate 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 a MATH instructor for acceptable models. Prerequisites: Completion of MATH 2205.

**MATH 2250 (3 cr.)****Elementary Linear Algebra**

This course involves a study of 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 a MATH instructor for acceptable models. Prerequisite: Completion of MATH 2200.

**MATH 2310 (3 cr.)****Applied Differential Equations**

This course involves a study of ordinary differential equations and integral transforms. Successful students acquire knowledge and develop skills that enables them to solve first order differential equations with exact solutions, solve higher order linear differential equations using Laplace transforms, and construct mathematical models and solve application problems. A specific calculator is required for this course. See a MATH instructor for acceptable models. Prerequisite: Completion of MATH 2205.

**MATH 2350 (4 cr.)****Business Calculus I**

This course involves the study of 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. This course is non-algebraic in nature, and the development of the conceptual understanding of calculus is data driven and technology based. A specific calculator is required for this course. See a MATH instructor for acceptable models. Prerequisite: Completion of MATH 1400 or equivalent.

**MATH 2355 (4 cr.)****Mathematical Applications for Business**

This course involves the study of equations and systems of equations, linear programming, matrices, the mathematics of finance, set theory, probability, and statistics. Successful students acquire knowledge about and develop skills in solving linear equations and least square regression, matrices, linear programming, finance (including simple and compound interest, inflation and population growth, annuities, and amortization), sets and counting problems, probability and statistics, and other selected topics. A specific calculator is required for this course. See a MATH instructor for acceptable models. Prerequisites: Completion of and MATH 1400 or equivalent.

## Medical Coding

### **MEDC 1500** (3 cr.) **Basic Diagnostic Coding**

Students are introduced to the basic coding guidelines using Volumes 1, 2, and 3 of the ICD-9 (International Classification of Diseases) coding classification system. Students practice the application of diagnosis codes, linking them to procedural codes and 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 guidelines of the National Correct Coding Initiative. Students also examine ICD-10 codes and are given practical applications of how to link ICD-9 and ICD-10.

### **MEDC 1550** (2 cr.) **Advanced Diagnostic Coding**

Students continue to sharpen the skills and knowledge introduced in Basic Diagnostic Coding by practicing higher-level case scenarios. Students analyze primary and secondary diagnoses and how they relate to reimbursement. Students study and apply modifiers, V codes, and E codes following the current guidelines and regulations. ICD-10 conventions are explored in more depth, and students must be able to apply both ICD-9 and ICD-10 codes proficiently. Students evaluate ethics in relation to fraud and incorrect coding. Prerequisite: Completion of MEDC 1500.

### **MEDC 1600** (3 cr.) **Basic CPT Coding**

Students are introduced to the basic coding guidelines of the Current Procedure Terminology (CPT) nomenclature. Students practice the application of CPT/HCPCS codes validating 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.

### **MEDC 1650** (2 cr.) **Advanced CPT Coding**

Students build on the base knowledge learned from Basic CPT Coding. Students link CPT codes and ICD codes using examples from medical records. Analyzing dictation reports, students follow the guidelines for reporting secondary procedures and diagnosis codes. Students add the knowledge of using modifiers and HCPCS codes. Students also review the current regulations as related to coding compliance and discuss major coding errors including fraud. Prerequisite: Completion of MEDC 1600.

### **MEDC 1700** (3 cr.) **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 develop accounts receivable management skills through different systems to include the tickler file, A-Z management, insurance company management, using a collection agency, and the aging process. Students review the fair debt collection act and apply the principles of the act through the accounts receivable process.

### **MEDC 1970** (2 cr.) **Professional Practice Experience (Coding)**

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. 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 coding environment. Prerequisite: Completion of MEDC 1650.

## Microbiology

### **MICR 2210** (4 cr.) **General Microbiology**

A study of microscopic organisms. Students compare and contrast microbial structures, categorizing microbes according to their physiological and metabolic properties. Students also examine the ecological role of microbes and utilize microbes to study genetic processes and develop microbial laboratory techniques while utilizing aseptic and basic lab safety procedures. One field trip is required. Typically, this course has three hours of lecture and three hours of laboratory per week. Prerequisite: Completion of BIOL 1010.

### **MICR 2240** (4 cr.) **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 college level biology or zoology.

## Music

### **MUSC 1000** (3 cr.) **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. Prerequisite: Completion of ENGL 0520 (or equivalent placement test score).

### **MUSC 1010** (3 cr.) **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 1022** (3 cr.) **Performance Sound Technology I**

Students learn how to utilize sound reinforcement equipment to amplify live performances. Students collaborate by helping each other find solutions for various set-up and amplification challenges. Class is open to LCCC students and people in the community. This is the first of two courses designed for students interested in sound amplification, recording, editing, and production.

### **MUSC 1030** (3 cr.) **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. Corequisite: Must be taken concurrently with MUSC 1035.

- MUSC 1035** (1 cr.)  
**Aural Theory I**  
First semester of a four-semester series. Students develop ear training and sight-singing skills. Students hear and write melodic, harmonic, and rhythmic measures from dictation and sight sing by solfege. Corequisite: Must be taken concurrently with MUSC 1030.
- MUSC 1040** (3 cr.)  
**Written Theory II**  
A continuation of MUSC 1030. Topics include principles of late 18th century harmonic progression, modulation, four-voice composition, classic period harmony, and forms. Prerequisites: Completion of MUSC 1030 and MUSC 1035. Corequisite: Must be taken concurrently with MUSC 1045.
- MUSC 1045** (1 cr.)  
**Aural Theory II**  
A continuation of MUSC 1035. Students develop ear training and sight-singing skills. Students hear and write more complicated diatonic and harmonic measures from dictation and sight sing disjunct and minor mode melodies. Prerequisites: Completion of MUSC 1030 and MUSC 1035. Corequisite: Must be taken concurrently with MUSC 1040.
- MUSC 1051** (1 cr.)  
**Applied Music: Vocal and Instrumental**  
Private lessons in voice, piano, guitar, woodwind, brass, percussion, and string instruments with an approved college instructor. The student pays an additional lesson fee. Prerequisite: Approval of instructor.
- MUSC 1052** (1 cr.)  
**Applied Music: Vocal and Instrumental**  
A continuation of MUSC 1051. Private lessons in voice, piano, guitar, woodwind, brass, percussion, and string instruments with an approved college instructor. The student pays an additional lesson fee. Prerequisites: Completion of MUSC 1051 and instructor approval.
- MUSC 1150** (1 cr.)  
**Guitar I**  
A course providing 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 twice for credit.
- MUSC 1290** (1 cr.)  
**Elementary Class Piano I**  
The first course of a four-semester sequence designed for the beginner. Students acquire and demonstrate skill in note reading, interpreting meter signatures and the corresponding rhythms found in that meter, harmonizing of melodies, sight reading, and improvisation. Students develop finger control, hand independence, and pedal technique. Prerequisite: instructor approval.
- MUSC 1295** (1 cr.)  
**Elementary Class Piano II**  
A continuation of MUSC 1290. Students further develop finger control and hand independence, hand-over-hand arpeggios, reading notes and rhythm patterns, sight reading, transposition, improvisation, harmonization, and repertoire. In addition, students acquire and demonstrate skills in harmonizing using I, IV, and V chords; harmonization using prescribed accompaniment patterns; prescribed chord progressions; and major scale, two octaves, hands together. Prerequisite: Completion of MUSC 1290 or successful completion of the final exam requirements for MUSC 1290, and instructor approval.
- MUSC 1380** (1 cr.)  
**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 8 credit hours. Prerequisites: Prior wind, brass, or percussion experience required.
- MUSC 1390** (1 cr.)  
**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 8 hours credit. Jazz training helpful. Prerequisites: Previous instrumental training on saxophone, trumpet, trombone, piano, bass, guitar, or percussion. New students must have instructor approval.
- MUSC 1400** (1 cr.)  
**Collegiate Chorale**  
A course involving singing 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 8 credit hours.
- MUSC 1408** (1 cr.)  
**Men's 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 8 hours credit.
- MUSC 1410** (1 cr.)  
**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 a maximum of 8 credit hours. Corequisite: Must be taken concurrently with MUSC 1400.
- MUSC 1450** (1 cr.)  
**Percussion Ensemble**  
A course that combines group instruction and performance on similar instruments in an ensemble setting. Students gain an appreciation of small instrumental chamber ensemble music through performing and listening. The musical literature focuses on original works for percussion instruments from various stylistic periods in music history. May be repeated for up to 8 credit hours. Prerequisite: Prior performance experience on a percussion instrument and instructor approval.
- MUSC 1460** (1 cr.)  
**Brass Ensemble**  
A course that combines group instruction and performance on similar instruments in an ensemble setting. Students gain an appreciation of small instrumental chamber ensemble music through performing and listening. The musical literature focuses on original works for brass instruments from various stylistic periods in music history. May be repeated for up to 8 credit hours. Prerequisite: Prior performance experience on a brass instrument and instructor approval.
- MUSC 1470** (1 cr.)  
**Woodwind Ensemble**  
A course that combines group instruction and performance on similar instruments in an ensemble setting. Students gain an appreciation of small instrumental chamber ensemble music through performing and listening. The musical literature focuses on original works for woodwind instruments from various stylistic periods in music history. May be repeated for up to 8 credit hours. Prerequisite: Prior performance experience on a woodwind instrument and instructor approval.

- MUSC 1480** (1 cr.)  
**String Ensemble**  
A course that combines group instruction and performance on similar instruments in an ensemble setting. Students gain an appreciation of small instrumental chamber ensemble music through performing and listening. The musical literature focuses on original works for string instruments from various stylistic periods in music history. May be repeated for up to 8 credit hours. Prerequisites: Prior performance experience on a string instrument.
- MUSC 2018** (3 cr.)  
**Music for Elementary Classroom Teachers**  
A course designed for prospective, pre-service, or certified elementary teachers, or for those classroom teachers seeking recertification. Students acquire knowledge about materials, instruction, and methods pertaining to the integration of music in the elementary classroom. Hands-on demonstration and class participation are emphasized.
- MUSC 2022** (3 cr.)  
**Performance Sound Technology II**  
Students learn how to record live sounds, edit those sounds with editing software, and produce compact disks. Students collaborate by helping each other find solutions for various recording and editing needs and challenges. Class is open to LCCC students and people in the community. This is the second of two courses designed for students interested in sound amplification, recording, editing, and production.
- MUSC 2030** (3 cr.)  
**Written Theory III**  
A continuation of MUSC 1040. Topics include 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. Prerequisite: Completion of MUSC 1040 and MUSC 1045. Corequisite: Must be taken concurrently with MUSC 2035.
- MUSC 2035** (1 cr.)  
**Aural Theory III**  
Students develop ear training and sight singing skills. Students hear and write from dictation multi-phrase melodies and simple melodies that module various beats and more complicated triads. Prerequisites: Completion of MUSC 1040 and MUSC 1045. Corequisite: Must be taken concurrently with MUSC 2030.
- MUSC 2040** (3 cr.)  
**Written Theory IV**  
A continuation of MUSC 2030. Topics include late 19th century impressionism, the music of the 20th century, such as modes, pan triadic technique, quartal harmony, 20th century rhythm, polychords, pandiatonicism, serial, and 12-tone technique. Prerequisites: Completion of MUSC 2030 and MUSC 2035. Corequisite: Must be taken concurrently with MUSC 2045.
- MUSC 2045** (1 cr.)  
**Aural Theory IV**  
Students work on ear training and develop sight-singing skills. Students hear and write from dictation melodies that modulate to six related keys and complex rhythms with simple and compound meters and sight sing melodies that modulate or with non-diatonic tones. Prerequisites: Completion of MUSC 2030 and MUSC 2035. Corequisite: Must be taken concurrently with MUSC 2040.
- MUSC 2050** (3 cr.)  
**Historical Survey I**  
First in a series of two courses on the history and literature of music from the Middle Ages to the present. Topics for the first semester include a review of the elements and materials of music, history, music literature, and culture of the Middle Ages, Renaissance, baroque era, and 18th century classicism. Prerequisites: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score) and ability to read music.
- MUSC 2055** (3 cr.)  
**Historical Survey II**  
Second in a series of two courses on the history and literature of music from the Middle Ages to the present. Topics for the second semester include a review of the elements and materials of music, history, music literature, and culture of the romantic era to the present. Prerequisites: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score) and ability to read music.
- MUSC 2060** (1 cr.)  
**Jazz Improvisation I**  
A course designed to provide 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 cr.)  
**Jazz Improvisation II**  
A continuation of MUSC 2060. A course designed to provide 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: Successful completion of MUSC 2060.
- MUSC 2071** (1 cr.)  
**Applied Music: Vocal and Instrumental**  
A continuation of MUSC 1052. Private lessons in voice, piano, guitar, woodwind, brass, percussion, and string instruments with an approved college instructor. The student pays an additional lesson fee. Prerequisite: Completion of MUSC 1052 and approval of instructor.
- MUSC 2072** (1 cr.)  
**Applied Music: Vocal and Instrumental**  
A continuation of MUSC 2071. Private lessons in voice, piano, guitar, woodwind, brass, percussion, and string instruments with an approved college instructor. The student pays an additional lesson fee. Prerequisites: Completion of MUSC 2071 and approval of instructor.
- MUSC 2150** (1 cr.)  
**Guitar II**  
A continuation of MUSC 1150. 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 twice for credit. Prerequisite: Completion of MUSC 1150.
- MUSC 2290** (1 cr.)  
**Elementary Class Piano III**  
Continuation of MUSC 1295. Students further develop skill in hand independence, reading notes and rhythm patterns, sight reading, transposition, improvisation, prescribed chord progressions repertoire, and major scales. In addition, students acquire and demonstrate knowledge of and skill in all 12 major scales; harmonization using the ii, iii, and vi chords; white-key tonic minor scales, two octaves, hands together, and sight-reading hymns. Prerequisites: Completion of MUSC 1295 or successful completion of the final exam requirements for MUSC 1295, and instructor approval.

**MUSC 2295** (1 cr.)  
**Elementary Class Piano IV**  
 Continuation of MUSC 2290. Students further develop skill in hand independence, reading notes and rhythm patterns, sight reading, repertoire and hymns, transposition, improvisation, repertoire, harmonization using all chords available, securely playing all 12 major scales, and white-key tonic minor scales, two octaves, hands together. In addition, students acquire knowledge of and skill in all 12 minor scales; harmonization using secondary dominants; learning two patriotic songs; and learning the accompaniment to a vocal or instrumental composition. Prerequisites: Completion of MUSC 2290 or successful completion of the final exam requirements for MUSC 2290, and instructor approval.

## Nursing Studies

**NRST 1610** (6 cr.)  
**Nursing I**  
 Students acquire introductory knowledge and principles basic to all nursing courses and practice. Students apply the nursing process to the study of the biopsychosocial spiritual individual by addressing oxygenation-circulation, nutrition-metabolic, sensory-security, and self-concept needs. Students also begin to apply theory as related to nursing's core components: professional behaviors, communication, assessment, clinical decision making, caring interventions, teaching and learning, collaboration and managing care. Prerequisites: Concurrent enrollment in NRST 1710 is required. Admission to the Nursing Program.

**NRST 1620** (6 cr.)  
**Nursing II**  
 Students enhance their knowledge of the following nursing core components: professional behaviors, communication, assessment, clinical decision making, caring interventions, teaching and learning, collaboration, and managing care and interventions. Students apply the nursing process to the care of the individual with alterations in basic human needs throughout the lifespan. Concurrent enrollment in NRST 1720 is required. Prerequisite: Completion of NRST 1610 and NRST 1710.

**NRST 1710** (3 cr.)  
**Clinical Experience I**  
 Students demonstrate competency in nursing interventions utilized in patient care in both clinical and laboratory settings. Students apply theory to the care of the individual through the beginning use of the nursing process, written care plans and by addressing basic human needs and core components: professional behaviors, communication, assessment, clinical decision making, caring interventions, teaching and learning, collaboration, and managing care. Concurrent enrollment in NRST 1610 is required. Prerequisite: Admission to the Nursing Program.

**NRST 1720** (5 cr.)  
**Clinical Experience II**  
 Students refine skills acquired in previous courses regarding the care of the individual throughout the lifespan with common recurring alterations in basic human needs. Utilizing the nursing process, students apply the following nursing core components: professional behaviors, communication, assessment, clinical decision making, caring interventions, teaching and learning, collaboration, and managing care in providing nursing care. Concurrent enrollment in NRST 1620 is required. Prerequisites: Completion of NRST 1610 and NRST 1710.

**NRST 1980** (2 cr.)  
**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 NRST 1620 and NRST 1720.

**NRST 2630** (6 cr.)  
**Nursing III**  
 Students build on previously acquired nursing knowledge and skills in applying the nursing process to the care of the individual throughout the lifespan with more complex alterations in basic human needs. Students integrate nursing core components: professional behaviors, communication, assessment, clinical decision making, caring interventions, teaching and learning, collaboration, and managing care into the role of the associate degree nurse. Concurrent enrollment in NRST 2730 is required. Prerequisite: NRST 1620 and NRST 1720 or competency in first-level program courses.

**NRST 2640** (6 cr.)  
**Nursing IV**  
 Students integrate knowledge gained from all nursing program courses as the basis for applying advanced nursing theory to the care of the patient and family throughout the lifespan with complex alterations in basic human needs. Students integrate the following nursing core components: professional behaviors, communication, assessment, clinical decision making, caring interventions, teaching and learning, collaboration, and managing care into the role of the associate degree nurse providing health care. Concurrent enrollment in NRST 2740 is required. Prerequisites: Completion of NRST 2630 and NRST 2730.

**NRST 2730** (5 cr.)  
**Clinical Experience III**  
 Students demonstrate competency in advanced nursing interventions utilized in providing health care. Students also synthesize knowledge gained from prior and concurrent program courses in applying the nursing process and by demonstrating the following nursing core components: professional behaviors, communication, clinical decision making, caring interventions, teaching and learning, collaboration, and managing care for the individual throughout the lifespan with more complex alterations in basic human needs. Concurrent enrollment in NRST 2630 is required. Prerequisite: Competency in first-level program courses.

**NRST 2740** (5 cr.)  
**Clinical Experience IV**  
 Students demonstrate critical thinking in evidence-based practice when managing and providing nursing care to small groups of patients and families throughout the lifespan with more complex alterations in basic human needs. Students incorporate the following nursing core components: professional behaviors, communication, assessment, clinical decision making, caring interventions, teaching and learning, collaboration, and managing care in beginning the transition from student role to the associate degree nurse. Concurrent enrollment in NRST 2640 is required. Prerequisites: Completion of NRST 2630 and NRST 2730.

## Paralegal

### **LEGL 1500 (3 cr.)**

#### **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. Prerequisites: Completion of DVST 0520 or ENGL 0520, DVST 0900 or MATH 0900, and ENGL 0700 or ENGL 1001 (or equivalent placement test scores).

### **LEGL 1710 (3 cr.)**

#### **Legal Research and Writing I**

A study of 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. Prerequisites: Completion of LEGL 1500 or enrollment in LEGL 1500 and permission of the program advisor.

### **LEGL 1720 (3 cr.)**

#### **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 cr.)**

#### **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 cr.)**

#### **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 cr.)**

#### **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 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 cr.)**

#### **Probate Practices and Procedures**

Students become familiar with 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 also become aware of the various forms, procedures, and tax consequences involved in probating an estate. Prerequisite: Completion of LEGL 1500 or permission of instructor.

### **LEGL 2570 (3 cr.)**

#### **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 cr.)**

#### **Family Law**

Students develop an awareness of the legal assistant'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 LEGL 1500 or permission of instructor.

### **LEGL 2620 (3 cr.)**

#### **Court Procedures and the Legal System**

A study of court procedures and substantive law through the examination of court cases and direct observation of court room activities at the county, municipal, state, and federal levels. Students gain an understanding of court procedures and learn about the locations, purposes, operations, and staffing of various courts located in Laramie County. Students also learn about substantive law through readings and by observing what is necessary to prove a case in court. Prerequisites: Completion of LEGL 1500, 1710, 1720, or permission of instructor, and completion of 15 credit hours of LEGL coursework.

### **LEGL 2630 (3 cr.)**

#### **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 cr.)**

#### **Criminal Law and Procedure**

The student acquires knowledge of statutory and common law crimes, including an understanding of criminal law theory and of the construction and interpretation of criminal law statutes. Students also 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 cr.)**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 cr.)**Administrative Law**

A course in which students develop an understanding of the principles of administrative law, administrative remedies, and administrative hearing procedures in various state and federal governmental agencies. Areas studied will include social security, EEOC, workers' compensation, as well as others. The course focuses on several practical problems in areas where legal assistants frequently are employed. Prerequisite: Completion of LEGL 1500 or permission of instructor.

**LEGL 2830** (3 cr.)**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, COSC 1200 or equivalent or permission of instructor.

**LEGL 2990** (3-5 cr.)**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 cr.)**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 DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent test scores).

**PHIL 2221** (3 cr.)**Logic**

An exploration of the critical thinking and reasoning skills to be developed and practiced in any field. Students acquire knowledge of induction, deduction, and informal fallacies as they occur in everyday rhetoric. Prerequisites: Completion of DVST 0520 or ENGL 0520, DVST 0900 or MATH 0900, and ENGL 0700 or ENGL 1001 (or equivalent placement test scores).

**PHIL 2301** (3 cr.)**Ethics**

An examination of major ethical theories and contemporary moral issues. Students gain an understanding of the importance of critical reasoning in analyzing moral problems and forming ethical judgments. Prerequisites: Completion of DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement test scores).

**PHIL 2311** (3 cr.)**Philosophy of Religion**

An exploration of the basic components of religion. Students survey the major religions of the world, including Judaism, Christianity, Islam, Hinduism, Buddhism, Taoism, Confucianism, and Shinto, and gain an understanding of the theoretical, practical, and sociological aspects of each.

**PHIL 2490** (3 cr.)**Topics:**

A course presenting a variety of significant topics in philosophy. May be repeated for up to 9 hours credit. Prerequisites: Completion of DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement test scores).

**Physical and Health Education – Health Education****HLED 1006** (3 cr.)**Personal Health**

Students become knowledgeable about a variety of personal health issues from the importance of physical activity and exercise to stress management. Students will be able to better care for their bodies, change and modify health behaviors, and learn how to improve their current state of overall health and well being. Prerequisites: Completion of DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement test scores).

**HLED 1221** (2 cr.)**Standard First Aid and Safety**

The student develops skills and gains knowledge of the various techniques for prevention, examination, and treatment of injuries for victims in emergency situations before medical assistance is available. Current first aid material is presented along with CPR. (theory)

**HLED 2006** (1 cr.)**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 language arts curriculum. Finally, students discuss current health-related issues facing the elementary-age student, families, and the elementary classroom teacher. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**Physical and Health Education – PE Activities****PEAC 1000** (1 cr.)**PE Activity:**

A course designed to provide instruction in special and/or unique outdoor sport or exercise activities in a "short" course format. The purpose is to give students an opportunity to experience intense one- to four-week training in an outdoor/wilderness environment or other physical activity. Tentative classes planned would range from swimnastics, white water rafting, camping adventures, mountaineering, outdoor survival, and orienteering to rollerblading. (activity)

<p><b>PEAC 1006</b> (1 cr.) <b>Weight Free Workout</b> Students learn and practice weight-free exercises which increase the student's muscular strength, muscular endurance, flexibility, and cardiorespiratory endurance levels. (activity)</p>	<p><b>PEAC 1030</b> (1 cr.) <b>Dance Aerobics</b> Students acquire knowledge of aerobic dance principles and dance choreography as related to rhythm and aerobic fitness. (activity)</p>	<p><b>PEAC 1250</b> (1 cr.) <b>Archery</b> Students demonstrate knowledge of rules, regulations, terminology, and play strategies. They also practice and demonstrate appropriate motor skills to allow them to successfully use this information as a lifetime leisure activity. The physical education department will provide equipment. (activity)</p>
<p><b>PEAC 1007</b> (1 cr.) <b>Fitness Challenge</b> 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.</p>	<p><b>PEAC 1031</b> (1 cr.) <b>Western and Social Dance</b> Students become knowledgeable about elementary principles and techniques in western and social dance and develop the ability to perform basic movement patterns and analyzing music to successfully participate in western and social dance as a lifetime leisure activity. (activity)</p>	<p><b>PEAC 1254</b> (1 cr.) <b>Beginning Fencing</b> Students acquire knowledge of the rules, terminology, and skills for the sport of fencing, particularly the foil. By completing the course, the student develops the fundamental skills to continue with fencing as a lifetime activity or continue as a competitive sport. (activity)</p>
<p><b>PEAC 1011</b> (1 cr.) <b>Aquatic Conditioning</b> 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. (activity)</p>	<p><b>PEAC 1037</b> (1 cr.) <b>Fitness Walking</b> 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. (activity)</p>	<p><b>PEAC 1255</b> (1 cr.) <b>Beginning Golf</b> 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. (activity)</p>
<p><b>PEAC 1012</b> (1 cr.) <b>Beginning Swimming</b> Students acquire knowledge of basic swimming components—water safety, breathing, kicking—and basic strokes of freestyle, backstroke, and breaststroke. (activity)</p>	<p><b>PEAC 1044</b> (1 cr.) <b>Beginning Tae Kwon Do</b> Students examine the Korean martial art of Tae Kwon Do. Students develop self-discipline, self-confidence, weight control strategies, respect, and courtesy while they gain skills in the art of self-defense. Students demonstrate skills of blocking, punching, kicking, one-step sparring, free sparring, and self-defense stances. (activity)</p>	<p><b>PEAC 1257</b> (1 cr.) <b>Beginning Racquetball</b> Students acquire knowledge of rules, regulations, terminology, and play strategies. They also practice and develop appropriate motor skills to allow them to successfully participate and use this information as a lifetime leisure activity. (activity)</p>
<p><b>PEAC 1013</b> (1 cr.) <b>Functional Fitness</b> 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. (activity)</p>	<p><b>PEAC 1046</b> (1 cr.) <b>Introduction to Pilates</b> 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. (activity)</p>	<p><b>PEAC 1260</b> (1 cr.) <b>Beginning Volleyball</b> Students acquire knowledge of rules, regulations, terminology, and play strategies. They also practice and develop appropriate motor skills to allow them to successfully participate and use this information as a lifetime leisure activity. (activity)</p>
<p><b>PEAC 1016</b> (1 cr.) <b>Swimnastics</b> 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. (activity)</p>	<p><b>PEAC 1047</b> (1 cr.) <b>Introduction to Spinning</b> 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. (activity)</p>	<p><b>PEAC 1263</b> (1 cr.) <b>Beginning Basketball</b> Students acquire knowledge of rules, regulations, terminology, and play strategies. They also practice and develop appropriate motor skills to allow them to successfully participate and use this information as a lifetime leisure activity. (activity)</p>
<p><b>PEAC 1026</b> (1 cr.) <b>Zumba Fitness</b> Students learn the basic steps involved in 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. (activity)</p>	<p><b>PEAC 1050</b> (1 cr.) <b>Beginning Tennis</b> 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. (activity)</p>	<p><b>PEAC 1273</b> (1 cr.) <b>Heavy Resistance Conditioning</b> Resistance conditioning is an introductory course based on proper lifting techniques for the strength and conditioning of the major muscle groups. Successful students demonstrate proper lifting techniques, plan individual nutritional programs, and construct training programs. (activity)</p>



**PEAC 1287** (1 cr.)  
**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 Vedauwoo Natural Historic Site. (activity)

**PEAC 1290** (1 cr.)  
**Therapeutic Relaxation**

A course in which students gain an understanding of the basic principles and techniques of massage, stress reduction, lifestyle relaxation, breathing techniques, and stress management. (activity)

**PEAC 1294** (1 cr.)  
**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. (activity)

**PEAC 1295** (1 cr.)  
**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. (activity)

**PEAC 1298** (1 cr.)  
**Snowshoeing**

Students explore the technical and mechanical aspects of snowshoeing. Students also examine safety considerations associated with snowshoeing. Topics include equipment used, clothing, orienteering, and survival skills. (activity)

**PEAC 1301** (1 cr.)  
**Introduction to Ballroom Dance**

Students become knowledgeable in basic techniques of ballroom dance patterns and analyzing music to successfully participate in ballroom dance as a lifetime leisure activity. (activity)

**PEAC 1560** (1 cr.)  
**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. (activity)

**PEAC 2011** (1 cr.)  
**Intermediate Swimming**

Students acquire skills in four swim strokes—front crawl, back crawl, breaststroke, and butterfly. Additional emphasis is placed on increasing cardiovascular fitness along with skill development in treading water, swimming underwater, turns, and dives. Prerequisite: Completion of PEAC 1012 or consent of instructor. (activity)

**PEAC 2050** (1 cr.)  
**Intermediate Tennis**

Students enhance their knowledge of and demonstrate advanced tennis skill techniques. They further develop tennis skill fundamentals and prepare for basic team and individual play strategies. Prerequisite: Completion of PEAC 1050 or consent of instructor. (activity)

**PEAC 2086** (1 cr.)  
**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. (activity)

**PEAC 2087** (1 cr.)  
**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. (activity)

**PEAC 2098** (1 cr.)  
**Intermediate Snowshoeing**

Students improve their understanding of the technical and mechanical aspects of snowshoeing, as well as safety considerations associated with the sport. In addition, they develop skills to guide novice snowshoers.

## Physical and Health Education – Professional PE

**PEPR 1004** (3 cr.)  
**Foundations of Physical and Health Education**

This course is designed for prospective school-based K-12 physical education teachers. Students become knowledgeable about five primary areas: history and philosophy of education and schooling in America; the effect of life experiences on preservice teachers; American social and cultural trends on the practice of physical education; academic credibility in physical education; and innovation and change in physical education. These content areas provide students with contemporary vision/philosophy of the field of physical education teacher education. (theory) Prerequisites: Completion of DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement test scores).

**PEPR 2050** (2 cr.)  
**Care and Prevention of Athletic Injuries**

Students develop the skills necessary to implement a risk management and preventive program as well as the ability to recognize and provide emergency care, triage, and management of emergencies and life-threatening conditions for the physically active. Prerequisites: Completion of DVST 0520 or ENGL 0520 and DVST 0630 or ENGL 0630 (or equivalent placement test scores).

**PEPR 2100** (3 cr.)  
**Theory of Coaching**

A course for the prospective teacher of physical education presenting an introduction to methodology, theories, and philosophies of the coaching profession. Prerequisites: Completion of DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement test scores). (theory)

# Physical Therapist Assistant

## **PTAT 1600 (3 cr.)** **Introduction to Physical Therapy**

Students examine the history and progress of the profession of physical therapy. Students discuss professional ethics, malpractice, and licensure laws related to physical therapy and the specific topics related to the physical therapist assistant (PTA). Students also develop professional oral and written communication skills, discuss current issues in physical therapy, utilize basic physical therapy terminology, practice collaboration with other health care professionals, and participate in reviewing the basic format of the professional literature. Prerequisite: Admission to the Physical Therapist Assistant program. Corequisite: PTAT 1650.

## **PTAT 1650 (4 cr.)** **Therapeutic Procedures I**

Students explore and develop skills involving the principles and practices of physical therapy including performing range of motion assessment and measurements, assessing posture, monitoring vital signs, implementing universal precautions, performing and assessing body mechanics during a variety of activities, performing transfers for a variety of patient populations, assessing wheelchair fitting, utilizing assistive devices, developing edema management programs, assessing and applying compression wraps, and demonstrating a variety of taping procedures. Prerequisite: Admission to the Physical Therapist Assistant program. Corequisite: PTAT 1600.

## **PTAT 1660 (3 cr.)** **Therapeutic Procedures II**

Students examine the principles and practices of physical therapy including assessment and measurement of pain and inflammation, applying a variety of massage techniques, and analyzing and applying principles of gait training. The students also assess and apply a variety of modalities including: thermal agents, continuous passive motion, ultrasound, infrared, electrical stimulation, diathermy, mechanical and manual traction, iontophoresis, and phonophoresis. Prerequisites: Completion of PTAT 1600 and PTAT 1650. Corequisite: PTAT 1970.

## **PTAT 1720 (4 cr.)** **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 and implementation in the clinical setting. Prerequisites: Completion of PTAT 1660 and PTAT 1970. Corequisites: PTAT 1740 and PTAT 2970.

## **PTAT 1740 (1 cr.)** **Cardiac Rehabilitation**

Students explore an in-depth description of cardiopulmonary rehabilitation and develop skills to read and assess basic EKG's (normal and pathological), identify cardiac protocols, assess and monitor common cardiopulmonary conditions, review cardiac and pulmonary circuitry, identify cardiac precautions for a variety of patient populations, and perform postural drainage, and establish endurance and wellness programs for healthy and diseased individuals. Prerequisites: Completion of PTAT 2030.

## **PTAT 1800 (3 cr.)** **Neurology**

Students examine multiple pathologies of the nervous system including stroke, demyelinating diseases, spinal cord injury, Parkinson's Disease, 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 also 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. Corequisites: PTAT 1820, PTAT 1840, and PTAT 2971.

## **PTAT 1820 (4 cr.)** **Orthopedics**

Students examine common orthopedic conditions and their medical management. They identify the common orthopedic conditions, identify components of an orthopedic physical therapy evaluation, analyze the information obtained from the evaluation, and organize treatment interventions. Students participate in case studies dealing with orthopedic patients including those with prosthesis-related diagnoses. Students also learn to progress a physical therapy program for a variety of orthopedic and post-surgical conditions. Prerequisite: Completion of PTAT 2970. Corequisites: PTAT 1800, PTAT 1840, and PTAT 2971.

## **PTAT 1840 (1 cr.)** **Specialty Rehabilitation**

Students explore an in-depth overview of vestibular rehabilitation including identification of a patient with a vestibular disorder, assessment tools utilized in a vestibular evaluation, and intervention strategies to assist patients in overcoming vestibular disorders. Students also explore an in-depth overview of pediatric rehabilitation including identifying common pediatric conditions such as cerebral palsy, Down's syndrome, prematurity, and drug-addicted children. Students assess physical deficits in pediatric disorders and develop treatment programs to address the specific disorders. Prerequisite: Completion of PTAT 2970. Corequisites: PTAT 1800, PTAT 1820, and PTAT 2971.

## **PTAT 1970 (4 cr.)** **PTA Internship I**

Students explore a variety of practice opportunities in the clinical setting, gaining exposure to the working environment under the supervision of a physical therapist. Students perform all documentation for patient care as used in the particular clinical setting. They perform all modalities as directed by the physical therapist. Finally, students carry a case load of 25-35% of a clinician by the tenth week of the internship with distant (line of sight) supervision by the physical therapist. Prerequisites: Completion of PTAT 1600 and PTAT 1650. Corequisite: PTAT 1660. (S/U grade only)

**PTAT 2030** (4 cr.)  
**Functional Kinesiology for the Physical Therapist Assistant**  
Students explore the application of anatomy to the study of human motion as it relates to the field of physical therapy. Students identify positioning and perform procedures for muscle testing, biomechanics, gait, posture, arthrokinematics, and goniometry of the lower extremities and describe the physiology of muscle contraction. Prerequisite: Admission to the Physical Therapist Assist program. Prior completion of or concurrent enrollment in ZOO 2025.

**PTAT 2970** (5 cr.)  
**PTA Internship II**  
Students explore a variety of practice opportunities in the clinical setting, gaining additional exposure to the working environment under the supervision of a physical therapist. Students perform all documentation for patient care as used in the particular clinical setting and also perform all modalities as directed by the physical therapist. In addition, students develop exercise programs based on the physical therapist's findings and assessment. Finally, students carry a case load of 50-75% of a physical therapist assistant by the fifth week of the internship with distant (line of sight) supervision by the physical therapist. Prerequisite: Completion of PTAT 1970. Corequisites: PTAT 1720, and PTAT 1740. (S/U grade only)

**PTAT 2971** (5 cr.)  
**PTA Internship III**  
Students explore a variety of practice opportunities in the clinical setting, gaining additional exposure to the working environment under the supervision of a physical therapist. Students document all patient care as used in the particular clinical setting and also perform all modalities as directed by the physical therapist. In addition, students develop exercise programs based on the physical therapist's findings and assessment. In this final internship, students carry a case load of 75-100% of a physical therapist assistant with distant (line of sight) supervision by the physical therapist and practice with little direction from the supervising physical therapist. Students should be given a case load and treat the patients according to clinical practice as documented by the physical therapist. Prerequisite: Completion of PTAT 2970. Corequisites: PTAT 1800, PTAT 1820, and PTAT 1840. (S/U grade only)

## Physics

**PHYS 1050** (4 cr.)  
**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. Prerequisites: Completion of MATH 0930 (or placed at MATH LEVEL II (or higher)); completion of ENGL 0520 (or placed at a READING LEVEL III (or higher); ENGL 0630 (or placed at a WRITING LEVEL II (or higher)).

**PHYS 1080** (4 cr.)  
**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. Prerequisites: Completion of DVST 0520 or ENGL 0520 and MATH 1000 or higher (or equivalent placement test scores). (Cross-listed as ENTK 1080.)

**PHYS 1090** (4 cr.)  
**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 0930 (or equivalent placement test scores).

**PHYS 1110** (4 cr.)  
**General Physics I**  
This is the first of a two-semester sequence in algebra-based physics with a laboratory component. Students apply knowledge and problem solving skills in classical mechanics, gravitation and thermodynamics. This course is intended primarily for pre-professional health science (premedical, pre dental, preoptometry, prephysical therapy, etc.) and biology students. Typically offered in fall semester only. 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 cr.)  
**General Physics II**  
This is the second course of a two-semester sequence in algebra-based physics with a laboratory component. Students apply knowledge and problem solving skills in wave mechanics, electricity and magnetism, optics, and modern physics. This course is intended primarily for pre-professional health science (premedical, pre dental, preoptometry, prephysical therapy, etc.) and biology students. Typically offered in spring semester only. Students receiving credit for PHYS 1120 cannot receive credit for PHYS 1150 or PHYS 1320. Prerequisite: Completion of PHYS 1110 or consent of instructor.

**PHYS 1310** (4 cr.)  
**College Physics I**  
This is the first course of a two-semester sequence in calculus-based physics with a laboratory component. Students apply knowledge and problem solving skills in classical mechanics, gravitation and mechanical waves. This course is intended primarily for engineering, physical science, computer science, and mathematics students. Typically offered fall semester only. Students receiving credit for PHYS 1310 cannot receive credit for PHYS 1050 or PHYS 1110. Prerequisites: Completion of MATH 2200 and concurrent enrollment in MATH 2205 (or equivalent placement test scores).

**PHYS 1320** (4 cr.)  
**College Physics II**  
This is the second course of a two-semester sequence in calculus-based physics with a laboratory component. Students apply knowledge and problem solving skills in electricity, magnetism, and thermodynamics. This course is intended primarily for engineering, physical science, computer science, and mathematics students. Typically offered in spring semester only. Students receiving credit for PHYS 1320 cannot receive credit for PHYS 1050 or PHYS 1120. Prerequisite: Completion of PHYS 1310, MATH 2205 and concurrent enrollment in MATH 2210 (or equivalent placement test scores) or instructor consent.

## Political Science

### **POLS 1000 (3 cr.) 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 0700 or ENGL 1001 or placement into ENGL 1010 or concurrently enrolled in ENGL 1010.

### **POLS 1005 (1 cr.) Computer Applications in Political Science**

An introduction to American government using computers. Students become knowledgeable about data analysis in such areas of political research as public opinion and voting behavior. Students map electoral and popular votes for U.S. presidents as far back as 1860, investigate the voting patterns and campaign financing of members of Congress, and discover the role of party affiliation in Congress. A variety of political issues are also investigated. This course is designed to assist students currently, or previously, enrolled in POLS 1000 in applying political concepts. Prior knowledge of computers is not necessary.

### **POLS 1100 (1 cr.) Wyoming Government**

An introductory course focusing on the Constitution and government processes. Students demonstrate knowledge of the major principles of the Wyoming Constitution. 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 requirement. Online only. Prerequisites: Completion of ENGL 0700 or ENGL 1001 or placement into ENGL 1010 or concurrently enrolled in ENGL 1010.

### **POLS 1200 (3 cr.) Non-Western Political Cultures**

Students learn about, and gain an appreciation of, selected non-Western political cultures by acquiring an understanding of the distinctive political institutions and practices created by these cultures. The course consists of using non-Western nations from Asia and Africa as case studies. Because many political science instructors require research papers, ENGL 1010 or its equivalent is strongly recommended. Prerequisite: Completion of POLS 1000 or consent of instructor.

### **POLS 2000 (3 cr.) Current Issues in American Government**

Students investigate a variety of current political topics and issues. Students are encouraged to explore key public policy problems, the policy-making process, and the final public policy choice. Students are expected to keep abreast of political events in America and to apply basic concepts in American government to current affairs. A variety of American political ideologies are investigated. Because many political science instructors require research papers, ENGL 1010 or its equivalent is strongly recommended. Prerequisite: Completion of POLS 1000 or consent of instructor.

### **POLS 2070 (3 cr.) 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 2075 (1 cr.) Wyoming Legislative Process**

Students are expected to gain knowledge about and an understanding of the political and procedural processes employed by Wyoming's legislature. Utilizing role-playing methods, students learn legislative procedures, leadership functions, and lobbying techniques.

### **POLS 2128 (3 cr.) 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: The prerequisite for POLS 2128 is successful completion of POLS 1000 or consent of the instructor. Because there is a substantial writing component, completion of ENGL 1010 is also highly recommended.

### **POLS 2310 (3 cr.) 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 consent of instructor.

### **POLS 2330 (3 cr.) Environmental Ethics**

Students focus on environmental issues that occur locally, nationally, and globally, and on the various ethical, philosophical, and intellectual traditions that influence environmental policy-making. Because this course has a substantial written component, ENGL 1010 is strongly recommended. Prerequisite: Completion of POLS 1000.

### **POLS 2410 (3 cr.) 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 2460** (3 cr.)  
**Introduction to Political Philosophy**  
A history of Western political thought from Plato to the present. Students learn to critically examine such topics as freedom and authority, popular sovereignty, justice, and the nature and functions of government. Because many political science instructors require research papers, ENGL 1010 or its equivalent is strongly recommended. Prerequisite: Completion of POLS 1000 or consent of instructor.

**POLS 2470** (1-4 cr.)  
**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.

## Portuguese

**PORT 1010** (4 cr.)  
**First Year Portuguese I**  
In this introductory course, students incorporate basic grammatical structures into the context of conversation, composition, and reading in order to communicate about themselves. Students also gain an understanding of the Portuguese-speaking culture.

**PORT 1020** (4 cr.)  
**First Year Portuguese II**  
In this continuation of beginning Portuguese, students increase their grammatical, conversational, compositional, and reading skills in order to communicate in real-life situations in the Portuguese-speaking world. Prerequisite: Completion of PORT 1010 or equivalent.

## Process Technology

**PTEC 1500** (2 cr.)  
**Introduction to Process Technology**  
Students explore the field of Process Operations at an introductory level and examine the roles and responsibilities of Process Technicians. Students discover the work environment, the equipment and systems operated, and practice fundamental workforce success skills. Instructor consent required.

**PTEC 1510** (4 cr.)  
**Safety, Health and the Environment**  
Students explore the history of industrial accidents and other impactful incidences. Students complete content required to receive an OSHA 10 certification and receive training in H2S, Confined Space and Lock Out Tag Out. Students also examine safety, health, and environmental issues and analyze the skills needed for communication of good safety habits and safe work practices. Instructor consent required.

**PTEC 1550** (1 cr.)  
**Foundations of Quality**  
Students define quality improvement and trace the re-emergence of quality in the United States. Students examine several philosophies of quality including Deming's, Juran's, Crosby's, and other models that positively affect workplace effectiveness. Students explain the purpose, benefits, policies, and procedures that must be in place to receive ISO 9000 certification. Prerequisite: PTEC 1500. Instructor consent required.

**PTEC 1600** (4 cr.)  
**Process Technology I: Equipment**  
Students explore Process Industry equipment and its related functionality. Students examine and analyze the equipment's purpose, components, operation, and the Process Technician's role in operating and troubleshooting various types of equipment. Prerequisite: PTEC 1500. Instructor consent required.

**PTEC 1605** (4 cr.)  
**Process Technology II: Systems**  
Students examine various water and gas systems, material storage and blending, refrigeration systems, steam and distribution systems, reaction systems, separation systems, extraction, distillation, dehydration, filtration, and control systems. Prerequisite: PTEC 1500. Instructor consent required.

## Psychology

**PSYC 1000** (3 cr.)  
**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 1004** (3 cr.)  
**Theories and Psychology of Terrorism**  
Students review modern sociological, psychological, and criminological theories that show relevance to terrorism of the 21st century. Beginning with the theories of political violence, students provide an objective overview of theories, concepts, causal factors, and models. Students review various theoretical explanations of terrorism and terrorist acts, including a number of subcultural and personality factors, and explore the implications of these theories for the professions of homeland security and psychology. Prerequisites: Completion of PSYC 1000 and ENGL 1010.

**PSYC 1100** (3 cr.)  
**Organizational Human Relations**  
An introduction to the practice of using systematic knowledge from psychology to understand individual human behavior within organizations. Topics such as motivation, leadership, power, quality of work life, and communication offer insight into the accomplishment of organizational and personal goals. Prerequisites: Completion of DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement test scores).

**PSYC 2000** (4 cr.)  
**Research Psychological Methods**  
This course introduces students to fundamental scientific methods in psychology. Students acquire a variety of research strategies ranging from observational to experimental. This includes 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 APA format. Prerequisites: Instructor approval, and completion of PSYC 1000, and STAT 2070. May be concurrently enrolled in STAT 2070.

**PSYC 2050** (3 cr.)  
**Introductory Counseling/  
Clinical Theories**  
Students review the development of psychotherapy, study psychological concepts basic to the therapeutic process, and gain an understanding of the major models and principles of psychotherapy. Prerequisites: Completion of PSYC 1000 and ENGL 1010.

**PSYC 2080 (3 cr.)****Psychobiology**

This course is designed as a general introduction to the biological bases of behavior. Emphasized are the structural and functional properties of the human nervous system, although comparisons to other animals will be made. Healthy and impaired brain functions will be covered in detail as they relate 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 and PSYC 1000.

**PSYC 2090 (3 cr.)****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. Prerequisites: Completion of PSYC 1000 and ENGL 1010.

**PSYC 2210 (3 cr.)****Drugs and Behavior**

Students learn how drugs affect behavior, including both psychotherapeutic agents and drugs with abuse potential. Included will be a brief introduction to the chemistry of the brain and how drugs may have their effects, as well as behavioral, social, historical, and medical aspects of each major class of psychoactive drugs. Prerequisites: Completion of PSYC 1000 and ENGL 1010 or consent of the instructor.

**PSYC 2300 (3 cr.)****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. Prerequisites: Completion of PSYC 1000 and ENGL 1010 or consent of the instructor.

**PSYC 2310 (2 cr.)****Exceptional Children**

Students gain knowledge of behaviors, mental processes, and development patterns of atypical children—the physically handicapped, the gifted, the mentally retarded. The study of children with neurological and psychological disturbances will be included. Prerequisites: Completion of PSYC 1000, PSYC 2300/EDFD 2460, ENGL 1010 or consent of the instructor.

**PSYC 2330 (3 cr.)****Psychology of Adjustment**

A study of common problems of adjustment with emphasis on understanding the psychological principles and social factors that bear on mental health. Prerequisites: Completion of PSYC 1000 and ENGL 1010 or consent of the instructor.

**PSYC 2340 (3 cr.)****Abnormal Psychology**

This course provides a general overview of abnormal behavior, emphasizing types, etiology and treatment methods. At the completion of this course, the students demonstrate an understanding of and describe and discuss facts, principles, and concepts that are basic to a scientific understanding of mental disorders. Students also 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: Six hours in psychology, including completion of PSYC 1000 and ENGL 1010.

**PSYC 2380 (3 cr.)****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). Prerequisites: Completion of PSYC 1000 and ENGL 1010 or consent of the instructor.

**PSYC 2395 (1 cr.)****Sophomore Seminar**

A course for psychology majors who are in or near their final semester and have taken at least nine semester hours of psychology. Students reflect upon major competencies developed over their course of study at LCCC and create a portfolio reflective of their studies. Students present their work to an audience of their peers and instructors. Prerequisites: Completion of ENGL 1010, completion of nine semester hours of psychology or instructor permission.

**PSYC 2400 (3 cr.)****Contemporary Social Issues**

In a seminar format, students gain new perspectives on contemporary issues important to the field of psychology. The emphasis is on individual investigations and class discussions. Prerequisite: Completion of PSYC 1000 or equivalent.

**Radiology Technology****RDTK 1503 (4 cr.)****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 program, reading placement test score at Level III, demonstrated competency to enter ENGL 1010, and MATH 1000 or MATH 1400 (or equivalent placement test scores).

**RDTK 1520 (1 cr.)****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 cr.)****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, mammography, portables, trauma, and pediatric radiography. The student also demonstrates competency in the anatomy, positioning, and radiographic demonstration of the gastrointestinal (alimentary canal) system, the genitourinary system, the biliary system, and the male/female reproductive 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 cr.)**  
**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. Prerequisite: Completion of RDTK 1503.

**RDTK 1590 (4 cr.)**  
**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 cr.)**  
**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. Concurrent enrollment in RDTK 1583, RDTK 1584, and RDTK 1611 is required.

**RDTK 1611 (1 cr.)**  
**Radiographic Imaging Lab I**

A course to be taken concurrently with RDTK 1610. Through laboratory experiences, students actively demonstrate and experiment with the effects of various technical factors, accessories, and receptor systems on radiographic image qualities. Students learn how to 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.

**RDTK 1620 (3 cr.)**  
**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: Acceptance into the radiography program.

**RDTK 1683 (3 cr.)**  
**Radiographic Positioning 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 cr.)**  
**Radiographic Lab II**

A course to be taken concurrently with RDTK 1683. Upon successful completion of this course, students are able to perform routine and special fluoroscopic exams such as arthrography, myelography, and angiography, and operate a C-arm fluoroscopic unit in both a surgical and departmental setting in a competent manner through simulated applications. Prerequisites: Completion of RDTK 1583 and RDTK 1584.

**RDTK 1713 (4 cr.)**  
**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. Prerequisites: Completion of RDTK 1503, RDTK 1583, and RDTK 1683.

**RDTK 2510 (8 cr.)**  
**Clinical Education III**

This is a clinical experience in the radiology environment. The course is to be taken during Fall II. Students refine skills learned previously in RDTK 2573 and RDTK 2583, including patient skills, implementing new technical skills, further building their practical experience in fluoro diagnostic studies, and introducing skull work. Students demonstrate competency in gastrointestinal, urinary, trauma, and portable work. Students will be expected to pass a competency-based imaging test at the end of the semester. Prerequisites: Second-year radiography status and completion of RDTK 1713.

**RDTK 2583 (3 cr.)**  
**Radiographic Positioning 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 cr.)**  
**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. Prerequisites: Completion of RDTK 1683 and RDTK 1684.

**RDTK 2603 (2 cr.)**  
**Survey of Technical Specialties**

Students examine current and developing imaging and/or therapeutic technologies such as nuclear medicine, radiation therapy, ultrasonography, and MRI with special emphasis on CT exam performance. Students have the opportunity to apply this knowledge to Clinical Education IV and Clinical Education V. Prerequisite: Completion of RDTK 2583 and RDTK 2584.

**RDTK 2613 (7 cr.)****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 cr.)****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. Prerequisites: Completion of RDTK 2583 and RDTK 2584.

**RDTK 2624 (1 cr.)****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. Prerequisites: Completion of RDTK 2583 and RDTK 2584.

**RDTK 2630 (1 cr.)****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 1683 and RDTK 1684.

**RDTK 2713 (3 cr.)****Clinical Education V**

This course, which provides clinical experience in the radiology environment, is to be taken in Summer Session II. Students will be evaluated in all areas covered in Clinical Education IV, plus determination of correct technique, and ability to adapt and innovate under varied conditions. Students also may study mammography, ultrasonography, nuclear medicine, radiation therapy, computerized tomography, or other specialized fields of personal interest during a special rotation in one of these imaging modalities. Upon completion of these clinical hours, the student will be able to perform all required duties of an entry-level radiographer. The student will be expected to pass a competency-based imaging test at the end of the semester. Prerequisite: Completion of RDTK 2613.

**RDTK 2900 (4 cr.)****Radiography Seminar**

A course utilizing personal research, laboratory problems, and group discussion to synthesize knowledge, attitudes, and skills in professional radiographic practice. Students complete a comprehensive review of all prior courses in the radiography curriculum and further develop the analytical and test-taking skills necessary for successful completion of the American Registry of Radiologic Technologists' national certifying examination. Prerequisite: Radiography graduate standing.

## Religious Studies

**RELI 1150 (3 cr.)****History and Philosophy of Islam**

A general survey of the history and philosophy of the Islamic religion. Students acquire knowledge about and gain an understanding of Islamic history, Islamic principles and practices, Islamic law, Islamic relationships to other major religions, and Islam in the context of the modern world. (Cross-listed as HIST 1150.)

**RELI 2080 (3 cr.)****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 teaching 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. Prerequisite: Completion of ENGL 1010, completed of HIST 1120, or instructor consent. Cross-listed as HIST 2080 Holocaust.

**RELI 2110 (3 cr.)****Introduction to the Old Testament**

A historical, archaeological, and literary survey of the Old Testament and its surrounding environment. During the course, students acquire a knowledge of the process and development of the Old Testament with its history, cultural environment, and literary development. Prerequisite: Completion of ENGL 0700 or ENGL 1001 or placement into ENGL 1010, or concurrently enrolled in ENGL 1010. (Cross-listed as HIST 1130.)

**RELI 2150 (3 cr.)****New Testament Survey**

An introduction to the historical, religious, and political setting of the Near East from Alexander the Great to the end of second century C.E. The class will investigate Judaism and Christianity in the Roman World. The New Testament will be viewed from within the context of the Greco-Roman civilization in which the early Christians lived. Prerequisite: Completion of ENGL 0700 or ENGL 1001 or placement into ENGL 1010, or concurrently enrolled in ENGL 1010. (Cross-listed as HIST 1135.)



**RELI 2225** (3 cr.)  
**History of Christianity**  
 A survey of the history of Christianity from the end of the Apostolic era to 20th century developments in North America. Students acquire knowledge about and gain an understanding of the following topics: the patristic era, the expansion of Christianity, the monastic movement, the medieval Western Church, the Orthodox Church, the Great Schism, the Enlightenment and Reformation, the English Reformation, the growth of institutions, the church in North America, new denominations, the missionary and conciliar movements, the times of theological controversy, and 20th century developments in church life. Prerequisite: Completion of ENGL 0700 or ENGL 1001 or placement into ENGL 1010, or concurrently enrolled in ENGL 1010. (Cross-listed as HIST 2225.)

## Social Work

**SOWK 2000** (3 cr.)  
**Introduction to Social Work**  
 This is an introductory-level course in which students examine social work and social welfare through the study of history, philosophy, ethics, values, methods, and fields of practice. Students also consider the person from an environmental perspective, the systems theory, the problem-solving process, and cultural diversity. Prerequisite: Completion of ENGL 0700 or ENGL 1001 (or equivalent placement test scores).

## Sociology

**SOC 1000** (3 cr.)  
**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 cr.)  
**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. Processes and activities of women in such areas as labor force, art, literature, and politics are investigated. Prerequisites: Completion of DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement test scores). (Cross-listed as HUMN 1080.)

**SOC 1150** (3 cr.)  
**Sociology of Sport**  
 Students examine sports in relationship to the social institutions of politics, economics, and religion. They also consider contemporary issues, including racial and gender inequality and controversies over violence and drugs. Students will be able to recognize that sports are but a microcosm of society as a whole.

**SOC 2120** (3 cr.)  
**Fundamentals of Aging and Human Development**  
 This course is designed to introduce students to the field of gerontology and examine the concept that aging is a lifelong process which involves the interrelationship between an individual and the environment. Upon successful completion of this course, the student should be able to identify, explain, compare, and contrast the major physical, psychological, social, and environmental forces that influence an individual in later life. (General Psychology or Introduction to Sociology is recommended as a prerequisite. Prerequisite: Completion of DVST 0630 or ENGL 0630 (or equivalent placement test scores).)

**SOC 2400** (3 cr.)  
**Criminology**  
 An introductory overview of criminal behavior and its impact on the criminal justice system. Topics include 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 permission of instructor. (Cross-listed as CRMJ 2400.)

**SOC 2410** (3 cr.)  
**Juvenile Delinquency**  
 Students demonstrate an understanding of the causes of juvenile problems and analysis of theories and techniques of treatment with consideration for both potential and actual offenders. State and national juvenile correctional systems are investigated in class and in the field.

## Spanish

**SPAN 1010** (4 cr.)  
**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 cr.)  
**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 2030** (4 cr.)  
**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 cr.)  
**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 2041** (4 cr.)  
**Intermediate Spanish II**  
 In this continuation of intermediate-level Spanish, students improve their self-expression skills in conversation as well as their reading comprehension. Students integrate intermediate-level grammatical structures into conversations and compositions and demonstrate an increased level of understanding of Spanish literature. Prerequisite: Completion of SPAN 2030, or equivalent.

**SPAN 2070** (3 cr.)  
**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 permission of the instructor.

**SPAN 2140** (3 cr.)  
**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 – Pathology and Audiology****SPPA 1100** (4 cr.)  
**American Sign Language I**

In this introductory course, students demonstrate basic syntactic knowledge, vocabulary, and conversational skills in American Sign Language (ASL). The direct experience method (using ASL with no voice) is used to enhance language acquisition. Students also become knowledgeable about the vital aspects of Deaf culture and community and the concept of Deafness as a cultural minority. Prerequisite: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score).

**SPPA 1110** (4 cr.)  
**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 cr.)  
**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 cr.)  
**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 cr.)  
**Statistical Concepts–Business**

This course involves a study of 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. Prerequisites: Completion Math 1400 and DVST 0520 or ENGL 0520 and ENGL 0700 or ENGL 1001 (or equivalent placement test scores).

**STAT 2050** (4 cr.)  
**Fundamentals of Statistics**

A course that presents central ideas and fundamental techniques of statistical inference on applications in the biological sciences. Students develop a command of probability models and inferences for means, variances and parameters of discrete distributions. Students also gain skills in using statistical computer packages. Credit cannot be earned in more than one of the following courses: STAT 2010, STAT 2050, and STAT 2070. Prerequisite: Successful completion of MATH 1000 or MATH 1400 or equivalent.

**STAT 2060** (4 cr.)  
**Integrated Statistics Statway II**

Students explore statistical concepts and methods with an emphasis on data analysis. Students analyze and interpret statistical studies that includes data collection, graphical and numerical descriptive statistics, correlation, simple linear regression, basic concepts of probability, confidence intervals and hypothesis tests for means and proportions, chi-square tests, and ANOVA. Application problems will be taken from such fields as business, economics, medicine, engineering, education, psychology and sociology. STAT 2060 is the second and final course in the Statway sequence. This sequence is recommended to students who are planning to transfer and continue further studies in humanities, liberal arts, and social science. Prerequisite: MATH 0960.

**STAT 2070** (4 cr.)  
**Introductory Statistics for the Social Sciences**  
This course involves a study of 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. Prerequisite: Completion of Math 1000 (or an equivalent placement test score within one year of enrollment in the course) or ACT math score of 25 or higher and ENGL 1010.

## Surgical Technology

**SURG 1600** (3 cr.)  
**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 cr.)  
**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: Admission to the surgical technology program.

**SURG 1620** (3 cr.)  
**Surgical Technology Skills Lab I**  
Students practice entry-level surgical technology skills such as scrubbing, gowning, and gloving, aseptic technique, instrument identification, preparation of the sterile field, safe sharps handling, procedure steps anticipation, and professional behaviors. Prerequisite: Admission to the surgical technology program.

**SURG 1630** (1 cr.)  
**Surgical Technology Skills Lab II**  
Students practice and develop intermediate and advanced level surgical technology skills with an emphasis on surgical specialty instrumentation, advanced anticipation skills, and professional behaviors. Students also develop critical thinking competence in aseptic practice by identifying, analyzing, and correcting errors in sterile technique. Prerequisite: All first-semester courses.

**SURG 1685** (2 cr.)  
**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 cr.)  
**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, urology, ophthalmology, and orthopedics. Prerequisites: All first-semester courses and concurrent enrollment in SURG 1850.

**SURG 1850** (5 cr.)  
**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. Prerequisites: All first-semester courses and concurrent enrollment in SURG 2810.

**SURG 2750** (4 cr.)  
**Surgical Procedures II**  
Students gain knowledge and skill in the theoretical aspects of complex 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 and cardiovascular, thoracic, and neurosurgery. Prerequisites: All first-semester courses, SURG 1750, and concurrent enrollment in SURG 1850.

**SURG 2810** (1 cr.)  
**Surgical Technology Clinical Synthesis I**  
The assessment and analysis of the clinical experience. Students maintain accurate documentation of case experiences, research and present case studies, and prepare for the certification examination. Prerequisites: All first-semester courses and concurrent enrollment in SURG 1850.

**SURG 2850** (7 cr.)  
**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. Prerequisites: All second-semester courses and concurrent enrollment in SURG 2895.

**SURG 2895** (1 cr.)  
**Surgical Technology Clinical Synthesis II**  
Continuing 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. Prerequisites: All second-semester courses and concurrent enrollment in SURG 2850.

**SURG 2896** (1 cr.)  
**Surgical Technology Capstone**  
 Students analyze historical and current trends in surgical technology education. Students research the history and development of the profession of surgical technology and evaluate various education models. Students utilize their professional practice experience to build a predictive model of the future of surgical technology education, clinical practice, and career advancement. This course is a capstone experience for Certified Surgical Technologists who are pursuing degree completion. Prerequisite: Permission of the Surgical Technology program director.

## Theater and Dance

**THEA 1000** (3 cr.)  
**Introduction to Theater**  
 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 0520.

**THEA 1100** (3 cr.)  
**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 0520.

**THEA 2000** (3 cr.)  
**Theatre Production**  
 A course involving participation in a theatrical production. Students either perform in the production or work behind the scenes. Students demonstrate professionalism and work with others to achieve a polished production. Performances are required; performers are cast based on an audition. May be repeated for up to 12 credit hours.

**THEA 2010** (3 cr.)  
**Dramatic Literature I**  
 A course exploring dramatic literature in western culture, from the Greeks through the 19th century, studying plays in terms of style, content, theme, theatrical conventions, and structure. In this course, students examine each play as a representation of its age and as a placeholder in the dramatic canon. They watch productions of plays on video and in live performance to supplement their readings.

**THEA 2020** (3 cr.)  
**Dramatic Literature II**  
 A course exploring dramatic literature in western culture, from the turn of the 19th through the 20th century, studying plays in terms of style, content, theme, theatrical conventions, and structure. In this course, students examine each play as a representation of its age and as a placeholder in the dramatic canon. They watch productions of plays on video and in live performance to supplement their readings.

**THEA 2100** (3 cr.)  
**Acting II**  
 A course to develop the actor's voice and body for characterization and character interaction through performance of scenes. Prerequisites: Completion of DVST 0520 or ENGL 0520 (or equivalent placement test score), and THEA 1100.

**THEA 2160** (3 cr.)  
**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 cr.)  
**Stagecraft**  
 An introduction to the various aspects of stagecraft. Prerequisite: Completion of DVST 0900 or MATH 0900 (or equivalent placement test score).

## Welding Technology

**WELD 1555** (2 cr.)  
**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 cr.)  
**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 1715** (3 cr.)  
**Thermal Cutting and Oxyfuel Welding**  
 Students demonstrate different types of thermal cutting and oxyfuel welding processes along with brazing processes currently used in the welding industry. Students utilize the American Welding Society (AWS) standards of excellence. Corequisite: WELD 1720.

**WELD 1720** (2 cr.)  
**Welding Shop I**  
 Students develop welding skills to become proficient in the welding industry and complete tasks within the program of study. This course runs concurrent with all major course studies in Welding Technology.

**WELD 1721** (4 cr.)  
**Welding Shop II**  
 Students continue to develop welding skills to become proficient in the welding industry and complete tasks, focusing on applying knowledge and techniques from courses in the second semester of the Welding Technology program.

**WELD 1722** (2 cr.)  
**Welding Shop III**  
 Students continue to develop welding skills to become proficient in the welding industry and complete tasks, focusing on applying information and techniques from courses in the third semester of the Welding Technology program.

**WELD 1723** (3 cr.)  
**Welding Shop IV**  
 Students continue to develop welding skills to become proficient in the welding industry and complete tasks, focusing on applying information and techniques from courses in the fourth semester of the Welding Technology program. Instructor consent required.

**WELD 1755** (4 cr.)  
**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 1720.

**WELD 1760** (4 cr.)  
**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 cr.)  
**Gas Metal Arc Welding/  
Flux Cored 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 1860** (3 cr.)  
**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 1920** (4 cr.)  
**Basic Pipe Welding**  
Students weld light and heavy walled pipe in all positions using shielded metal arc welding and/or gas tungsten arc welding, gas metal arc welding, and flux cored arc welding techniques. Students use correct techniques for fit-up and layout IAW procedures approved by the American Welding Society and American Society of Mechanical Engineers.

**WELD 2650** (4 cr.)  
**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 cr.)  
**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 cr.)  
**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 cr.)  
**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 cr.)  
**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 cr.)  
**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 1470** (3 cr.)  
**Wind Energy Technology Internship**  
Students gain hands-on field experience to apply the technical, mechanical, and electrical skills they have developed. Students also gain valuable exposure to the wind energy industry and the major companies involved in wind energy power production and maintenance. Prerequisites: Students must successfully complete a minimum of 24 Wind Energy technical credits and 10 program-required general education credits prior to enrollment.

**WTT 2200** (3 cr.)  
**Advanced Wind Turbine Generator  
Mechanical Systems**  
Students analyze, troubleshoot, and document critical wind turbine generator systems. They perform systems analysis and diagnostics evaluation to develop solutions based on given data. They also analyze failed components and identify root cause failures. Students demonstrate proper inspection techniques and provide written documentation of their results. They interpret technical manuals and submit written corrections for inaccuracies. Students perform preventive maintenance procedures on an operational wind turbine generator.

**WTT 2300** (2 cr.)  
**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 cr.)  
**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 cr.)  
**Advanced AC Electricity**

Students identify and explain semiconductor operating principles as they apply to DC and AC electrical drives and power conversions systems used in wind turbine power generation. Students also examine electrical instrumentation used for control in the operating systems of wind turbines.

**WTT 2600** (4 cr.)  
**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 cr.)  
**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 as HIST 2389.)

**Zoology****ZOO 2010** (5 cr.)  
**Anatomy and Physiology I**

The first semester of a two-semester course in which the student explores 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, directional and anatomical terms, and explore homeostatic and functional mechanisms from a molecular, cellular, and organ level. Prerequisite: Successful completion of (grade of C or higher) or concurrent enrollment in MATH 1000 (or equivalent placement test score) or higher. It is recommended that students complete BIOL 1010 and/or CHEM 1000 prior to enrolling in ZOO 2010.

**ZOO 2015** (4 cr.)  
**Human Anatomy**

A study of the structure of the human body. Each organ system is considered from a basis of tissue and gross structure; attention is also given to the impact of the study of human anatomy upon history and upon modern society. Typically, this course has three hours of lecture and three hours of laboratory per week. Prerequisite: Completion of MATH 0920 (or equivalent placement test score). It is recommended that students complete BIOL 1010 or CHEM 1000 prior to enrolling in ZOO 2015.

**ZOO 2020** (5 cr.)  
**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: autonomic nervous system, 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: Successful completion (grade of C or higher) of ZOO 2010.

**ZOO 2025** (4 cr.)  
**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. Prerequisite: Completion of ZOO 2015 and MATH 1000 (or concurrent enrollment in) or equivalent placement test score. Recommended completion of BIOL 1010 and/or CHEM 1000.

**ZOO 2450** (3 cr.)  
**Wildlife Management**

An introductory course in wildlife management. Students acquire knowledge in determining wildlife values, communities and habitats, population analysis and management, ecosystem and fisheries management, biopolitics, economics, and current issues in resource management. Offered in spring semesters. Prerequisites: Completion of ENGL 0520, ENGL 0630, and MATH 0920 (or equivalent placement test scores).

# Administration and Full-Time Faculty

Kristin Abraham, Instructor, English  
 Fuji Adachi, Instructor, Mathematics  
 M. Michele Albert, Instructor, Zoology/  
 Biology  
 Jennifer Anderson, Program Director,  
 Nursing  
 Harold Andrews, Director, Accounting  
 Services  
 Teresa Authier, Librarian  
 Paula Badgett, Librarian  
 David Beals, Instructor, Engineering  
 Technology  
 Paula Belknap, Instructor, Nursing  
 Kim Bender, Associate Vice President,  
 Institutional Effectiveness  
 Monica Benes, Instructor, Mathematics  
 Robert Benning, Instructor, Auto Body  
 Repair  
 Juan-Antonio Bernabéu, Instructor,  
 Spanish  
 Jeffrey Berry, Instructor, Agriculture/  
 Livestock Judging Coach  
 Bryan Boatright, Instructor, Wind Energy  
 Technology  
 Kari Brown-Herbst, Instructor, Internet  
 Technology  
 Nicole Bryant, Interim Dean, School of Arts  
 & Humanities  
 Ken Bunya, Director, Systems and  
 Technology Support  
 Ian Caldon, Instructor, Spanish/ESL  
 Jonathan Carrier, Instructor, Psychology  
 ACC  
 E. Stephen Cassells, Instructor,  
 Anthropology/Sociology  
 Mohamed Chakhad, Instructor, Physics/  
 Math/Engineering  
 Eileen Chase, Instructor, Nursing  
 Patrick Currie, Program Manager/  
 Instructor, Emergency Services  
 Burton Davis, Instructor, Science/  
 Mathematics, Albany County Campus  
 Dusty Day, Instructor, Communication  
 Qing Du, Instructor, Chemistry  
 Robin Duncan, Instructor, Nursing  
 Judith Dunn, Instructor, Computer  
 Information Systems  
 Randy Fetzer, Instructor, English  
 Jose Fierro, Vice President, Academic  
 Affairs  
 Roger Findley, Instructor, Cisco Technology  
 Joslyn Gaines, Lead Instructor, ESOL  
 Luanne Gearhart, Instructor, Psychology  
 Holly Girmus, Instructor/ACCE, Physical  
 Therapist Assistant  
 Arun Goyal, Dean, School of Mathematics  
 and Science  
 Samuel Graham, Instructor, Welding  
 Technology  
 Geoffrey Green, Instructor, Nursing  
 Jeri Griego, Instructor, Accounting/  
 Business  
 Tanya Griffith, Instructor, Accounting/  
 Business  
 Laura Grow, Instructor, English  
 Gary Hall, Instructor, Instrumental Music  
 Melvin Hamburger, Interim Instructor,  
 Mathematics  
 MaryAnn Hamburger, Interim Instructor,  
 Mathematics  
 Therese Harper, Dean, School of Health  
 Sciences and Wellness  
 Jerry Harris, Director, Contracting/  
 Procurement  
 Dale Hartley, Instructor, Business/  
 Marketing  
 Melvin Hawkins, Dean, School of Business,  
 Agriculture and Technical Studies  
 Judy Hay, Vice President, Student Services  
 Kira Heater, Instructor, Mathematics,  
 Albany County Campus  
 Cynthia Henning, Instructor/Program  
 Director, Exercise Science  
 Carla Herstead, Instructor, ABE  
 Carol Hoglund, Vice President,  
 Administration and Financial Services  
 Nathan Huseman, Interim Instructor,  
 Developmental English  
 Elizabeth Jackson, Instructor, English  
 Dawn Jung, Lead Instructor, ABE  
 Meghan Kelly, Librarian  
 JoLene Klumpp, Instructor, Human  
 Services/Psychology  
 Marie Koenings, Instructor, Nursing  
 Damien Kortum, Instructor, English  
 Jill Koslosky, Dean of Students, Student  
 Life  
 Peggie Kresl-Hotz, Executive Director,  
 Human Resources  
 Robert LaFaso, Instructor, Automotive  
 Technology  
 Richard Laidlaw, Instructor, Chemistry/  
 Mathematics  
 Charlotte Langaas, Instructor, Physical  
 Education  
 Karen Lange, Associate Dean, Library and  
 Learning Commons  
 Kathleen Lemaster, Lead Electrical  
 Instructor, IST  
 Robert W. Lemerich, Instructor,  
 Mathematics  
 Mary Ludwig, Instructor, History  
 Timothy Macnamara, Director, Physical  
 Plant  
 Holly Manning, Instructor, Communication  
 David Marcum, Instructor, Government  
 Studies  
 Chad Marley, Chief Technology Officer  
 Starla Mason, Program Director/Instructor,  
 Radiography  
 Daniel Maw, Instructor, Art  
 Melissa McAllister, Instructor, English as  
 Second Language  
 Lanae McDonald, Instructor, Equine  
 Studies  
 Dean McIntire, Coordinator/Instructor,  
 Math Lab  
 Laura McMennamin, Instructor, English,  
 Albany County Campus  
 Robert McNabb, Instructor/Program  
 Director, HVAC/R  
 Molly McNeely, Instructor, Nursing  
 Ronald Medina, Instructor, Art  
 Amber Mercil, Instructor, Business, Albany  
 County Campus  
 Valerie Millsap, Instructor, Nursing  
 Scott Moncrief, Instructor, Education  
 Trent Morrell, Instructor, Geoscience  
 Lisa Murphy, Associate Vice President,  
 Institutional Advancement  
 Leah Noonan, Instructor, Computer  
 Information Systems  
 Lisa Nordyke, Instructor, Developmental  
 Mathematics  
 Joshua O'Brien, Instructor, Mass Media/  
 Multimedia  
 Jason Pasqua, Instructor, Theatre/  
 Communication  
 Pauline Phillips, Instructor, Dental  
 Hygiene  
 Roxanne Powers, Instructor/Clinical  
 Coordinator, Dental Hygiene  
 Dawn Puente, Instructor, Health  
 Information Technology and  
 Management  
 Eric Quade, Instructor, Math, Albany  
 County Campus  
 Ashleigh Ralls, Radiography Clinical  
 Coordinator/Instructor  
 Judy Ransom, Instructor, Choral Music  
 Clint Reading, Instructor, Zoology/Biology  
 Arshi Rizwani-Nisley, Instructor, English  
 Seth Robbins, Instructor, Diesel  
 Technology  
 Lee Roberson, Instructor, Mathematics  
 Valerie Rodekohl, Program Director, Dental  
 Hygiene  
 Meredith Roehrs, Instructor, Zoology/  
 Biology  
 Zachary Roehrs, Instructor, Biology  
 Catherine Rogers, Instructor, Computer  
 Information Systems  
 John Sanford, Instructor, Psychology  
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