

# Programs of Study

**AA** = Associate of Arts Degree  
**AS** = Associate of Science Degree  
**AAS** = Associate of Applied Science Degree  
**CSC** = Comprehensive Skills Certificate  
**SC** = Skills Certificate

	PAGE	PROGRAM OF STUDY	ASSOCIATE DEGREES			CERTIFICATES	
			AA	AS	AAS	CSC	SC
<b>A</b>	38	Accounting or Business Administration		■			
	38	Agriculture Business		■			
	39	Agriculture Communication		■			
	39	Agriculture Education		■			
	52	Agriculture – Farm and Ranch Management			■		
	68	Agriculture – Production			■	■	
	69	Agriculture – Range Management		■			
	40	Agroecology		■			
	40	Allied Health		■			
	40	Animal Science		■			
	41	Anthropology	■				
	41	Archaeological Technician					■
	41	Archaeology Technology		■			
	42	Art	■				
	42	Athletic Training		■			
	61	Audio Technician					■
	<b>B</b>	43	Biology		■		
61		Biology – Natural Resource Biology		■			
43		Business			■		
38		Business Administration or Accounting		■			
44		Business Technology – Administrative Assistant			■		
44		Business Technology – General Office / Clerical Skills				■	
44		Business Technology – Help Desk					■
45		Business Technology – Word Processing					■
44		Challenge Course Facilitation					■
<b>C</b>		45	Chemistry		■		
	42	Coach – Assistant					■
	56	Coach – Head					■
	45	Communication	■				
	46	Criminal Justice	■				
	68	Dentistry – Pre-Professional Sciences		■			
<b>D</b>	46	Drafting Technology			■		■
	47	Education – Early Childhood	■	■			■
<b>E</b>	48	Education – Elementary	■	■			
	48	Education – Secondary (with emphasis in subject area)	■	■			
	49*	Electrical Apprenticeship (8 semesters)				■	
	**	Endorsements					
	49	Engineering		■			
<b>F</b>	49	English – Literary Studies	■				
	50	English – Writing	■				
	61	Environmental Biology – Natural Resource Biology		■			
	50	Equine Business Management			■		
	51	Equine Care and Basic Riding					■
	51	Equine Riding and Training			■		
	51	Farrier Business Management			■		
	52	Farrier: Horse Owner Hoof Care					■
	52	Farrier – Professional					■
	52	Film Production	■				

	PAGE	PROGRAM OF STUDY	ASSOCIATE DEGREES			CERTIFICATES	
			AA	AS	AAS	CSC	SC
<b>G</b>	61	Forestry – Natural Resource Biology		■			
	58	French – Modern Languages	■				
	28	General Studies	■	■			
	55	Graphics Administration					■
	55	Graphics – Basic Graphic Arts Production					■
	54	Graphics – Design	■		■		
	55	Graphics – Lithographic Offset Press					■
	55	Graphics – Offset Duplicator					■
	55	Graphics – Prepress					■
	54	Graphics – Prepress Production			■		
	55	Graphics – Printing Production			■		
	56	Graphics – Professional Desktop Publishing					■
	56	Graphics – Web Design and Application					■
	<b>H</b>	56	History	■			
57		Journalism Endorsement for Public School Teachers					■
57		Journalism – Print	■				
57		Journalism – Web/Broadcasting	■				
29		Liberal Studies	■				
57		Mathematics		■			
68		Medicine – Pre-Professional Sciences		■			
59		Music	■	■	■		
60		Music Technology			■		
61		Natural Resource Biology		■			
61		Nursing			■		
63		Nursing Assistant					■
62		Nursing – Practical				■	
<b>J</b>		63	Occupational Safety and Health		■		
	63	Outdoor Education and Recreation Leadership		■			
	65	Photographic and Digital Preservation Specialist					■
	64	Photographic Communications			■		
	65	Photographic Communications – Basic Digital Imaging					■
	65	Photographic Communications – Basic Photographic Imaging					■
	65	Physical Education		■			
	66	Physics		■			
	66	Political Science	■				
	67	Pre-Occupational Therapy		■			
	67	Pre-Optometry		■			
	68	Pre-Pharmacy		■			
	67	Pre-Physical Therapy		■			
	68	Pre-Professional Sciences		■			
<b>L</b>	69	Psychology	■				
	53	Radio Production			■	■	
	61	Resource Management – Natural Resource Biology		■			
	53	Screenwriting	■				
	70	Social Science	■				
	70	Sociology	■				
	58	Spanish – Modern Languages	■				
	***	Technical Studies: Electrical Technology			■		
	53	Television Production			■		
	71	Travel and Tourism			■		
	71	Veterinary Assistant			■		
	68	Veterinary – Pre-Professional Sciences		■			
	72	Welding – Gas Metal Arc Welding (GMAW)					■
	72	Welding – Gas Tungsten Arc Welding (GTAW)					■
72	Welding – Robotics Technology					■	
71	Welding Technology			■	■	■	
61	Wildlife Management – Natural Resource Biology		■				

\*The Electrical Apprenticeship program is designed to provide training for apprentices in the electrical industry.

\*\* NWC offers the lower division courses required for Wyoming endorsements in various areas.

\*\*\*Special degree option. See the Academic Affairs Office for more information.

# Accounting or Business Administration

This program provides students who wish to concentrate in the study of accounting or business administration with coursework that is a common base for advanced study and/or careers in business. Students who study in this area typically seek degrees at senior institutions in the fields of accounting, finance, management, marketing and personnel administration among others. A degree in business is a popular choice for students planning to attend law school upon graduation. Northwest College's Business Department offers students an opportunity to build a solid foundation for further study in these programs.

Students planning to enter careers in business through advanced study at a four-year institution will need to have coursework beyond the program requirements at Northwest College.

Students must consult closely with their academic advisor in the Business Department to determine which general education elective courses (social science, humanities, visual and performing arts, and lab science) will satisfy specific requirements of their intended transfer college or university. Most four-year institutions have prescribed requirements for admission to junior-level, upper-division status in their respective business programs. Note: Not all business courses offered at NWC are designed for transfer. Please consult with your academic advisor before selecting courses. Students will be required to complete each core course with a "C-" or better to meet program requirements.

## ASSOCIATE OF SCIENCE ACCOUNTING or BUSINESS ADMINISTRATION

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Six credits of Social Science and seven to nine credits of Mathematics may be fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
ACCT 2010—Principles of Accounting I.....	4
ACCT 2020—Principles of Accounting II ...	4
BADM 2395—Capstone in Business (Capstone Course) .....	1
ECON 1010—Macroeconomics .....	3
ECON 1020—Microeconomics.....	3
MATH 1050—Finite Mathematics.....	3
or	
MATH 2350—Business Calculus.....	5
STAT 2010—Statistical Concepts for Business .....	4
<b>TOTAL</b>	<b>22-24</b>

Transfer and General Electives selected in consultation with advisor .....13-19

### Recommended Transfer and General Electives

ACCT 2410—Intermediate Accounting I....	3
BADM 1000—Introduction to Business .....	3
BADM 1020—Business Communication.....	3
BADM 2010—Business Law.....	3
BMIS 2000—Computer Information Systems .....	3
BUSN 2000—Introduction to International Business .....	3
COM 1010—Public Speaking .....	3
IMGT 2400—Introduction to Information Management.....	3
MGT 2100—Principles of Management .....	3
MKT 2100—Principles of Marketing.....	3

MINIMUM CREDITS FOR DEGREE = 64

## Agriculture Business

This program prepares students for careers in agribusiness or for transfer into agricultural business, agricultural economics and farm and ranch management programs. The field involves the application of business and economic principles to farming and ranching enterprises and related industries. Employment possibilities are available in businesses which process and market agricultural products, and those which sell products and services to producers. Additional opportunities exist in the operation of farms and ranches or in lending institutions. Students must successfully complete core courses with a "C-" or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in

as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF SCIENCE AGRICULTURE BUSINESS

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Six credits of General Education may be fulfilled by taking Core Courses or Core Electives.*

### Core Courses

Number and Title	Credits
ACCT 1050—Practical Accounting .....	3
or	
ACCT 2010—Principles of Accounting I.....	4
AGEC 1010—Agricultural Economics I.....	3
AGEC 2020—Farm and Ranch Business Management (Capstone Course) .....	4
AGRI 1010—Computers in Agriculture.....	2
<b>TOTAL</b>	<b>12-13</b>

### Core Electives

Students must take three courses from the following list of approved courses.

Number and Title	Credits
AECL 1000—Agroecology.....	4
AECL 2010—Ecological Web: Soil .....	4
AECL 2395—Plant Science Research Methods (Capstone Course) .....	2
AGEC 1020—Agricultural Economics II.....	3
AGEC 2010—Farm/Ranch Business Records .....	3
AGEC 2300—Agricultural Marketing .....	3
ANSC 1022—Animal Science I.....	4
ANSC 1024—Animal Science II.....	4
<b>TOTAL</b>	<b>8-12</b>

General Electives selected in consultation with advisor .....11-20

### Transfer and General Electives

Number and Title	Credits
BIOL 1000—Principles of Biology.....	4
MATH 2350—Business Calculus.....	5
STAT 2010—Statistical Concepts for Business .....	4
STAT 2050—Fundamentals of Statistics.....	4

MINIMUM CREDITS FOR DEGREE = 64

# Agriculture Communication

Career opportunities include work in agriculture-related publications, radio, and television. Transfer options are available regionally and nationally. In order to achieve an Associate of Science in Agriculture Communication, students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF SCIENCE AGRICULTURE COMMUNICATION

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

### Core Courses

Number and Title	Credits
AGRI 2385—Agriculture Communication/Leadership .....	2
ANSC 1022—Animal Science I.....	4
CO/M 2485—Sophomore Seminar: Communication (Capstone Course).....	3
JOUR 1100—News writing and Reporting I... 3	
JOUR 1240—Agriculture Communications Practicum.....	2
JOUR 2000—Broadcast Production .....	3
or	
JOUR 2140—News Editing and Layout.....	3
<b>TOTAL</b>	<b>17</b>

### Core Electives

Students must take six-seven credits from the following list of approved courses.

Number and Title	Credits
AECL 2010—Ecological Web: Soil .....	4
AGEC 2300—Agricultural Marketing .....	3
AGRI 2390—Agriculture Literacy/Leadership 2	
JOUR 1010—Publications Production.....	1-2
JOUR 2000—News writing and Reporting II. 3	
PHTO 1610—Introduction to Photography.. 3	
CROP 2200—Forage Crop Science .....	3

### Transfer and General Electives

The following courses are recommended as electives for General Education Requirements and Transfer programs.

Number and Title	Credits
AECL 1000—Agroecology.....	4
AECL 2395—Plant Science Research Methods (Capstone Course) .....	2
AGEC 1010—Agricultural Economics I.....	3
BIOL 2400—Ecology .....	3
CO/M 1010—Public Speaking.....	3
JOUR 1000—Introduction to Mass Media... 3	
RGMG 1000—Introduction to Range Management.....	1
RGMG 2000—Principles of Range Management.....	3
ZOO 2450—Wildlife Management.....	3

MINIMUM CREDITS FOR DEGREE = 64

# Agriculture Education

This program will prepare students to transfer to a university program of agriculture education/extension. In order to achieve an Associate of Science in Agriculture Education, students must successfully complete core courses with a “C-” or better to meet program requirements. Upon transfer, graduates will select a more specific program of study for a bachelor’s degree which will prepare them for teaching at the secondary level or working in the extension service. Agriculture education majors are also sought after by many industry organizations because of the breadth of the training. Currently there is a national shortage of agriculture education teachers. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF SCIENCE AGRICULTURE EDUCATION

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Three credits of General Education may be fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
AECL 1000—Agroecology.....	4
AGRI 2385—Agriculture Communication/Leadership .....	2
AGRI 2390—Agriculture Literacy/Leadership ..2	
ANSC 1022—Animal Science I.....	4
EDFD 2020—Foundations of Education .....	3
EDFD 2100—Educational Psychology.....	3
EDUC 2100—Practicum in Teaching (Capstone Course) .....	2
PSYC 1200—Human Development .....	3
WELD 1700—General Welding.....	3
<b>TOTAL</b>	<b>26</b>

### Transfer and General Electives

The following courses are recommended as electives for General Education Requirements and Transfer programs.

Number and Title	Credits
AECL 2010—Ecological Web: Soil .....	4
AGEC 1010—Agricultural Economics I.....	3
AGEC 2010—Farm and Ranch Business Records .....	3
AGRI 1010—Computers in Agriculture.....	2
ANSC 1024—Animal Science II .....	4
ANSC 1210—Livestock Judging I.....	2
ANSC 2020—Feeds and Feeding .....	4
ANSC 2430—Comparative Anatomy and Physiology.....	4
BIOL 1000—Principles of Biology .....	4
CO/M 1010—Public Speaking .....	3
CROP 2200—Forage Crop Science.....	3
FDSC 2060—Fresh Meat Processing .....	3
HLED 1225—Standard First Aid and CPR.. 2	
PSYC 1000—General Psychology .....	4
RGMG 2000—Principles of Range Management.....	3
RGMG 2490—Rangeland Plant Identification .....	2
STAT 2050—Fundamentals of Statistics.....	4

MINIMUM CREDITS FOR DEGREE = 64

# Agriculture – Farm and Ranch Management

See *Farm and Ranch Management*

# Agriculture – Production

See *Production Agriculture*

## Agriculture – Range Management

See *Range Management*

## Agroecology

This program is designed for students interested in the application and integration of biological and physical sciences to sustainable crop production. Students transfer into crop science or agronomy programs for careers in seed, fertilizer, and chemical industries, or in crop production. Transfer into a soil science or ecology curriculum can lead to land management and natural resource management positions. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

### ASSOCIATE OF SCIENCE AGROECOLOGY

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Eleven credits of General Education may be fulfilled by taking Core Courses.*

#### Core Courses

Number and Title	Credits
AECL 1000—Agroecology.....	4
AECL 2010—Ecological Web: Soil .....	4
AECL 2395—Plant Science Research Methods (Capstone Course) .....	2
AGEC 1010—Agricultural Economics I.....	3
<b>TOTAL</b>	<b>13</b>

#### Core Electives

Students must take two courses from the following list of approved courses.

Number and Title	Credits
AGRI 1010—Computers in Agriculture.....	2
CROP 2200—Forage Crop Science.....	3
ENTO 1001—Insect Biology .....	4
<b>TOTAL</b>	<b>5-7</b>

General Electives selected in consultation with advisor.....7-15

#### Transfer and General Electives

Number and Title	Credits
BIOL 1010—General Biology I.....	4
BIOL 2400—Ecology .....	3
CHEM 1000—Introduction to Chemistry ...	5
CHEM 2300—Introduction to Organic Chemistry .....	4
STAT 2050—Fundamentals of Statistics.....	3

MINIMUM CREDITS FOR DEGREE = 64

## Allied Health

The Allied Health Program is designed for students preparing for the Nursing Program or a profession in Allied Health. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements of Northwest College in order to transfer as a junior. Contact the Director of Nursing for details on admission criteria.

### ASSOCIATE OF SCIENCE ALLIED HEALTH

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	33-36

#### Core Courses

Number and Title	Credits
CO/M 1025—Communication for Health Care Professionals.....	2
HLSC 1010—Introduction to Allied Health Professions .....	2
HLSC 2030—Applied Allied Health Concepts (Capstone Course).....	2
MOLB 2210—General Microbiology.....	4
NRST 1200—Medical Terminology.....	2
PSYC 1000—General Psychology .....	4
ZOO 2010—Human Anatomy and Physiology I.....	4
ZOO 2020—Human Anatomy and Physiology II.....	4
<b>TOTAL</b>	<b>24</b>

#### Core Electives

Students must complete one three-credit course and one four/five-credit course from the following courses.

Number and Title	Credits
ANTH 1200—Introduction to Cultural Anthropology.....	3
or	

SOC 1000—Sociological Principles .....	3
and	
CHEM 1000—Introduction to Chemistry ...	5
or	
NRST 1510—Nurse Assistant (required for nursing).....	4
<b>TOTAL</b>	<b>8</b>

MINIMUM CREDITS FOR DEGREE = 64

## Animal Science

The Animal Science curriculum provides a foundation in biological and physical sciences, augmented by applications to production in western environments. It prepares students to transfer into an advanced degree program in any of several options within animal science. Graduates find employment in feed and health product companies, livestock management and marketing, breed associations, government agencies, or the meat industry. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

### ASSOCIATE OF SCIENCE ANIMAL SCIENCE

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Six credits of General Education may be fulfilled by taking Core Courses or Core Electives.*

#### Core Courses

Number and Title	Credits
AGEC 1010—Agricultural Economics I.....	3
AGEC 2020—Farm/Ranch Business Management (Capstone Course).....	4
ANSC 1022—Animal Science I.....	4
ANSC 1024—Animal Science II.....	4
<b>TOTAL</b>	<b>15</b>

#### Core Electives

Students must take at least five credits from the following list.

Number and Title	Credits
AGEC 1020—Agricultural Economics II.....	3

AGRI 1010—Computers in Agriculture.....	2
ANSC 1210—Livestock Judging I.....	2
ANSC 2020—Feeds and Feeding.....	4
ANSC 2430—Comparative Anatomy/ Physiology of Domestic Animals.....	4
FDSC 2060—Fresh Meat Processing.....	3
RGMG 2000—Principles of Range Management.....	3
<b>TOTAL</b>	<b>5-8</b>

General Electives selected in  
consultation with advisor .....14-17

### Transfer and General Electives

Number and Title	Credits
AECL 2010—Ecological Web: Soil .....	4
CHEM 2300—Introduction to Organic Chemistry.....	4
CROP 2200—Forage Crop Science.....	3
STAT 2050—Fundamentals of Statistics.....	3

MINIMUM CREDITS FOR DEGREE = 64

## Anthropology

Anthropology is the study of human beings, focusing on their origin and physical development (physical anthropology) as well as on their way of life (cultural anthropology). Anthropologists study all aspects of human life: social behavior, values, personality, language, government, history, prehistory, technology, art, healing, religion, housing, clothing, and economics.

This program allows students to focus on anthropology for their associate of arts degree. The core provides students the basic coursework in the field, while allowing them the flexibility to tailor their program to their individual needs. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year college should consult with their advisor and the appropriate four-year college catalog.

### ASSOCIATE OF ARTS ANTHROPOLOGY

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	36-42

*Six hours of Social Science and six hours of Comparative Cultural Awareness will be fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
ANTH 1100—Physical Anthropology .....	3
ANTH 1200—Introduction to Cultural Anthropology.....	3
ANTH 1300—Introduction to Archaeology.	3
ANTH 2210—North American Indian Cultures .....	3
Capstone Course (in consultation with advisor) .....	1-3
<b>TOTAL</b>	<b>13-15</b>

### Core Electives

Students must complete six credits from the following list of approved courses.

Number and Title	Credits
ANTH 1105—Lab (optional).....	1
ANTH 1250—Archaeology of Wyoming.....	3
ANTH 2200—World Ethnography.....	3
ANTH 2310—Archaeological Field Methods .....	1-6
ANTH 2470—Internship: Anthropology ..	1-6
<b>TOTAL</b>	<b>6</b>

General Electives selected in  
consultation with advisor .....13-19

MINIMUM CREDITS FOR DEGREE = 64

## Archaeological Technician

The Archaeological Technician Skills Certificate Program requires a student to complete three 2-credit field schools or two 3-credit field schools for a total of six credits. A certificate is awarded listing the specific skills learned during the particular field school. Currently, choices for field school include three 10-day summer field schools in Wyoming (2 credits each).

## Archaeology Technology

Archaeology technology encompasses both archaeology and a number of sciences and technologies that are used in:

- excavation and analysis of materials that are discovered,
- analysis, curation, and storage of those materials,
- museum display,
- reconstruction of past environments, and
- publication of the results of excavation.

In order to achieve an Associate of Science degree in Archaeology Technology, students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year college should consult with their advisor and the appropriate four-year college catalog.

### ASSOCIATE OF SCIENCE ARCHAEOLOGY TECHNOLOGY

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Three to six hours of Social Science and three hours of Comparative Cultural Awareness will be fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
ANTH 1300—Introduction to Archaeology.	3
ANTH 2310—Archaeology Field Methods 2-6	
BIOL 2395—Biological Research .....	1
or	
SOSC 2395—Seminar in Social Science Research (Capstone Course) or other Capstone Course (in consultation with advisor) .....	3

**TOTAL 6-12**

### Core Electives

Students must take four courses (12 credits) from the following list of core electives, at least one course from each of the three categories.

#### Environmental Science and Related Subjects

Number and Title	Credits
AECL 1000—Agroecology.....	4
AECL 2020—Ecological Web: Agronomic and Horticultural Plant Biology.....	4
BIOL 1080—Environmental Science .....	3
BIOL 2400—Ecology .....	3
BOT 2100—Forest Management .....	3
GEOL 1100—Physical Geology.....	4
GEOL 1200—Historical Geology.....	4
HORT 1100—Introduction to Horticulture.	3
ZOO 2400—Vertebrate Natural History.....	4
ZOO 2450—Wildlife Management.....	3

#### Technical Skills and Knowledge

Number and Title	Credits
ART 1050—Drawing I .....	3
ART 2010—Art History I.....	3
ART 2020—Art History II.....	3
ART 2100—Computer Illustration - Adobe Illustrator .....	3
ART 2410—Ceramics I .....	3
ART 2420—Ceramics II.....	3

BIOL 2310—Geographic Information Systems .....	3
BMIS 2000—Computer Information Systems .....	3
ENGL 2010—Technical Writing .....	3
ENTK 1800—Cartography.....	3
ENTK 2500—Computer Aided Drafting I..	3
ES 2070—Engineering Survey .....	3
PHTO 1500—35mm Camera (or other appropriate photo course) .....	1-3

**Anthropology and Related Subjects**

Number and Title	Credits
ANTH 1105—Physical Anthropology Lab ..	1
ANTH 1100—Physical Anthropology.....	3
ANTH 1200—Introduction to Cultural Anthropology .....	3
ANTH 1250—Archaeology of Wyoming.....	3
ANTH 1300—Introduction to Archaeology.....	3
ANTH 1470 or ANTH 2470—Internship: Anthropology.....	1-6
ANTH 2210—North American Indian Cultures .....	3
G&R 1000—Introduction to Geography.....	3
HIST 2050—Introduction to Public History	3

MINIMUM CREDITS FOR DEGREE = 64

## Art

The Northwest College Art Department offers a sequence of foundation courses and electives designed to build strong skills for work in the two-dimensional, three-dimensional, and graphic design areas. Upon completion of these foundation courses, along with the general college requirements for graduation, a student may transfer to a four-year college or university, or seek employment with the confidence that comes from sound preparation.

Although the foundation courses are planned with the art program in mind, any student interested in expanding their understanding and enjoyment of art may enroll.

### ASSOCIATE OF ARTS ART

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	36-42

*Six hours of Visual & Performing Arts will be fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
ART 1050—Drawing I .....	3
ART 1110—Design: 2-D .....	3
ART 2410—Ceramics I .....	3
or	
ART 2420—Ceramics II.....	3
or	
ART 1120—Design: 3-D.....	3
ART 1130—Design: Color.....	3
ART 2010—Art History I.....	3
ART 2020—Art History II .....	3
ART 2465—Art Portfolio (Capstone Course).2	
or	
ART 2479—Special Projects (Capstone Course).....	3
<b>TOTAL 20-21</b>	

### Core Electives

Students intending to seek a four-year degree in Art should take at least two courses from the following list.

Number and Title	Credits
ART 1060—Drawing II.....	3
ART 1250—Beginning Water-Based Media I.....	3
ART 2050—Life Drawing I.....	3
ART 2060—Life Drawing II.....	3
ART 2090—Printmaking I .....	3
ART 2092—Printmaking II: Serigraphy I....	3
ART 2210—Painting I.....	3
ART 2220—Painting II .....	3
ART 2420—Ceramics II.....	3
ART 2479—Special Projects (Capstone Course).....	3

MINIMUM CREDITS FOR DEGREE = 64

### ART EDUCATION

For secondary education, to facilitate transfer to a four-year college as a junior, students planning to become middle school or high school art teachers are encouraged to complete programs in both Secondary Education and in the subject(s) they plan to teach. Consult your advisor every semester when selecting courses.

## Assistant Coach

This certificate is designed for students wishing to meet the requirements for assistant coach endorsement by the Wyoming Professional Teaching Standards Board.

### SKILLS CERTIFICATE ASSISTANT COACH

Number and Title	Credits
PEPR 2100—Theory of Coaching (specific sport).....	2
PEPR 2110—Coaching Principles.....	2
PEPR 2050—Care and Prevention of Athletic Injuries .....	2
HLED 1225—First Aid/CPR .....	2
or	
PEPR 1040—Sport First Aid.....	2

TOTAL CREDITS FOR CERTIFICATE = 8

## Athletic Training

This program provides a solid foundation for students planning a career as an athletic trainer. It prepares students to transfer to institutions offering bachelor's degrees in athletic training. Students must successfully complete core courses with a "C-" or better to meet program requirements. At the beginning of the spring semester of their sophomore year, students must make application for admission to an accredited athletic training education program at a four-year institution.

### ASSOCIATE OF SCIENCE ATHLETIC TRAINING

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

#### Core Courses

Number and Title	Credits
HLED 1225—First Aid/CPR .....	2
KIN 1052—Introduction to Athletic Training .....	3
KIN 1058—Emergency Management of Athletic Injury/Illness .....	3
KIN 2068—Athletic Training Clinical I.....	1
KIN 2057—Assessment and Evaluation of Athletic Injury/Illness I.....	3
KIN 2058—Assessment and Evaluation of Athletic Injury/Illness II (Capstone Course).....	3
KIN 2078—Athletic Training Clinical II .....	1
PEPR 1005—Introduction to Physical Education and Sport.....	2
ZOO 2010—Human Anatomy and Physiology .....	4
ZOO 2020—Human Anatomy and Physiology II .....	4

**TOTAL 26**

Transfer and General Electives selected in consultation with advisor .....1-7

MINIMUM CREDITS FOR DEGREE = 64

## Audio Technician

See *Music Technology*

## Basic Digital Imaging

See *Photographic Communications*

## Basic Graphic Arts Production

See *Graphics*

## Basic Photographic Imaging

See *Photographic Communications*

## Biology

The study of biology includes courses designed to help students acquaint themselves with the structure and function of living organisms and to appreciate some of the ecological relationships existing in the world of life. The biology courses required in this program parallel those found at four-year institutions and should transfer without difficulty. Students must successfully complete core courses with a “C-” or better to meet program requirements. Recommended courses are designed to aid students in completing their four-year degrees. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

### ASSOCIATE OF SCIENCE BIOLOGY

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Eight hours of Science are fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
BIOL 1010—General Biology I.....	4
BIOL 2020—General Biology II.....	4
BIOL 2395—Biological Research (Capstone Course).....	1
<b>TOTAL</b>	<b>9</b>

### Core Electives

Students must take 12 credits from the following list of approved courses.

Number and Title	Credits
BIOL 2023—Biology of Plants and Fungi....	4
BIOL 2200—Genetics (offered alternate years).....	4
BIOL 2400—Ecology.....	3
BIOL 2410—Field Ecology Lab.....	1
BOT 2050—Taxonomy of Flowering Plants.....	4
ENTO 1001—Insect Biology.....	4
MOLB 2210—General Microbiology.....	4
ZOO 2010—Human Anatomy and Physiology I.....	4
ZOO 2400—Vertebrate Natural History.....	4

Transfer and General Electives selected in consultation with advisor .....16-20

### Recommended Transfer and General Electives

Track I and Track II courses are designed to fulfill degree requirements at different four-year institutions.

#### Track I

Students seeking a degree more advanced than a Bachelor of Science should pursue Track I.

Number and Title	Credits
CHEM 1020—General Chemistry I.....	5
CHEM 1030—General Chemistry II.....	4
CHEM 2320—Organic Chemistry I.....	4
CHEM 2340—Organic Chemistry II.....	4
MATH 1450—Precalculus Algebra and Trigonometry.....	5
MATH 2345—Survey of Calculus.....	5
PHYS 1110—General Physics I.....	4
PHYS 1120—General Physics II.....	4
STAT 2050—Fundamentals of Statistics.....	3

#### Track II

Students stopping at an associate of science or bachelor of science degree should follow Track II.

Number and Title	Credits
CHEM 1000—Introduction to Chemistry ...	5
CHEM 2300—Introduction to Organic Chemistry.....	4
MATH 1400—College Algebra.....	4
PHYS 1110—General Physics I.....	4
STAT 2050—Fundamentals of Statistics.....	3

### Recommended General Electives for either Track

Number and Title	Credits
CO/M 1010—Public Speaking.....	3
ENGL 2017—Introduction to Research.....	3
PHIL 2420—Logic I: Critical Thinking.....	3

MINIMUM CREDITS FOR DEGREE = 64

### BIOLOGY EDUCATION

For secondary education, to facilitate transfer to a four-year college as a junior, students planning to become middle school or high school biology teachers are encouraged to complete programs in both Secondary Education and Biology. Consult your advisor every semester when selecting courses.

## Biology – Natural Resources Biology

See *Natural Resources Biology*

## Business

This Business Program prepares students for entry-level positions in business. It emphasizes writing, speaking, and problem-solving skills and provides students with the general education and business coursework favored by many employers. Most required coursework is transferable should the student decide to pursue a bachelor's degree. The program offers an internship, where students work part time in professional positions to gain experience and ease the transition from school to career. Students will be required to complete each core course with a “C-” or better to meet program requirements.

### ASSOCIATE OF APPLIED SCIENCE BUSINESS

#### General Education Requirements

Number and Title	Credits
BADM 1005—Business Mathematics.....	3
or	
MATH Any College-Level Mathematics...3-5	
BADM 1020—Business Communication.....	3
CO/M 1010—Public Speaking.....	3
ECON 1010—Macroeconomics.....	3
or	
ECON 1020—Microeconomics.....	3

ENGL 1010—English I: Introduction to Composition.....	3
POLS 1000—American and Wyoming Government.....	3
or	
HIST 1221—The United States From 1865 ..	3
or	
HIST 1210—United States History I.....	3
and	
HIST 1250—History of Wyoming.....	3
Wellness Education.....	2
<b>TOTAL 20-22</b>	

### Core Courses

Number and Title	Credits
ACCT 1050—Practical Accounting.....	3
or	
ACCT 2010—Principles of Accounting I.....	4
BADM 1000—Introduction to Business .....	3
BADM 2010—Business Law.....	3
BADM 2030—Business Ethics.....	3
BMIS 2000—Computer Information Systems.....	3
MGT 2100—Principles of Management .....	3
MKT 2100—Principles of Marketing.....	3
BADM 2100—Small Business Practices.....	3
BADM 2395—Capstone in Business (Capstone Course).....	1
<b>TOTAL 25-26</b>	

### Recommended Electives

Number and Title	Credits
General Electives selected in consultation with advisor, 12 credits of which must be business courses .....	18-21

MINIMUM CREDITS FOR DEGREE = 64

## Business Administration

See *Accounting or Business Administration*

## Business Technology

This degree and certificate options prepare students for careers in the computer information systems field. Each option allows students to develop entry level skills needed for employment. The Administrative Assistant option is designed to reflect current needs in business offices and includes software applications and Microsoft Office Specialist certification preparation. The Help Desk Certification option is designed to develop advanced skills in software use, problem solving, telephone support and outcome tracking, and written and oral communication.

## ASSOCIATE OF APPLIED SCIENCE ADMINISTRATIVE ASSISTANT

### General Education Requirements

Number and Title	Credits
BADM 1005—Business Mathematics .....	3
BADM 1020—Business Communications ...	3
CO/M 1010—Public Speaking .....	3
or	
CO/M 1030—Interpersonal Communication	3
ENGL 1010—English I: Introduction to Composition.....	3
POLS 1000—American and Wyoming Government.....	3
or	
HIST 1221—The United States from 1865 ..	3
Science/Social Science/Visual & Performing Arts.....	3
Wellness Education.....	2
<b>TOTAL 20</b>	

### Core Courses

Number and Title	Credits
ACCT 1050—Practical Accounting .....	3
or	
ACCT 2010—Principles of Accounting I.....	4
ACCT 2110—Microcomputer Accounting ..	2
BADM 1000—Introduction to Business .....	3
BMIS 2000—Computer Information Systems .....	3
BOTK 2750—Records and Information Management.....	1
BOTK 2950—Employment Orientation (Capstone Course).....	1
CMAJ 1715—Word Processing.....	2
CMAJ 1765—Spreadsheet Applications.....	2
CMAJ 1815—Database Applications .....	2
CMAJ 1850—Desktop Publishing .....	3
CMAJ 2630—Presentation Graphics.....	2
MGT 1000—Introduction to Supervision ...	3
(Capstone Course).....	1
<b>TOTAL 27-28</b>	

General Electives selected in consultation with advisor ..... Up to 16

### Recommended Electives

Number and Title	Credits
BADM 2010—Business Law.....	3
BADM 2100—Small Business Practices.....	3
BOTK 1500—Ten-Key Mastery .....	1
BOTK 2510—Legal Terminology .....	1
BOTK 2600—Medical Transcription .....	3
BOTK 2620—Medical Coding.....	2
BOTK 2970—Internship .....	2
BUSN 2000—Introduction to International Business .....	3
CMAJ 1680—Microcomputer Applications: .....	1-3
CMAJ 1920—Computer Hardware Maintenance .....	3
CMAJ 2900—Advanced Integrated Computer	

Applications..... 3  
GRAR 1800—Introduction to Macintosh..... 3

MINIMUM CREDITS FOR DEGREE = 64

## COMPREHENSIVE SKILLS CERTIFICATE BUSINESS TECHNOLOGY-GENERAL OFFICE/CLERICAL SKILLS

This certificate program is designed to provide students with the basic secretarial skills needed in a general office setting. It also provides foundation courses for students who wish to continue their office career preparation in a two-year administrative assistant degree option.

Number and Title	Credits
ACCT 1050—Practical Accounting .....	3
or	
ACCT 2010—Principles of Accounting I.....	4
ACCT 2110—Microcomputer Accounting ..	2
BADM 1000—Introduction to Business .....	3
BADM 1005—Business Mathematics.....	3
BADM 1020—Business Communication.....	3
BMIS 2000—Computer Information Systems .....	3
BOTK 2750—Records and Information Management.....	1
BOTK 2950—Employment Orientation .....	1
CMAJ 1715—Word Processing.....	2
ENGL 1010—English I: Introduction to Composition.....	3
Electives selected in consultation with advisor, two of which must be selected from the following designators: ACCT, BADM, BOTK, CMAJ .....	Up to 9

TOTAL CREDITS FOR CERTIFICATE = 32-34

## SKILLS CERTIFICATE HELP DESK

This certificate program is designed to provide students with advanced skills in software use, problem solving, telephone support and outcome tracking, and written and oral communication. These skills are used to provide a high level of service and support to customers—whether they are internal or external.

### General Education Requirements

Number and Title	Credits
CO/M 1030—Interpersonal Communication	3
ENGL 1010—English I: Introduction to Composition .....	3

## Core Courses

Number and Title	Credit
BMIS 2000—Computer Information Systems	3
CMAP 1715—Word Processing	2
CMAP 1765—Spreadsheet Applications	2
CMAP 2540—Introduction to Help Desk Management	2
CMAP 2825—Help Desk Fundamentals	4
CMAP 2970—Internship	2
MGT 1000—Introduction to Supervision	3

TOTAL CREDITS FOR CERTIFICATE = 24

## SKILLS CERTIFICATE WORD PROCESSING

This certificate program is designed to develop and recognize advanced skill in word processing using a microcomputer and a currently popular word processing software package.

Number and Title	Credits
BMIS 2000—Computer Information Systems	3
CMAP 1715—Word Processing	2
CMAP 1850—Desktop Publishing I	3
CMAP 2630—Presentation Graphics	2

TOTAL CREDITS FOR CERTIFICATE = 10

## Challenge Course Facilitation

See *Outdoor Education*

## Chemistry

Chemistry courses are offered primarily to those students who want chemistry to fill their science course requirements including Pre-Medicine, Pre-Veterinary, Pre-Dentistry, and Pre-Optometry. Individuals who want to specialize in chemistry should work closely with their advisor to devise a suitable associate of science degree program.

The Associate of Science in Chemistry emphasizes the traditional areas of chemistry at the freshman and sophomore level. The program provides basic education in chemistry with sufficient flexibility to allow students to transfer to a variety of four-year schools offering bachelor's degrees in chemistry. Students must successfully complete core courses with a "C-" or better to meet program requirements. Students planning to transfer to a

four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF SCIENCE CHEMISTRY

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33	31-37

*Four hours of Science and three hours of Mathematics will be fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
CHEM 1020—General Chemistry I	5
CHEM 1030—General Chemistry II	4
CHEM 2320—Organic Chemistry I	4
CHEM 2340—Organic Chemistry II	4
MATH 2200—Calculus I	5
MATH 2205—Calculus II	5
MATH 2310—Applied Differential Equations I (Capstone Course)	3
or	
BIOL 2395—Biological Research (Capstone Course)	1
or	
CHEM 2385—Research in the Life and Physical Sciences (Capstone Course)	3
<b>TOTAL</b>	<b>28-30</b>

Transfer and General Electives selected in consultation with advisor .....17-20

### Transfer and General Electives

It is very strongly recommended that students intending to seek a four-year degree in chemistry take at least three courses (11-hour minimum) from the following. Two of the three courses should be a PHYS sequence.

Number and Title	Credits
CHEM 2230—Quantitative Analysis	4
MATH 2210—Calculus III	5
PHYS 1110—General Physics I	4
PHYS 1120—General Physics II	4
PHYS 1310—College Physics I	4
PHYS 1320—College Physics II	4

MINIMUM CREDITS FOR DEGREE = 64

### CHEMISTRY EDUCATION

For secondary education, to facilitate transfer to a four-year college as a junior, stu-

dents planning to become middle school or high school teachers in chemistry are encouraged to complete programs in both Secondary Education and in the subject(s) they plan to teach. Consult your advisor every semester when selecting courses.

## Communication

The communication area offers a variety of coursework for students who plan to transfer to a four-year institution or better understand their communication patterns. Students planning to receive a bachelor of arts degree in this area need to review carefully the degree requirements of the college or university to which they plan to transfer. Speech communication courses are available to students under any degree or certificate plan as either fulfilling humanities requirements or as electives.

Northwest has a nationally recognized forensics squad which represents the college at tournaments throughout the western United States. Forensics is a form of rhetorical scholarship which involves various dimensions: debate, public address, and the interpretation of literature. Forensics serves as a curricular and co-curricular laboratory for improving students' abilities in research, analysis, and oral communication. Typically, forensics activities are conducted in a competitive environment to motivate students and accelerate the learning process. In addition to the competitive speaking program, the Northwest forensics squad performs on campus as well as in the community and works with high school programs throughout the state.

## ASSOCIATE OF ARTS COMMUNICATION

This program allows students to explore the field of communication as the basis for their associate of arts degree. The core provides students the basic coursework in the field while allowing them the flexibility to tailor their program to their individual needs. Students must successfully complete core courses with a "C-" or better to meet program requirements. Students who are planning to transfer to a four-year program may need to have addi-

tional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	36-42

*Six hours of Humanities and three hours of Visual and Performing Arts requirements may be fulfilled by taking Core Courses and Electives.*

### Core Courses

Number and Title	Credits
CO/M 1010—Public Speaking.....	3
CO/M 1030—Interpersonal Communication	3
CO/M 2485—Sophomore Seminar: Communication (Capstone Course).....	3
<b>TOTAL</b>	<b>9</b>

### Core Electives

Students must take three courses (9 hours) from the following list of approved courses. Two of the three courses must have a CO/M designator.

Number and Title	Credits
CO/M 1040—Introduction to Human Communication.....	3
CO/M 2090—Introduction to Persuasion ....	3
CO/M 2110—Nonverbal Communication...	3
CO/M 2120—Small Group Communication	3
CO/M 2125—Family Communication.....	3
CO/M 2150—Argumentation .....	3
JOUR 1000—Introduction to Mass Media...	3
PHIL 2420—Logic I: Critical Thinking .....	3
THEA 2120—Oral Interpretation.....	3
General Electives in consultation with advisor.....	12-18

MINIMUM CREDITS FOR DEGREE = 64

## Coaching

See Assistant or Head Coach

## Criminal Justice

Criminal Justice at Northwest College offers students an overview of the American criminal justice system and a survey of the theories, procedures, laws, and elements that guide our justice system. Students acquire a general knowledge of the origins and methods of the police, courts, and correctional systems in America, as

well as their design structure and operation. An Associate of Arts degree in Criminal Justice provides a solid foundation of coursework for students interested in pursuing a baccalaureate degree in criminal justice studies, those wanting to become a practitioner within the field, or professionals already working within the field who need educational upgrading. Students must successfully complete the core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements of Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

### ASSOCIATE OF ARTS CRIMINAL JUSTICE

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Two semesters of foreign language (Spanish) could satisfy both Humanities and Comparative Cultural Awareness NWC general education requirements. Students transferring to UW in Criminal Justice Studies must have two semesters of a foreign language that could be acquired at Northwest College.*

#### Core Courses

Number and Title	Credits
CRMJ 2120—Introduction to Criminal Justice	3
CRMJ 2210—Criminal Law.....	3
CRMJ 2400—Criminology.....	3
SOSC 2395—Seminar in Social Science Research (Capstone Course) or other Capstone Course (in consultation with advisor) .....	3
<b>TOTAL</b>	<b>12</b>

#### Core Electives

Students must complete nine credits from the following list of approved courses.

Number and Title	Credits
CRMJ 1020—Introduction to Policing.....	3
CRMJ 2130—Criminal Investigation .....	3
CRMJ 2230—Law of Evidence .....	3
CRMJ 2350—Introduction to Corrections ...	3
<b>TOTAL</b>	<b>9</b>
General Electives selected in consultation with advisor .....	1-7

MINIMUM CREDITS FOR DEGREE = 64

## Denistry

See Pre-Professional Sciences

## Drafting Technology

Drafting is required for the design, development, manufacturing, and construction of most products. Drafters translate data and sketches from engineers, architects, and scientists into detailed drawings that are used in manufacturing and construction. The Drafting Technology Program at Northwest College provides students with a comprehensive education that focuses on the correct use of state-of-the-art Computer Aided Design and Drafting (CADD) software. Coursework covers basic through advanced two-dimensional (2-D) and the three-dimensional (3-D) CADD applications, through the effective use of individualized educational techniques. Students are exposed to a variety of drafting fields, including mechanical, architectural, structural, and civil drafting technology. Current drafting and related industry standards and techniques are covered in detail, in addition to building applicable work habits, logic, and skills. The program works well for students with disabilities, as customized computer workstations are available with adaptive equipment.

The Associate of Applied Science in Drafting Technology degree prepares students to work in the drafting industry after two years of study. The degree also provides students with an excellent background for additional study in Drafting Technology-related fields such as engineering, architecture, construction technology, technology education, and design. Students must complete the core courses with a “C-” or better grade. Students wanting to transfer to a four-year institution will need to take additional courses beyond the AAS degree requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF APPLIED SCIENCE DRAFTING TECHNOLOGY

### General Education Requirements

Number and Title	Credits
ART 1110—Design: 2-D.....	3
or	
ENTK 1500—Engineering Graphics .....	3
CO/M 1010—Public Speaking.....	3
ENGL 1010—Introduction to Composition	3
ENGL 2010—Technical Writing.....	3
Government.....	3-6
Wellness.....	2
<b>TOTAL</b>	<b>17-20</b>

Three hours of Mathematics will be fulfilled by taking Core Courses.

### Core Courses

Number and Title	Credits
BOTK 2950—Employment Orientation.....	1
BMIS 2000—Computer Information Systems	3
ENTK 1710—Architectural Drafting I.....	3
ENTK 1720—Architectural Drafting II.....	3
ENTK 1770—Structural Drafting.....	3
ENTK 2500—Computer Aided Drafting I..	3
ENTK 2505—Computer Aided Drafting II.	3
ENTK 2530—Computer Aided Drafting 3-D .....	3
ENTK 2550—Civil Drafting Technology.....	3
ENTK 2615—MicroStation Fundamentals..	3
ENTK 2685—Project Drafting (Capstone Course).....	3

### Option 1

Requirements for drafting students who plan to obtain the Associate of Applied Science degree and go directly into the workforce.

Number and Title	Credits
ES 2670—Practical Surveying.....	2
and	
MATH 1510—Technical Mathematics I.....	3

### Option 2

Recommendations for students who plan to transfer to a four-year civil, architectural, or engineering program.

Number and Title	Credits
ES 2070—Engineering Surveying.....	3
and	
MATH 1405—Precalculus Trigonometry.....	3
or	
MATH 1450—Precalculus Algebra and Trigonometry.....	5

**TOTAL 36-39**

### Recommended Electives

Number and Title	Credits
ART 1050—Drawing I.....	4
ART 1060—Drawing II.....	3

ART 2100—Computer Illustration - Adobe Illustrator.....	3
BIOL 2310—Introduction to Geographic Information Systems.....	3
CMAP 1930—LAN Wiring and Network Technology .....	3
ENTK 2625—Advanced MicroStation.....	3

MINIMUM CREDITS FOR DEGREE = 64

### SKILLS CERTIFICATE DRAFTING TECHNOLOGY

This certificate will prepare students to work in the drafting industry. The certificate also provides students with an excellent background for additional study in the Drafting Technology Associate of Applied Science degree program or related fields such as engineering, architecture, construction technology, technology education, and design.

### General Education Requirements

Number and Title	Credits
ENGL 1010—English I: Introduction to Composition.....	3
MATH 1510—Technical Mathematics I.....	3

### Core Courses

Number and Title	Credits
BMIS 2000—Computer Information Systems.....	3
ENTK 1710—Architectural Drafting I.....	3
ENTK 1720—Architectural Drafting II.....	3
ENTK 2500—Computer Aided Drafting I..	3
ENTK 2505—Computer Aided Drafting II.	3

### Core Electives

Number and Title	Credits
ART 1110—Design: 2-D.....	3
BIOL 2310—Introduction to Geographic Information Systems.....	3
BOTK 2950—Employment Orientation (Capstone Course).....	1
CO/M 1010—Public Speaking.....	3
ENGL 2010—Technical Writing.....	3
ENTK 1500—Engineering Graphics.....	3
HLED 1271—Diet and Exercise .....	2

TOTAL CREDITS FOR CERTIFICATE = 24

## Education

The first two years of preparation for a career as an early childhood, elementary, middle school, or secondary teacher can be accomplished at Northwest College. The Education Department offers courses which teach the basic principles and theo-

ries of teaching and learning. Through the cooperation of public school personnel, our students observe and gain practical experience in public school classrooms throughout the Big Horn Basin.

Academic advisors guide students in their career choices as well as advise them on course selection and transfer options.

Since teaching requires state certification, it is important that students consult with their advisors frequently to become informed of program requirements at four-year colleges. The catalog of the four-year transfer college must be consulted by the student when selecting courses.

## Education – Early Childhood

This program allows students to focus on Early Childhood Education for their associate of arts or science degree. Students completing this program can use this as a terminal degree and apply for CDA certification to work in a child care setting or apply for a substitute teaching certificate to work in the public schools in the state of Wyoming. Additionally, the transfer student could transfer to a university offering a four-year degree in early childhood teaching or other areas of service to young children. The core provides students the basic coursework in the field while allowing them the flexibility to tailor their program to their individual needs. Students must successfully complete core courses with a "C-" or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

### ASSOCIATE OF ARTS or ASSOCIATE OF SCIENCE EARLY CHILDHOOD EDUCATION

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33	
.....	36-42 (AA degree)
.....	31-37 (AS degree)

Three hours of Humanities and three hours of Social Science may be fulfilled by taking Core Electives.

## Core Courses

All the Core Courses meet outcome standards for Wyoming Teacher Certification in Early Childhood Education.

Number and Title	Credits
EDEC 1020—Introduction to Childhood Education .....	3
EDEC 1300—Curriculum Planning and Development For Young Children.....	3
EDEC 2200—Early Childhood Practicum (Capstone Course).....	3-5
FCSC 2121—Child Development.....	4
<b>TOTAL 13-15</b>	

## Core Electives

Students must complete eight credits from the following list of approved courses.

Number and Title	Credits
CO/M 2125—Family Communication.....	3
EDEC 1030—Infant Toddler Care.....	3
EDEC 1100—Child Guidance.....	3
EDEC 2010—Special Education for Children Birth to 8.....	3
EDEC 2435—Child Development (CDA) Seminar (Students holding a CDA certificate may apply to receive 3 credits in Core Electives in Early Childhood) ....	3
EDEX 2484—Introduction to Special Education .....	3
FCSC 1140—Nutrition .....	2
or	
FCSC 1141—Principles of Nutrition.....	3
LIBS 2280—Literature for Children.....	3
PSYC 1200—Human Development.....	3
PSYC 2300—Child Psychology.....	3
<b>TOTAL 8</b>	

General electives selected in consultation with advisor..... Up to 12 hours

MINIMUM CREDITS FOR DEGREE = 64

## SKILLS CERTIFICATE EARLY CHILDHOOD

### Core Courses

Number and Title	Credits
EDEC 1020—Introduction to Childhood Education .....	3
FCSC 2121—Child Development.....	4
HLED 1225—Standard First Aid and CPR..	2
EDEC 1300—Curriculum Planning and Development for the Young Child.....	3
EDEC 2200—Early Childhood Practicum...	3
EDEC 2435—Child Development (CDA) Seminar.....	3

TOTAL CREDITS FOR CERTIFICATE = 18

## Education – Elementary

Students completing the Elementary Education program can use it for transfer to a four-year college or as a terminal degree which would qualify them to obtain a substitute teaching certificate in the state of Wyoming. The core courses provide students the basic coursework in the field while allowing them the flexibility to tailor their program to their individual needs. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program will need additional courses beyond the program requirements in order to transfer as a junior. Students should consult with their advisor and the appropriate four-year college catalog. Selection of general education courses is often restricted by state certification requirements, so it is important for students to meet with their academic advisor each semester.

### ASSOCIATE OF ARTS OR ASSOCIATE OF SCIENCE ELEMENTARY EDUCATION

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33	
AA Degree.....	36-42
AS Degree .....	31-37

### Core Courses

Number and Title	Credits
EDEX 2484—Introduction to Special Education .....	3
MATH 1100—Theory of Arithmetic I.....	3
EDFD 1000—Introduction to Careers in Education .....	1
EDFD 2020—Foundations of Education .....	3
EDUC 2100—Practicum in Teaching (Capstone Course).....	3
PSYC 1200—Human Development .....	3
<b>TOTAL 16</b>	

### Core Electives

Students who intend to transfer should consult their advisor to ensure all transfer requirements are met. Six to seven credits from the following list of Core Electives must be completed.

Number and Title	Credits
EDFD 2100—Educational Psychology.....	3
I TEC 2360—Teaching with Technology .....	3
LIBS 2280—Literature for Children.....	3

MATH 1105—Theory of Arithmetic II .....	3
or	
MATH 1400—College Algebra.....	4
<b>TOTAL 6-7</b>	

Transfer and General Electives selected in consultation with advisor ..... 41-42

MINIMUM CREDITS FOR DEGREE = 64

## Education – Secondary

This program allows students to prepare for a career as an educator, teaching classes from the seventh through 12<sup>th</sup> grades. Since teachers must obtain state certification after graduation with the bachelor’s degree, it is important for those specializing in education to work closely with their advisors. Planning for transfer to a university involves selecting general education courses which will meet education program requirements and state certification regulations. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program will need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. Students should consult with their advisor and the appropriate four-year college catalog.

To become certified, all those interested in specializing in Secondary Education must complete coursework in their teaching area, i.e., the subjects they plan to teach. At Northwest College, these students are assigned an advisor in their teaching area who will assist them in selecting appropriate courses. Consult a catalog from the transfer college, as well as your advisor, when selecting courses. Most universities require students to complete 15 to 30 credit hours in their teaching area, in addition to the education program, in order to be admitted as juniors to secondary education programs. At Northwest College, students may complete teaching area courses in the following subjects: agriculture, art, biology, business, chemistry, English, English/communications, English/journalism, history, mathematics, modern languages-French, modern languages-Spanish, music, physical education, science, and social studies.

Those in Secondary Education are, in fact, specializing in two areas. In order to transfer to a four-year college as a junior, students must complete both the educa-

tion program and extensive coursework in the subjects they plan to teach. Consult your advisor every semester.

## ASSOCIATE OF ARTS or ASSOCIATE OF SCIENCE SECONDARY EDUCATION

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33	
AA Degree.....	36-42
AS Degree .....	31-37

### Core Courses

Number and Title	Credits
EDEX 2484—Introduction to Special Education .....	3
EDFD 1000—Introduction to Careers in Education .....	1
EDFD 2020—Foundations of Education .....	3
EDUC 2100—Practicum in Teaching (Capstone Course).....	3
PSYC 1000-General Psychology.....	4
PSYC 1200—Human Development .....	3
<b>TOTAL</b>	<b>17</b>

### Core Electives

Students who intend to transfer should consult their advisor to ensure all transfer requirements are met. At least three credits from the following list of Core Electives must be completed.

Number and Title	Credits
EDFD 2100—Educational Psychology.....	3
IITEC 2360—Teaching with Technology .....	3
<b>TOTAL</b>	<b>3</b>

Transfer and General Electives selected in consultation with advisor .....3-13

MINIMUM CREDITS FOR DEGREE = 64

## Electrical Apprenticeship

The Electrical Apprenticeship Program is designed to provide training for apprentices in the electrical industry. The training includes the study of the National Electrical Code and electrical theory principles and fundamentals. The program meets the required 144 hours of classroom instruction for apprentices mandated by the Department of Fire Prevention and Electrical Safety.

## COMPREHENSIVE SKILLS CERTIFICATE ELECTRICAL APPRENTICESHIP

Number and Title	Credits
ELAP 1515—Electrical Apprenticeship I.....	5
ELAP 1525—Electrical Apprenticeship II ...	5
ELAP 1535—Electrical Apprenticeship III..	5
ELAP 1545—Electrical Apprenticeship IV..	5
ELAP 1555—Electrical Apprenticeship V ...	5
ELAP 1565—Electrical Apprenticeship VI..	5
ELAP 1575—Electrical Apprenticeship VII	5
ELAP 1585—Electrical Apprenticeship VIII	5

TOTAL CREDITS FOR CERTIFICATE = 40

## Engineering

The various fields in engineering are related in that they all require a thorough understanding of basic scientific laws. Engineers apply scientific knowledge and principles to the design and operation of machines, to the selection of materials, to the environmental betterment of humankind, and to the economical use of personnel, money, and energy.

The Associate of Science in Engineering degree emphasizes the traditional core of engineering at the freshman and sophomore level. The program provides basic education in engineering with sufficient flexibility to allow students to transfer to a variety of four-year schools offering bachelor of science degrees in engineering. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF SCIENCE ENGINEERING

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Three hours of Mathematics may be fulfilled by taking Core Courses.*

### Core Courses

The following courses are traditionally considered to be the core of the first two years of an engineering curricula, as dictated by the American Board of Engineering and Technology Education (ABET) and by the content of the Fundamentals of Engineering Exam (FE).

Number and Title	Credits
ES 1000—Orientation to Engineering.....	1
ES 2110—Statics.....	3
ES 2120—Dynamics .....	3
MATH 2200—Calculus I.....	5
MATH 2205—Calculus II.....	5
MATH 2210—Calculus III .....	5
MATH 2310—Applied Differential Equations I (Capstone Course) .....	3
<b>TOTAL</b>	<b>25</b>

Transfer and General Electives selected in consultation with advisor .....15-18

### Transfer and General Electives

The student who plans to transfer to a four-year program in engineering will need to have additional hours beyond the program requirements at Northwest. These students should take courses from the following list of suggested electives in consultation with their advisors.

Number and Title	Credits
CHEM 1020—General Chemistry I.....	5
CHEM 1030—General Chemistry II.....	4
ENGL 2010—Technical Writing.....	3
ENTK 1500—Engineering Graphics.....	3
ENTK 2500—Computer Aided Drafting I..	3
ENTK 2505—Computer Aided Drafting II..	3
ENTK 2530—Computer Aided Drafting 3-D.....	3
ES 1060—Introduction to Engineering Computing .....	3
ES 2070—Engineering Surveying.....	3
ES 2210—Electrical Circuit Theory.....	4
ES 2310—Thermodynamics.....	4
ES 2330—Fluid Dynamics/Mechanics.....	3
ES 2410—Mechanics of Materials.....	3
PHYS 1310—College Physics I.....	4
PHYS 1320—College Physics II.....	4

## English – Literary Studies or Writing

English is a two-year program of study to prepare students for transfer, with an emphasis in Literary Studies or in Writing. Students normally transfer as English majors or English/Secondary Education double majors. In order to achieve an Associate of Arts in English degree, students must successfully complete core

courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

**ASSOCIATE OF ARTS  
ENGLISH – LITERARY STUDIES  
OR ENGLISH – WRITING**

**General Education Requirements**

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	36-42

**Core Courses  
Literary Studies or Writing Areas**

Number and Title	Credits
HUMN 2440—Dialogues in the Humanities (Capstone Course).....	3
<b>TOTAL 3</b>	

**Core Courses  
Literary Studies Areas**

Students must take four ENGL courses selected from the following list.

Number and Title	Credits
ENGL 2000—Introduction to Language .....	3
ENGL 2050—Creative Writing: Fiction.....	3
or	
ENGL 2080—Creative Writing: Poetry.....	3
ENGL 2210—English Literature I.....	3
ENGL 2220—English Literature II.....	3
ENGL 2230—Introduction to Shakespeare..	3
ENGL 2280—Introduction to Mythology ...	3
ENGL 2310—American Literature I.....	3
ENGL 2320—American Literature II.....	3
ENGL 2410—Literary Genres .....	3
<b>TOTAL 12</b>	

**Core Courses  
Writing Area**

Number and Title	Credits
Choose 3 from the following list:	
* ENGL 2010—Technical Writing.....	3
* ENGL 2017—Introduction to Research.....	3
* ENGL 2030—Critical Reading and Writing	3
ENGL 2041—Creative Nonfiction.....	3
ENGL 2050—Creative Writing: Fiction.....	3
ENGL 2080—Creative Writing: Poetry.....	3
JOUR 1100—Reporting and Newswriting I. 3	3
* ENGL 2010, 2017, or 2030 will not double count as meeting English general education requirements and a core course.	

Choose one from the following list:

ENGL 2210—English Literature I.....	3
ENGL 2220—English Literature II.....	3
ENGL 2230—Introduction to Shakespeare..	3
ENGL 2310—American Literature I.....	3
ENGL 2320—American Literature II.....	3
ENGL 2340—Native American Literature and Culture.....	3
ENGL 2410—Literary Genres .....	3

**Recommended Transfer and General Education Electives  
for Literary Studies and Writing Areas**

The following courses are recommended as electives for General Education Requirements and Transfer programs.

Number and Title	Credits
Two semesters of modern or classical language .....	6-8
HIST 1110—Western Civilization I.....	3
HIST 1120—Western Civilization II.....	3
ART 2010—Art History I.....	3
ART 2020—Art History II.....	3
MUSC 1000—Introduction to Music.....	3
MUSC 2050—Music History I.....	3
MUSC 2055—Music History II.....	3
THEA 2120—Oral Interpretation.....	3

MINIMUM CREDITS FOR DEGREE = 64

**ENGLISH EDUCATION**

Students who plan to teach at the secondary level should complete coursework both in the Secondary Education Program and in English. Many options exist for teaching English, English/communication, or English/journalism, and students need to work closely with their Northwest advisors to monitor the requirements of transfer institutions.

For those interested in exploring teaching possibilities, opportunities exist at Northwest for peer tutoring experiences.

**Environmental  
Biology**

*See Natural Resource Biology*

**Equine Studies**

Growth of the equine industry in the United States has created a demand for qualified personnel in all of its related fields. The associate degree program in equine studies is intended to provide

basic, practical, and theoretical grounds from which students may directly enter their fields of interest.

This two-year program has two degrees that emphasize a practical approach. The equine riding and training degree assists students in learning riding, training, and horse handling skills, in addition to related management concepts. Students must make arrangements to have a horse to use for in and out of class work. (It is not mandatory for the student to supply a horse for training, but all students are strongly urged to do so.) Students completing the program may find employment in riding academies, training stables, summer camps, and feed or saddle companies.

The equine business management degree is designed for those who would like to be involved in the sales and merchandising aspects of the equine industry. Students need not have a horse to pursue this exciting career field.

Students taking classes that require horses are encouraged to bring their own horse with them to campus. The college does not own horses for student use. Students wanting to enroll in a riding class must fill out an Equine Studies Application and provide a riding video in order to be placed in a riding class and stable a horse on campus. Students housing horses at NWC Equine Center must be enrolled in the appropriate Horse and Stall Care class and a riding class.

Both of the associate of applied science degrees have been designed to meet the sophisticated demands of today’s market.

**ASSOCIATE OF APPLIED SCIENCE  
EQUINE BUSINESS MANAGEMENT**

**General Education Requirements**

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	20-23

**Core Courses**

Number and Title	Credits
ACCT 2010—Principles of Accounting I.....	4
AGEC 2010—Farm and Ranch Business Records.....	3
AGRI 1010—Computers in Agriculture.....	2
or	

BMIS 2000—Computer Information Systems	3
BADM 2010—Business Law	3
BADM 2100—Small Business Practices	3
ECON 1010—Macroeconomics	3
or	
ECON 1020—Microeconomics	3
or	
AGEC 1010—Agriculture Economics I	3
or	
AGEC 1020—Agriculture Economics II	3
EQST 1510—Equine Nutrition	3
or	
ANSC 2020—Feeds and Feeding	3
EQST 1520—Horse Production I	3
EQST 1525—Horse Production II	3
EQST 1550—Equine Evaluation I	2
or	
EQST 2520—Equine Breeding	3
or	
EQST 2680—Western Horsemanship	3
EQST 2690—Hunt Seat Equitation	3
MKT 1000—Sales	3
or	
MKT 2100—Principles of Marketing	3
MGT 2100—Principles of Management	3
EQST 2515—Horse Show/Clinic/Event Management	2
<b>TOTAL 40-41</b>	

Capstone course selected in consultation with advisor .....1-3

MINIMUM CREDITS FOR DEGREE = 64

## ASSOCIATE OF APPLIED SCIENCE EQUINE RIDING AND TRAINING

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	20-23

### Core Courses

Number and Title	Credits
ANSC 2430—Comparative Anatomy/Physiology of Domestic Animals.....	4
EQST 1510—Equine Nutrition.....	2
or	
ANSC 2020—Feeds and Feeding.....	4
EQST 1520—Horse Production I.....	3
EQST 1525—Horse Production II.....	3
EQST 1540—Applied Horse and Stall Care I.....	1
EQST 1545—Applied Horse and Stall Care II.....	1
EQST 1550—Equine Evaluation I.....	2
EQST 1680—Horse Handling and Behavior.....	2
EQST 1805—Farrier Science I.....	2
EQST 2520—Equine Breeding.....	3
EQST 2540—Applied Horse and Stall Care III.....	1
EQST 2545—Applied Horse and Stall Care IV.....	1

EQST 2680—Western Horsemanship.....	3
EQST 2690—Hunt Seat Equitation.....	3
EQST 2800—Fundamentals of Teaching Riding.....	3
EQST 2810—Training and Development of the Western Horse I.....	3
or	
EQST 2830—Training and Development of the English Horse I.....	3
EQST 2820—Training and Development of the Western Horse II (Capstone Course).....	3
or	
EQST 2840—Training and Development of the English Horse II (Capstone Course).....	3
<b>TOTAL 40-42</b>	

General Electives selected in consultation with advisor .....6

MINIMUM CREDITS FOR DEGREE = 64

## SKILLS CERTIFICATE EQUINE CARE AND BASIC RIDING

This certificate is designed to promote quality care of the horse and give the student basic riding and occupational skills. Coursework covers equine safety, health management, nutrition, equine behavior, tack fitting and basic horse safety. Students will be prepared for jobs such as boarding stables operator, riding stable help, wrangler, trail ride guide, groom, equine salesperson, breeding farm operator, and farm sitter.

### Core Courses

Number and Title	Credits
EQST 1510—Equine Nutrition.....	2
EQST 1520—Horse Production I.....	3
EQST 1525—Horse Production II.....	3
EQST 2500—Equine Health Management.....	2
or	
ANSC 2020—Feeds and Feeding.....	4
EQST 1505—Basic Horsemanship.....	1
EQST 1550—Equine Evaluation.....	2
EQST 1645—Tack, Fit and Function.....	3
EQST 1680—Horse Handling and Behavior.....	2
<b>TOTAL 18-20</b>	

### Recommended Electives

Number and Title	Credits
EQST 1540—Applied Horse and Stall Care I.....	1
EQST 1805—Farrier Science I.....	2
EQST 1850—Blacksmithing I.....	2
EQST 2550—Training the Young Horse I.....	2
EQST 2520—Equine Breeding.....	3
EQST 2690—Hunt Seat Equitation.....	3
EQST 2680—Western Horsemanship.....	3

TOTAL CREDITS FOR CERTIFICATE = 18-20

## ASSOCIATE OF APPLIED SCIENCE FARRIER BUSINESS MANAGEMENT

The Farrier Business Management Program prepares students with needed skills in both farrier science and business. Students develop practical accounting, business technology, and management skills. Students also acquire background in equine anatomy and physiology, gait and lameness problems, approaches to equine balance, and the ways conformation relates to soundness and movement. Classroom time is complemented with significant time at the forge. Horses are provided so students have ample hands-on experience. Students become skilled in making corrective and therapeutic shoes as well as standard shoeing.

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	20-23

### Core Courses

Number and Title	Credits
ACCT 1050—Practical Accounting.....	3
AGEC 2020—Farm and Ranch Business Management (Capstone Course).....	4
AGRI 1010—Computers in Agriculture.....	2
BADM 2100—Small Business Practices.....	3
EQST 1520—Horse Production I.....	3
EQST 1550—Equine Evaluation I.....	2
EQST 1680—Horse Handling and Behavior.....	2
EQST 1805—Farrier Science I.....	2
EQST 1810—Farrier Science II.....	3
EQST 1815—Production Shoeing I.....	3
EQST 1820—Production Shoeing II.....	3
EQST 1825—Production Shoeing III.....	3
EQST 1830—Production Shoeing IV.....	3
EQST 1850—Blacksmithing I.....	2
WELD 1600—General Arc Welding.....	2-3
<b>TOTAL 40-41</b>	

General Electives selected in consultation with advisor .....7-9

MINIMUM CREDITS FOR DEGREE = 64

## SKILLS CERTIFICATE FARRIER: HORSE OWNER BASIC HOOF CARE

Students learn basic skills to trim and shoe horses. The skills practiced in class will allow for evaluation and treatment of minor lameness and gait problems. Classroom time is complemented with

significant time in lab. Horses are provided so students have ample hands-on experience. These courses could also be the foundation for continuing to the Professional Farrier Certificate or an Associate of Applied Science degree in Farrier Business Management.

Number and Title	Credits
EQST 1805—Farrier Science I.....	2
EQST 1810—Farrier Science II.....	3
EQST 1815—Production Shoeing I.....	3
EQST 1820—Production Shoeing II.....	3
EQST 1850—Blacksmithing I.....	2

MINIMUM CREDITS FOR CERTIFICATE = 13

### SKILLS CERTIFICATE PROFESSIONAL FARRIER

Students are prepared to pass the American Farrier's Association Certified Farrier test, demonstrating the knowledge and skill in farrier science to shoe horses professionally. Students acquire knowledge in equine anatomy and physiology, gait and lameness problems, approaches to equine balance, and the ways conformation relates to soundness and movement. Classroom time is complemented with significant time at the forge. Horses are provided so students have ample hands-on experience. Students become skilled in making corrective and therapeutic shoes as well as standard shoeing. This curriculum would fit well with the Farrier Business Management Associate of Applied Science degree program.

Number and Title	Credits
EQST 1680—Horse Handling and Behavior.	2
EQST 1805—Farrier Science I.....	2
EQST 1810—Farrier Science II.....	3
EQST 1815—Production Shoeing I.....	3
EQST 1820—Production Shoeing II.....	3
EQST 1825—Production Shoeing III.....	3
EQST 1830—Production Shoeing IV.....	3
EQST 1850—Blacksmithing I.....	2
EQST 1860—Blacksmithing II.....	2
WELD 1700—General Welding.....	3

MINIMUM CREDITS FOR CERTIFICATE = 26

## Farm and Ranch Management

The Farm and Ranch Program provides marketable, entry-level skills in management for positions in agriculture-related business and industry. Students obtain

a foundational knowledge of plant and animal sciences to augment business knowledge and skills. Graduates of this program enter the rapidly expanding job market in businesses which process and market agriculture commodities or businesses which sell goods and services to producers. Students planning to return to a farm or ranch enterprise will also find this program useful. The selection of electives allows students to pursue their areas of interest. Students must complete core courses with a "C-" or better to meet program requirements.

### ASSOCIATE OF APPLIED SCIENCE FARM AND RANCH MANAGEMENT

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	20-23

#### Core Courses

Number and Title	Credits
ACCT 1050—Practical Accounting.....	3
or	
ACCT 2010—Accounting I.....	4
AGEC 1010—Agricultural Economics I.....	3
AGEC 2010—Farm and Ranch Business Records.....	3
AGEC 2020—Farm and Ranch Business Management (Capstone Course).....	4
AGEC 2300—Agricultural Marketing.....	3
AGRI 1010—Computers in Agriculture.....	2
Agroecology/Agronomy Elective.....	3
Animal Science Elective.....	3
BADM 2010—Business Law.....	3
or	
BADM 2100—Small Business Practices.....	3
or	
MKT 1000—Sales.....	3
<b>TOTAL 27-28</b>	

General Electives selected in consultation with advisor.....7-10

MINIMUM CREDITS FOR DEGREE = 64

## Farrier

See *Equine Studies*

## Film, Radio, and Television

The Film, Radio, and Television Program provides students with hands-on, skill-

based instruction and practice coupled with the liberal arts and aesthetic components necessary for a well-rounded education and future career in film, radio, or television. The program offers multiple degree, certificate, and track options that prepare students for transfer and the workplace. Students interested in transfer should enroll in one of the Associate of Arts degree options. Students interested in heading straight to work should enroll in the Associate of Applied Science or Certificate options.

### ASSOCIATE OF ARTS FILM PRODUCTION

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	36-42

#### Core Courses

Number and Title	Credits
ENGL/JOUR 2075—Introduction to Screenwriting.....	3
HUMN 2450—Introduction to Film.....	3
JOUR 1000—Introduction to Mass Media...	3
JOUR 1320—Movie Production I.....	3
JOUR 1340—Documentary Filmmaking.....	2
JOUR 2340—Movie Production II.....	3
CO/M 2485—Sophomore Seminar: Communication (Capstone Course).....	3
or	
HUMN 2440—Dialogues in the Humanities (Capstone Course).....	3
<b>TOTAL 20</b>	

General Electives selected in consultation with advisor.....2-8

#### Recommended Electives

Number and Title	Credits
CO/M 1010—Public Speaking.....	3
ENGL/JOUR 2085—Advanced Screenwriting.....	3
ENGL 2090—Writing for Television and Radio.....	3
FLM/R 1960—Field Studies in Film, Radio, and Television.....	3
FLM/R 1970—Television Practicum I.....	2
FLM/R 2970—Television Practicum II.....	2
HUMN 2455—Television and American Culture.....	3
JOUR 2000—Broadcast Production.....	3
MUSC 1435—Audio Recording.....	3
MUSC 2435—Advanced Audio Recording..	3
PHTO 1610—Introduction to Photography	4
THEA 1100—Beginning Acting.....	3

MINIMUM CREDITS FOR DEGREE = 64

**ASSOCIATE OF ARTS  
SCREENWRITING**

**General Education Requirements**

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	36-42

**Core Courses**

Number and Title	Credits
ENGL/JOUR 2075—Introduction to Screenwriting.....	3
ENGL/JOUR 2085—Advanced Screenwriting.....	3
ENGL 2090—Writing for Television and Radio .....	3
HUMN 2450—Introduction to Film .....	3
JOUR 1000—Introduction to Mass Media...3	
JOUR 1320—Movie Production I .....	3
CO/M 2485—Sophomore Seminar: Communication (Capstone Course).....	3
or	
HUMN 2440—Dialogues in the Humanities (Capstone Course).....	3
<b>TOTAL 21</b>	

General Electives selected in consultation with advisor .....1-7

**Recommended Electives**

Number and Title	Credits
CO/M 1010—Public Speaking .....	3
ENGL 2041—Creative Nonfiction .....	3
ENGL 2050—Creative Writing: Fiction .....	3
ENGL 2055—Creative Writing: Writing in the Wild .....	3
ENGL 2080—Creative Writing: Poetry .....	3
FLM/R 1960—Field Studies in Film, Radio, and Television .....	3
FLM/R 1970—Television Practicum I.....	2
FLM/R 2970—Television Practicum II .....	2
HUMN 2455—Television and American Culture.....	3
JOUR 1340—Documentary Filmmaking.....	2
JOUR 2000—Broadcast Production.....	3
JOUR 2170—Broadcast Writing.....	3
JOUR 2340—Movie Production II.....	3
THEA 1100—Beginning Acting.....	3

MINIMUM CREDITS FOR DEGREE = 64

**ASSOCIATE OF APPLIED SCIENCE  
RADIO PRODUCTION**

**General Education Requirements**

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	20-23

**Core Courses**

Number and Title	Credits
CO/M 1010—Public Speaking .....	3
ENGL/JOUR 2075—Introduction to Screenwriting.....	3
ENGL 2090—Writing for Television and Radio .....	3
JOUR 1000—Introduction to Mass Media...3	
JOUR 1100—Reporting and Newswriting I.3	
JOUR 2000—Broadcast Production.....	3
JOUR 2170—Broadcast Writing.....	3
MUSC 1000—Introduction to Music.....	3
MUSC 1415—Audio Basics and Live Sound Reinforcement.....	3
MUSC 1435—Audio Recording.....	3
MUSC 2435—Advanced Audio Recording..3	
RADI 1970—Radio Practicum I.....	2
RADI 2500—Radio Station Management (Capstone Course).....	3
RADI 2970—Radio Practicum II .....	2
<b>TOTAL 40</b>	
General Electives selected in consultation with advisor.....	1-4

**Recommended Electives**

Number and Title	Credits
BADM 1000—Introduction to Business.....	3
ENGL/JOUR 2085—Advanced Screenwriting.....	3
FLM/R 1960—Field Studies in Film, Radio, and Television .....	3
FLM/R 1970—Television Practicum I.....	2
FLM/R 2970—Television Practicum II .....	2
HUMN 2455—Television and American Culture .....	3
JOUR 1320—Movie Production I .....	3
JOUR 2340—Movie Production II.....	3
MUSC 2025—World Music .....	3
MUSC 2050—Historical Survey I.....	3
MUSC 2055—Historical Survey II.....	3
THEA 1100—Beginning Acting.....	3

MINIMUM CREDITS FOR DEGREE = 64

**ASSOCIATE OF APPLIED SCIENCE  
TELEVISION PRODUCTION**

**General Education Requirements**

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	20-23

**Core Courses**

Number and Title	Credits
ENGL/JOUR 2075—Introduction to Screenwriting.....	3
ENGL 2090—Writing for Television and Radio .....	3
FLM/R 1970—Television Practicum I.....	2
FLM/R 2970—Television Practicum II .....	2
HUMN 2455—Television and American Culture .....	3

JOUR 1000—Introduction to Mass Media...3	
JOUR 1320—Movie Production I .....	3
JOUR 1340—Documentary Filmmaking.....	2
JOUR 2000—Broadcast Production.....	3
JOUR 2170—Broadcast Writing.....	3
MUSC 1435—Audio Recording.....	3
PHOTO 1610—Introduction to Photography 4	
CO/M 2485—Sophomore Seminar: Communication (Capstone Course).....	3
or	
HUMN 2440—Dialogues in the Humanities (Capstone Course).....	3
<b>TOTAL 37</b>	

General Electives selected in consultation with advisor .....4-7

**Recommended Electives**

Number and Title	Credits
CO/M 1010—Public Speaking .....	3
ENGL/JOUR 2085—Advanced Screenwriting.....	3
FLM/R 1960—Field Studies in Film, Radio, and Television .....	3
HUMN 2450—Introduction to Film .....	3
JOUR 2340—Movie Production II.....	3
MUSC 1415—Audio Basics and Live Sound Reinforcement.....	3
MUSC 2435—Advanced Audio Recording..3	
RADI 1970—Radio Practicum I.....	2
THEA 1100—Beginning Acting.....	3

MINIMUM CREDITS FOR DEGREE = 64

**COMPREHENSIVE SKILLS  
CERTIFICATE  
RADIO PRODUCTION**

**General Education Requirements**

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	6
<i>Completion of Core Courses fulfills General Education requirements.</i>	

**Core Courses**

Number and Title	Credits
CO/M 1010—Public Speaking .....	3
JOUR 1000—Introduction to Mass Media...3	
JOUR 2000—Broadcast Production.....	3
MUSC 1000—Introduction to Music.....	3
MUSC 1415—Audio Basics and Live Sound Reinforcement.....	3
MUSC 1435—Audio Recording.....	3
RADI 1970—Radio Practicum I.....	2
RADI 2500—Radio Station Management (Capstone Course).....	3
RADI 2970—Radio Practicum II .....	2
<b>TOTAL 25</b>	

Students must complete five credits from the Required Elective Options.....5

## Required Elective Options

Number and Title	Credits
BADM 1000—Introduction to Business.....	3
ENGL/JOUR 2075—Introduction to Screenwriting.....	3
ENGL 2090—Writing for Television and Radio.....	3
FLM/R 1960—Field Studies in Film, Radio, and Television.....	3
FLM/R 1970—Television Practicum I.....	2
FLM/R 2970—Television Practicum II.....	2
HUMN 2455—Television and American Culture.....	3
JOUR 1320—Movie Production I.....	3
JOUR 2170—Broadcast Writing.....	3
JOUR 2340—Movie Production II.....	3
MUSC 2025—World Music.....	3
MUSC 2050—Historical Survey I.....	3
MUSC 2055—Historical Survey II.....	3
MUSC 2435—Advanced Audio Recording..	3
THEA 1100—Beginning Acting.....	3

MINIMUM CREDITS FOR CERTIFICATE = 30

## Forestry

See *Natural Resource Biology*

## French

See *Modern Languages*

## Gas Metal Arc Welding (GMAW)

See *Welding*

## Gas Tungsten Arc Welding (GTAW)

See *Welding*

## General Studies

See *page 28*

## Graphics

The Graphics Program at Northwest College has been developed to provide students with career preparation in the related fields of design, prepress, and printing united by a common core of classes. Required courses beyond the core curriculum are designed to help students focus their education toward developing individual strengths and interests. The

associate of applied science degree prepares students for entry-level positions in the graphic arts industry. The associate of arts is a transfer-oriented degree designed for students intending to continue at a four-year institution.

### Graphics Core Courses

Number and Title	Credits
ART 1110—Design: 2-D.....	3
ART 2100—Computer Illustration - Adobe Illustrator.....	3
GRAR 1510—Introduction to Graphic Arts	3
GRAR 1800—Introduction to Macintosh (or successful waiver exam).....	3
GRAR 1810—Electronic Publishing: InDesign.....	3
or GRAR 1820—Electronic Publishing: QuarkXPress.....	3
<b>TOTAL</b>	<b>15</b>

### ASSOCIATE OF ARTS GRAPHICS – DESIGN

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	36-42

*Six hours of Visual & Performing Arts will be fulfilled by taking Core Courses.*

#### Core Courses

Number and Title	Credits
Graphics Core Courses (see page 54).....	15
ART 1130—Design: Color.....	3
ART 2120—Graphic Design I.....	3
ART 2130—Graphic Design II.....	3
GRAR 2750—Magazine Editing and Management (Capstone Course).....	3
or ART 2479—Special Projects: Graphic Design (Capstone Course).....	3
or ART 2465—Art Portfolio (Capstone Course).	2
<b>TOTAL</b>	<b>26-27</b>

MINIMUM CREDITS FOR DEGREE = 64

### ASSOCIATE OF APPLIED SCIENCE GRAPHICS – DESIGN

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	20-23
<i>Three hours of General Education may be fulfilled by taking Core Courses.</i>	

### Core Courses

Number and Title	Credits
Graphics Core Courses (see page 54).....	15
ART 1130—Design: Color.....	3
ART 1050—Drawing I.....	3
ART 2010—Art History I.....	3
or ART 2020—Art History II.....	3
ART 2120—Graphic Design I.....	3
ART 2130—Graphic Design II.....	3
ART 2110—Typography.....	3
ART 2155—Foundations in Web Design.....	3
or GRAR 2555—Foundations in Web Design..	3
GRAR 1610—Offset Production I.....	3
GRAR 1720—Imaging for Print Reproduction.....	3
GRAR 2750—Magazine Editing and Management (Capstone Course).....	3
or ART 2479—Special Projects: Graphic Design (Capstone Course).....	3
or ART 2465—Art Portfolio (Capstone Course).....	2
<b>TOTAL</b>	<b>44-45</b>

MINIMUM CREDITS FOR DEGREE = 64

### ASSOCIATE OF APPLIED SCIENCE GRAPHICS – PREPRESS PRODUCTION

Prepress Production involves the overlooked but ever-so-important area of prepress. This profession most often works between the graphic design and the printing departments. Prepress professionals must have a good sense of graphic design but also know how to prepare a printed piece to ensure the highest quality of reproduction while keeping production costs to a minimum. Members of the prepress community are often requested to repair and “tweak” files from designers that might otherwise result in an inferior product once on the printing press. This task is often referred to as “preflight.” As a result, the prepress professional is expected to have a full understanding of the printing process while knowing all the major graphics software packages used in the graphic design and publishing professions.

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	20-23

*Three hours of General Education may be fulfilled*

by taking Core Courses. Three hours of Math may be fulfilled by taking GRAR 2710.

### Core Courses

Number and Title	Credits
Graphics Core Courses (see page 54) .....	15
ART 1130—Design: Color .....	3
ART 2120—Graphic Design I .....	3
ART 2465—Art Portfolio .....	2
GRAR 1610—Offset Production I .....	3
GRAR 1620—Offset Production II .....	3
GRAR 1720—Imaging for Printing Reproduction .....	3
GRAR 1820—Electronic Publishing: QuarkXPress .....	3
GRAR 1950—Preflighting/Image Assembly (fulfills 3 credits of Graphics Core above) .....	3
PHTO 1600—Survey of Photography .....	3
or	
PHTO 1610—Introduction to Photography .....	4
or	
PHTO 2650—Digital Imaging I .....	3

#### One course from the following list of approved capstone courses:

ART 2479—Special Projects: Graphic Design (Capstone Course) .....	3
or	
GRAR 2750—Magazine Editing and Management (Capstone Course) .....	3

**TOTAL 44-45**

MINIMUM CREDITS FOR DEGREE = 64

### ASSOCIATE OF APPLIED SCIENCE GRAPHICS – PRINTING PRODUCTION

Printing production is designed to prepare students to enter the graphic arts/printing profession as offset printing press operators. Some might think of it as boot camp for printers. Included with the thorough study and hands-on experience of the printing press, printing production students will also be exposed to the fundamentals of graphic design allowing them a better understanding of the discipline that generates the work that is targeted for the printing press. These students will also get a basic background in prepress which will assist them in their communications with the area that works in concert with printing. This degree also provides the groundwork for print management training. A second two-year business degree or transfer to a four-year school to study business is recommended for those seeking a career in the administrative area of the printing industry.

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33 .....	20-23

*Three hours of Humanities/Social Science/Visual & Performing Arts/Science may be fulfilled by taking Core Courses. Three hours of Math may be fulfilled by taking GRAR 2710.*

### Core Courses

Number and Title	Credits
Graphics Core Courses (see page 54) .....	15
ART 1130—Design: Color .....	3
ART 2120—Graphic Design I .....	3
ART 2465—Art Portfolio .....	2
GRAR 1610—Offset Production I .....	3
GRAR 1620—Offset Production II .....	3
GRAR 1720—Imaging for Printing Reproduction .....	3
GRAR 1950—Preflighting/Image Assembly .....	3
* GRAR 2710—Print Estimating .....	3
GRAR 2810—Advanced Press .....	3
PHTO 1600—Survey of Photography .....	3
or	
PHTO 1610—Introduction to Photography .....	4
or	
PHTO 2650—Digital Imaging I .....	3

#### One course from the following list of approved capstone courses:

ART 2479—Special Projects: Graphic Design (Capstone Course) .....	3
or	
GRAR 2750—Magazine Editing and Management (Capstone Course) .....	3

**TOTAL 37-38**

MINIMUM CREDITS FOR DEGREE = 64

*\*Fulfills Math requirement for AAS program.*

### SKILLS CERTIFICATE BASIC GRAPHIC ARTS PRODUCTION

This certificate acknowledges students' understanding of graphics equipment, Macintosh software applications, and preliminary design skills.

Number and Title	Credits
ART 1110—Design: 2-D .....	3
GRAR 1510—Introduction to Graphic Arts .....	3
GRAR 1800—Introduction to Macintosh .....	3

TOTAL CREDITS FOR CERTIFICATE = 9

### SKILLS CERTIFICATE GRAPHICS ADMINISTRATION

This certificate acknowledges students' understanding and the basic skills

required to begin an administrative career in the graphics industry.

Number and Title .....	Credits
GRAR 1510—Introduction to Graphic Arts .....	3
GRAR 1610—Offset Production I .....	3
GRAR 1620—Offset Production II .....	4
GRAR 1720—Imaging for Print Reproduction .....	3
GRAR 2710—Print Estimating .....	3
ACCT 1050—Practical Accounting .....	3
BADM 1000—Introduction to Business .....	3

TOTAL CREDITS FOR CERTIFICATE = 22

### SKILLS CERTIFICATE LITHOGRAPHIC OFFSET PRESS

This certificate acknowledges students' understanding and the basic skills required to begin or upgrade a career in offset press operation.

Number and Title .....	Credits
GRAR 1510—Introduction to Graphic Arts .....	3
GRAR 1610—Offset Production I .....	3
GRAR 1620—Offset Production II .....	4
GRAR 1720—Imaging for Print Reproduction .....	3
GRAR 2710—Print Estimating .....	3
GRAR 2810—Advanced Press .....	3

TOTAL CREDITS FOR CERTIFICATE = 19

### SKILLS CERTIFICATE OFFSET DUPLICATOR

This certificate acknowledges students' understanding and the basic skills required to begin a career in offset duplicator operation.

Number and Title .....	Credits
GRAR 1510—Introduction to Graphic Arts .....	3
GRAR 1610—Offset Production I .....	3
GRAR 1620—Offset Production II .....	4
GRAR 1720—Imaging for Print Reproduction .....	3

TOTAL CREDITS FOR CERTIFICATE = 13

### SKILLS CERTIFICATE PREPRESS

This certificate acknowledges students' background and the skills in prepress required of those wishing to work in the area of prepress which includes but is not limited to preflight files troubleshooting, building and editing files for proper output and efficiency, adjusting images for optimal printing conditions, and assembling files for output to various output devices (e.g., imagesetters, plate-setters, and wide-format printers).

Number and Title	Credits
GRAR 1510—Introduction to Graphic Arts	3
GRAR 1610—Offset Production I	3
GRAR 1800—Introduction to Macintosh	3
GRAR 1810—Electronic Publishing:	
InDesign	3
or	
GRAR 1820—Electronic Publishing:	
QuarkXPress	3
GRAR 1950—Preflighting/Image Assembly	3
PHTO 2650—Digital Imaging I	3
or	
GRAR 1720—Imaging for Print	
Reproduction	3

TOTAL CREDITS FOR CERTIFICATE = 18

### SKILLS CERTIFICATE PROFESSIONAL DESKTOP PUBLISHING

This certificate acknowledges students' understanding of professional desktop software and practices employed for efficient and successful output and production of documents targeted for print and publishing.

Number and Title	Credits
GRAR 1510—Introduction to Graphic Arts	3
GRAR 1800—Introduction to Macintosh	3
GRAR 1810—Electronic Publishing:	
InDesign	3
GRAR 1820—Electronic Publishing:	
QuarkXPress	3
GRAR 1720—Imaging for Print	
Reproduction	3
or	
PHTO 2650—Digital Imaging I	3

TOTAL CREDITS FOR CERTIFICATE = 15

### SKILLS CERTIFICATE WEB DESIGN AND APPLICATION

This certificate is designed for students wishing to develop the skills necessary to design and manage a basic Web site.

Number and Title	Credits
ART/PHTO 2165—Issues in Web Design	3
INET 1610—Dynamic Web Graphics:	
Flash	3
INET 2010—Database Driven Web Sites	3
PHTO 2650—Digital Imaging I	3
PHTO 2660—Web Page Design	3

TOTAL CREDITS FOR CERTIFICATE = 15

## Head Coach

This certificate is designed for students wishing to meet the requirements for head coach endorsement by the Wyo-

oming Professional Teaching Standards Board. Students must have completed the requirements for or received the Assistant Coach Certificate.

### SKILLS CERTIFICATE HEAD COACH

Number and Title	Credits
PSYC 1000—General Psychology	4
PSYC 1200—Human Development	3

TOTAL CREDITS FOR CERTIFICATE = 7

## Help Desk

See *Business Technology*

## History

The function of history courses is not merely to train professional historians, but also to explain the past for our time. It is the habit of history that gives us a deeper insight into our humanity by looking at the alternatives provided by others.

This program permits students to focus on history as a course of study for their associate of arts degree. The core provides students the basic coursework in the field while allowing them the flexibility to tailor their program to their individual needs. Students must successfully complete core courses with a "C-" or better to meet program requirements. Students who are planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

### ASSOCIATE OF ARTS HISTORY

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33	36-42

*Six hours of Humanities, six hours of Social Science, three hours of Government, and six hours of Comparative Cultural Awareness will be fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
HIST 1110—Western Civilization I	3
HIST 1120—Western Civilization II	3
HIST 1210—United States History I	3
HIST 1221—United States From 1865	3
SOSC 2395—Seminar in Social Science	
Research (Capstone Course) or other	
Capstone Course (in consultation with	
advisor)	3
<b>TOTAL 15</b>	

### Core Electives

Students must complete six credits from the following list of approved courses.

Number and Title	Credits
HIST 1100—Ancient Civilization	3
HIST 1229—History of Yellowstone	3
HIST 1250—History of Wyoming	3
HIST 1280—History of Montana	3
HIST 1290—History of United States West	3
HIST 2050—Introduction to Public History	3
HIST 2070—The Holocaust: A Survey	3
HIST 2112—Revolutionary Europe	3
HIST 2115—20th Century Europe	3
HIST 2120—Ancient Greece	3
HIST 2130—Ancient Rome	3
HIST 2140—Ancient Near East	3
HIST 2290—North American Indians	3
HIST 2420—History of Crime and Justice	3

General electives selected in consultation with advisor.....23-25

### HISTORY/SOCIAL SCIENCE EDUCATION

For secondary education, to facilitate transfer to a four-year college as a junior, students planning to become middle school or high school history/social studies teachers are encouraged to complete programs in both Secondary Education and in the subject(s) they plan to teach. Consult your advisor every semester when selecting courses.

## Journalism

The Journalism Program at Northwest College offers introductory courses for students who plan to transfer to a four-year institution in pursuit of a bachelor's degree. Students may choose from print or Web/broadcast programs. Print-related courses prepare students for careers in newspapers and magazines, including reporting and writing,

photojournalism, editing, page layout and design. Web/broadcast courses provide training for careers in television, radio and the Internet, such as reporting, video camera operation, editing, announcing and Web-delivered content including audio, video and streaming media.

**ASSOCIATE OF ARTS  
JOURNALISM PRINT**

This program allows students to explore journalistic print media for their associate of arts degree. The core provides students the basic coursework in the field while allowing them the flexibility to tailor their program to their individual needs. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

**General Education Requirements**

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	36-42

*Six hours of Humanities will be fulfilled by taking Core Courses.*

**Core Courses**

Number and Title	Credits
JOUR 1000—Introduction to Mass Media... 3	
JOUR 1010—Publications Production I....1-2	
JOUR 1100—Reporting and Newswriting I. 3	
JOUR 2100—Reporting and Newswriting II 3	
JOUR 2010—Publications Production II...1-2	
JOUR 2140—News Editing ..... 3	
CO/M 2485—Sophomore Seminar: ..... 2	
<b>TOTAL 16-18</b>	

General Electives selected in consultation with advisor .....4-12

MINIMUM CREDITS FOR DEGREE = 64

**ASSOCIATE OF ARTS  
JOURNALISM WEB/  
BROADCASTING**

This program allows students to explore journalistic Web/broadcasting for their associate of arts degree. The core provides

students the basic coursework in the field while allowing them the flexibility to tailor their program to their individual needs. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

**General Education Requirements**

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	36-42

*Six hours of Humanities will be fulfilled by taking Core Courses.*

**Core Courses**

Number and Title	Credits
JOUR 1000—Introduction to Mass Media... 3	
JOUR 1020—Webcasting Practicum I .....1-2	
JOUR 1100—Reporting and Newswriting I. 3	
JOUR 2100—Reporting and Newswriting II 3	
JOUR 2020—Webcasting Practicum II ....1-2	
JOUR 2000—Broadcast Production ..... 3	
CO/M 2485—Sophomore Seminar: Communication (Capstone Course)..... 2	
<b>TOTAL 16-18</b>	

General Electives selected in consultation with advisor.....4-12

MINIMUM CREDITS FOR DEGREE = 64

**SKILLS CERTIFICATE  
JOURNALISM ENDORSEMENT FOR  
PUBLIC SCHOOL TEACHERS**

**Core Courses**

Number and Title	Credits
JOUR 1000—Introduction to Mass Media... 3	
JOUR 1100—Reporting and Newswriting I. 3	
JOUR 2320—Publications Production for High School Advisors..... 3	

TOTAL CREDITS FOR CERTIFICATE = 9

**Liberal Studies**

See page 29

**Literary Studies**

See English

**Lithographic Offset  
Press**

See Graphics

**Mathematics**

Mathematics courses are designed to meet the needs of students in all departments of the college: students who plan to teach mathematics; those specializing in such fields as chemistry, physics, and engineering who need a foundation in mathematics; and students who pursue other academic careers and want practice in the art of logical, clear, and accurate thinking.

Individuals who want to concentrate in mathematics in a program designed for transfer to a four-year institution may pursue an Associate of Science in Mathematics degree.

This degree emphasizes the traditional core of mathematics at the freshman and sophomore level. The program provides basic education in mathematics with sufficient flexibility to allow students to transfer to a variety of four-year schools offering bachelor of science degrees in mathematics. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students who are planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

**ASSOCIATE OF SCIENCE  
MATHEMATICS**

**General Education Requirements**

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Three hours of Mathematics may be fulfilled by taking Core Courses.*

## Core Courses

Students must complete four of the five courses.

Number and Title	Credits
MATH 1405—Precalculus Trigonometry	3
or	
MATH 1450—Precalculus Algebra/ Trigonometry	5
MATH 2200—Calculus I	5
MATH 2205—Calculus II	5
MATH 2210—Calculus III	5
MATH 2310—Applied Differential Equations I (Capstone Course)	3
<b>TOTAL</b>	<b>21-23</b>

(Students taking MATH 2310 may use it for their capstone course. Students not taking MATH 2310 will need to take a different capstone course selected in consultation with their advisors.)

Transfer and General Electives selected in consultation with advisor .....21-28

## MATHEMATICS EDUCATION

To facilitate transfer to a four-year college, students planning to become middle school or high school mathematics teachers are encouraged to complete both the Secondary Education program and the Mathematics program. Consult your advisor every semester when selecting courses.

## Medicine

See *Pre-Professional Sciences*

## Modern Languages

This program allows students to focus on the French or Spanish languages for their associate of arts degree. Students must successfully complete core courses with a “C-” or better to meet program requirements. After completing the core requirements, students will have the foundation necessary to continue at the intermediate or advanced levels of French or Spanish at a transfer institution. With the choices offered in Recommended Core Electives, students will also be exposed to a second foreign language and classes that focus on the relationship of language, culture and society. Students planning to transfer to a four-year program may need to have additional hours beyond the program

requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF ARTS MODERN LANGUAGES

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33	36-42

### Core Courses French Option

Number and Title	Credits
HUMN 2440—Dialogues in the Humanities (Capstone Course)	3
and	
Any combination of the following classes equivalent to four semesters or 14-16 credit hours in French:	
FREN 1010—First Year French I	4
FREN 1020—First Year French II	4
FREN 2030—Second Year French I	4
FREN 2040—Second Year French II	4
FREN 2210—Intermediate Conversation and Composition I	3
FREN 1475—Independent Study in French	1-3
<b>TOTAL</b>	<b>17-19</b>

### Recommended Transfer and General Education Electives

The following courses are recommended as electives for General Education Requirements and Transfer programs.

Number and Title	Credits
ANTH 1200—Introduction to Cultural Anthropology	3
ART 2020—Art History II	3
ENGL 1210—English as a Second Language	3
ENGL 2000—Introduction to Language	3
FREN 2460—French Field Studies	1-3
HUMN 2420—Introduction to Cross-Cultural Studies	3
HUMN 2445—Introduction to U.S. Culture	3
HUMN 2460—Humanities Field Studies	1-3
SPAN 1010—First Year Spanish I	4
SPAN 1020—First Year Spanish II	4
SPAN 2460—Spanish Field Studies	1-3

### Core Courses Spanish Option

Number and Title	Credits
HUMN 2440—Dialogues in the Humanities	3

(Capstone Course) ..... 3  
and

Any combination of the following classes equivalent to four semesters or 14-16 credits hours in Spanish:

SPAN 1010—First Year Spanish I	4
SPAN 1020—First Year Spanish II	4
SPAN 1475—Independent Study in Spanish	1-3
SPAN 2030—Second Year Spanish I	4
SPAN 2040—Second Year Spanish II	4
SPAN 2140—Introduction to Literature	3
SPAN 2210—Intermediate Conversation and Composition I	3
SPAN 2220—Intermediate Conversation and Composition II	3
SPAN 2460—Field Studies	1-3
<b>TOTAL</b>	<b>17-19</b>

## Core Electives

Students should choose courses from the following list totaling 3-7 credits.

Number and Title	Credits
ANTH 1200—Introduction to Cultural Anthropology	3
ART 2020—Art History II	3
ENGL 1210—English As A Second Language	3
ENGL 2000—Introduction to Language	3
ENGL 2210—English Literature I	3
ENGL 2220—English Literature II	3
ENGL 2410—Literary Genres: Native American Literature	3
FREN 1010—First Year French I	4
FREN 1020—First Year French II	4
HUMN 2420—Introduction to Cross-Cultural Studies	3
HUMN 2445—Introduction to U.S. Culture	3
HUMN 2460—Humanities Field Studies	1-3
SPAN 2460—Spanish Field Studies	1-3

MINIMUM CREDITS FOR DEGREE = 64

## MODERN LANGUAGE EDUCATION

Students who plan to teach at the secondary level should complete coursework both in the Secondary Education program and in their primary language (French or Spanish). Students need to work closely with their Northwest advisors to monitor the requirements of transfer institutions. Language majors have found it helpful to initiate study of a second foreign language during their first two years of college work. Northwest’s course offerings and scheduling support such an option.

# Music

Musicians live and work in sound. They inhale life around them and exhale their response to that life in organized sounds. Since music learning must handle various aspects of these sounds, our music curriculum involves elements of theory, history, cultural understanding, personal skill development, technology use, and both group and individual performance. The following curricular demands and outcomes are those typically required during the first two years of a four-year music degree, as recommended by the National Association of Schools of Music (NASM) accrediting body in their curricular guidelines for accredited colleges. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF ARTS MUSIC

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	36-42

*Six hours of Visual and Performing Arts and six hours of Comparative Cultural Awareness will be fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
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 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.....	3
MUSC 2055 Historical Survey II (Capstone Course).....	3
<b>TOTAL 22</b>	

Transfer and General Electives selected in consultation with advisor .....6-12

## Recommended Transfer and General Electives

The Music Department and four-year transfer colleges and universities expect music majors to take applied music and ensembles every semester. Piano proficiency is required for a bachelor's degree in music. The piano proficiency exam should be taken here before transfer to another college. Piano class or applied piano is taken until the proficiency exam is passed. Passing of the piano proficiency will be posted on the transcript.

Number and Title	Credits
MUSC 0200—Convocation (4 semesters) ....	0
MUSC 1290—Class Piano I.....	1
or	
MUSC 1200—Piano I.....	1
MUSC 1295—Class Piano II	
or	
MUSC 1200—Piano I.....	1
MUSC 2290—Class Piano III.....	1
or	
MUSC 2200—Piano II.....	1
MUSC 2295—Class Piano IV.....	1
or	
MUSC 2200—Piano II.....	1
MUSC—Music Ensemble (4 semesters).....	4
MUSC—Applied Music (major instrument/voice).....	8

Music education students should take the following courses:

Number and Title	Credits
MUSC 1025—Introduction to Music Education.....	2
MUSC 1310—Public School Music: Brass I.....	1
MUSC 1350—Public School Music: Woodwinds I.....	1

### Music Electives

Number and Title	Credits
MUSC 1000—Introduction to Music.....	3
MUSC 1415—Audio Basics and Live Sound Reinforcement.....	2
MUSC 1435—Audio Recording.....	3
MUSC 2060—Jazz Improvisation I.....	1
MUSC 2065—Jazz Improvisation II.....	1
MUSC 2370—Rock and Roll - Its History and Culture.....	3
MUSC 2440—Electronic Musicianship: Synths and MIDI.....	3
MUSC 2435—Advanced Audio Recording..	3

MINIMUM CREDITS FOR DEGREE = 64

## ASSOCIATE OF SCIENCE MUSIC

The associate of science degree fits between the Associate of Arts and the Associate of Applied Science degrees. It features music courses from the Associate of Arts degree but also brings in music technical and technology courses. This degree's courses will transfer, but students may have to take more general education courses at a four-year college.

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Three hours of Visual and Performing Arts will be fulfilled with Core Courses.*

### Core Courses

Number and Title	Credits
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 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—Music History Survey I.....	3
MUSC 2055—Music History Survey II (Capstone Course).....	3
<b>TOTAL 22</b>	

Transfer and General Electives selected in consultation with advisor .....8-14

## Recommended Transfer and General Electives

Number and Title	Credits
MUSC 0200—Convocation (4 semesters) ....	0
MUSC 1290—Class Piano I.....	1
or	
MUSC 1200—Piano I.....	2
MUSC 1295—Class Piano II.....	1
or	
MUSC 1200—Piano I.....	2
MUSC 2290—Class Piano III.....	1
or	
MUSC 2200—Piano II.....	2
MUSC 2295—Class Piano IV.....	1
or	
MUSC 2200—Piano II.....	2
MUSC—Music Ensemble (4 semesters).....	4
MUSC—Applied music (major instrument/voice).....	8

## Music Electives

Number and Title	Credits
MUSC 1415—Audio Basics and Live Sound Reinforcement .....	2
MUSC 1435—Audio Recording.....	3
MUSC 2060—Jazz Improvisation I.....	1
MUSC 2065—Jazz Improvisation II.....	1
MUSC 2370—Rock and Roll - Its History and Culture.....	3
MUSC 2435—Advanced Audio Recording..	3
MUSC 2440—Electronic Musicianship: Synths and MIDI .....	3

MINIMUM CREDITS FOR DEGREE = 64

## ASSOCIATE OF APPLIED SCIENCE MUSIC

### General Education Requirements

Number and Title	Credits
POLS 1000—American and Wyoming Government.....	3
or	
HIST 1221—United States from 1865 .....	3
or	
HIST 1210—United States History I.....	3
and	
HIST 1250—History of Wyoming.....	3
ENGL—English Requirement .....	6
MATH—Any College-Level Mathematics 3-5	3-5
or	
BADM 1005—Business Mathematics .....	3
Humanities/Lab Science/Social Science.....	6
Wellness Education .....	2

TOTAL 20-25

### Core Courses

Number and Title	Credits
MUSC 0200—Convocation (4 semesters) ....	0
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 1290/1295—Class Piano I/II.....	2
MUSC 1415—Audio Basics and Live Sound Reinforcement .....	3
MUSC 1435—Audio Recording.....	3
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—Music History Survey I.....	3
MUSC 2055—Music History Survey II (Capstone Course).....	3
MUSC 2290/2295—Class Piano III/IV .....	2
MUSC—Music Ensemble (4 semesters).....	4
MUSC—Applied Music (major instrument/voice) .....	8

TOTAL 44

## Recommended Electives

Number and Title	Credits
BADM 1000—Introduction to Business .....	3
MUSC 1310—Public School Music: Brass ...	1
MUSC 1350—Public School Music: Woodwind.....	1
MUSC 1325—Public School Music: Percussion.....	1
MUSC 1270/2270—Voice.....	1
MUSC 2370—Rock and Roll - Its History and Culture.....	3

TOTAL CREDITS FOR DEGREE = 64

## MUSIC EDUCATION

For secondary education, to facilitate transfer to a four-year college as a junior, students planning to become middle school or high school music teachers are encouraged to complete programs in both Secondary Education and in the subject(s) they plan to teach. Consult your advisor every semester when selecting courses.

## Music Technology

The Associate of Applied Science degree in Music Technology prepares students for technical, technological, and business careers in the music industry. Meant to be a terminal degree, the associate of applied science will help students learn production techniques in music recording, live sound reinforcement, sound for film, and computer-based music education tools necessary in modern times.

## ASSOCIATE OF APPLIED SCIENCE MUSIC TECHNOLOGY

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	20-23

### Core Courses

Number and Title	Credits
GRAR 1800—Introduction to Macintosh....	3
MUSC 0200—Convocation (2 semesters) ....	0
MUSC 1000—Introduction to Music.....	3
MUSC 1010—Music Fundamentals.....	2
MUSC 1290—Class Piano I.....	1
or	
MUSC 1200—Piano I .....	2
MUSC 1295—Class Piano II.....	1
or	

MUSC 1200—Piano I .....	2
MUSC 1415—Audio Basics and Live Sound Reinforcement .....	3
MUSC 1435—Audio Recording.....	3
MUSC 1970—Internship: Music Technology I.....	2
MUSC 2435—Advanced Audio Recording..	3
MUSC 2440—Electronic Musicianship: Synths and MIDI .....	3
MUSC 2500—Electronic Portfolio (Capstone Course).....	3
MUSC 2970—Internship: Music Technology II .....	2
MUSC—Music Ensemble (2 semesters).....	2
MUSC—Applied Music (major instrument/voice) (2 semesters).....	2

TOTAL 33-35

Electives selected in consultation with advisor..... 6-11

## Electives

### Multimedia Production

Number and Title	Credits
ART/PHTO 2165—Issues in Web Design..	3
HUMN 2450—Introduction to Film.....	3
JOUR 1020—Webcasting Practicum.....	1-2
PHTO 2650—Digital Imaging I .....	3
PHTO 2660—Web Page Design.....	3
PHTO 2760—Introduction to Digital Multimedia .....	3

### Recording Technology

Number and Title	Credits
MUSC 1000—Introduction to Music.....	3
MUSC 2025—World Music .....	3
MUSC 2050—Music History Survey I.....	3
MUSC 2055—Music History Survey II.....	3
MUSC 2370—Rock and Roll - Its History and Culture.....	3

### Electronic Composition

Number and Title	Credits
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 2030—Written Theory III.....	3
MUSC 2035—Aural Theory III.....	1
MUSC 2040—Written Theory IV .....	3
MUSC 2045—Aural Theory IV .....	1
MUSC 2060—Jazz Improvisation I .....	1
MUSC 2065—Jazz Improvisation II.....	1
MUSC 2290—Class Piano III .....	1
or	
MUSC 2200—Piano II .....	2
MUSC 2295—Class Piano IV .....	1
or	
MUSC 2200—Piano II .....	2

TOTAL CREDITS FOR DEGREE = 64

## SKILLS CERTIFICATE AUDIO TECHNICIAN

### Core Courses — Fall Semester

Number and Title	Credits
FLM/R 1960—Television Practicum I.....	2
or	
RADI 1970—Radio Practicum I.....	2
GRAR 1800—Introduction to Macintosh....	3
MUSC 1010—Music Fundamentals.....	2
MUSC 1415—Audio Basics and Live Sound Reinforcement .....	3
MUSC 1435—Audio Recording.....	3
MUSC 1970—Internship: Music Technology I.....	2
<b>TOTAL FALL SEMESTER</b>	<b>15</b>

### Core Courses — Spring Semester

Number and Title	Credits
MUSC 1000—Introduction to Music.....	3
FLM/R 1960—Television Practicum I.....	2
or	
MUSC 1290—Class Piano I.....	1
or	
MUSC—Applied Music (major instrument/voice) .....	1
or	
RADI 1970—Radio Practicum I.....	2
MUSC 2435—Advanced Audio Recording..	3
MUSC 2440—Electronic Musicianship: .....	
Synths and MIDI .....	3
MUSC 2970—Internship: Music Technology II .....	2
<b>TOTAL SPRING SEMESTER</b>	<b>12-13</b>

TOTAL CREDITS FOR CERTIFICATE = 27-28

## Natural Resource Biology

This program includes areas in **Environmental Biology, Forestry, Resource Management, and Wildlife Management**. The program of Natural Resource Biology provides coursework concerning ecological communities, plant and animal studies, and Geographic Information Systems. The courses required in this program parallel those found at four-year institutions and should transfer without difficulty. Students must successfully complete core courses with a “C-” or better to meet program requirements. Transfer courses are designed to aid students in completing their four-year degrees. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer

in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF SCIENCE NATURAL RESOURCE BIOLOGY

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Eight hours of Science will be fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
BIOL 1010—General Biology I.....	4
BIOL 2020—General Biology II .....	4
BIOL 2310—Introduction to Geographic Information Systems.....	3
BIOL 2400—Ecology .....	3
BIOL 2410—Field Ecology Lab.....	1
BIOL 2395—Biological Research (Capstone Course).....	1
<b>TOTAL</b>	<b>16</b>

### Core Electives

Students must take two courses from the following list of approved courses. Forestry students should take BIOL 2023, Biology of Plants and Fungi and BOT 2100, Forest Management. Wildlife Management students should take ZOO 2400, Vertebrate Natural History and ZOO 2450, Wildlife Management.

Number and Title	Credits
BIOL 1080—Environmental Science .....	3
BIOL 2023—Biology of Plants and Fungi....	4
BOT 2050—Taxonomy of Flowering Plants 4	
BOT 2100—Forest Management .....	3
ZOO 2400—Vertebrate Natural History.....	4
ZOO 2450—Wildlife Management.....	3

Transfer and General Electives selected in consultation with advisor.....11-17

### Recommended Transfer and General Electives

Track I and Track II courses are designed to fulfill degree requirements at different four-year institutions.

#### Track I

Students pursuing academic or research careers in Natural Resource Biology should follow Track I.

Number and Title	Credits
CHEM 1020—General Chemistry I.....	5
CHEM 1030—General Chemistry II.....	4
CHEM 2320—Organic Chemistry I.....	4

CHEM 2340—Organic Chemistry II.....	4
MATH 1450—Precalculus Algebra and Trigonometry.....	5
MATH 2345—Survey of Calculus.....	5
PHYS 1110—General Physics I.....	4
PHYS 1120—General Physics II .....	4
STAT 2050—Fundamentals of Statistics.....	3

#### Track II

Students pursuing careers in the management or administration of natural resources should follow Track II.

Number and Title	Credits
CHEM 1000—Introduction to Chemistry... 5	
CHEM 2300—Introduction to Organic Chemistry .....	4
MATH 1400—College Algebra .....	4
PHYS 1110—General Physics I.....	4
STAT 2050—Fundamentals of Statistics.....	3

### General Electives for either Track

AECL 2010—Ecological Web: Soil .....	4
CO/M 1010—Public Speaking .....	3
PHIL 2420—Logic I: Critical Thinking .....	3
POLS 2410—Introduction to Public Administration .....	3
RGMG 2000—Principles of Range Management.....	3

MINIMUM CREDITS FOR DEGREE = 64

## Nursing

The Northwest College Associate of Applied Science Degree Nursing Program is approved by the Wyoming State Board of Nursing and accredited by the National League for Nursing Accrediting Commission. (NLNAC, 61 Broadway 33rd Floor, New York, NY, 10006, 800-669-1656, ext 153, FAX 212-812-0390.) The two-year program of study leads to an Associate of Applied Science degree in Nursing. Upon successful completion of the program, students are eligible to take the National Council Licensure Examination for Registered Nursing.

The program is open to all individuals interested in a career in nursing. Classroom, laboratory, and clinical experience are integrated throughout the program. The student gains nursing experience in patient care under the direct supervision of qualified instructors.

To be eligible for graduation from Northwest College, students must satisfactorily complete the curriculum here for the

academic year of admission into the Nursing Program.

Criteria for admission to the Nursing Program are:

- Completion of standard Northwest College application.
- Completion of a Nursing Program Letter of Intent and nursing application packet.
- Evidence of high school graduation or GED (score of 500 or above).
- Cumulative GPA of 2.5 (most recent high school transcript or last 12 credits of college coursework or GPA on those courses taken as required by the Northwest College Nursing Program, at least 12 credits).
- Placement at math level 2 (eligible to take MATH 0930). Math testing is required for courses older than five years.
- Completion of ZOO 2010 – Human Anatomy and Physiology I (within the past five years), PSYC 1000 – General Psychology, and ENGL 1010 – Introduction to Composition with a grade of 2.0 or better in each course.
- ACT score of 20 (applies to first two years after high school graduation. Successful college work may fulfill this criteria).
- Completion of the Test of Essential Academic Skills (TEAS). Contact the Director of Nursing for scoring criteria details.
- Evidence of certification as a nursing assistant by the Wyoming State Board of Nursing. (This is not required for acceptance into the program, but it is required by the commencement of fall semester, freshman year.)

Students admitted to the program may anticipate additional expenses for student uniforms, name pins, shoes, liability insurance fees, travel and lodging to clinical facilities, stethoscopes, bandage scissors, licensure fees, plus meals, transportation, and housing for off-campus activities. Students must provide their own transportation to the clinical facilities.

Current licensure as a practical nurse or completion of a practical nursing program is required to be eligible for advanced

placement into the second year of the NWC Nursing Program. Students will be admitted for advanced placement depending on space availability and the following:

- Completion of a standard Northwest College application.
- Completion of an Advance Placement Nursing Program Letter of Intent and nursing application packet.
- Cumulative GPA of 2.0 on a 4 point scale from the practical nursing program attended.
- Completion of the LPN Gap test and scoring of the national average.
- Completion of a Skills Laboratory and Clinical Challenge Examination, if deemed necessary by the nursing faculty and Director of Nursing.
- Licensure as a practical nurse.
- Completion of the following general education courses with a grade of “C” or better:

*ANTH 1200 – Cultural Anthropology (3 credits)*

*or*

*SOC 1000 – Sociology Principles (3 credits)*

*ENGL 1010 – Introduction to Composition (3 credits)*

*ENGL 2010 – Technical Writing (3 credits)*

*or*

*ENGL 2017 – Introduction to Research (3 credits)*

*or*

*ENGL 2030 – Critical Reading and Writing (3 credits)*

*POLS 1000 – American and Wyoming Government (3 credits)*

*or*

*HIST 1221 – The United States from 1865 (3 credits)*

*PSYC 1000 – General Psychology (4 credits)*

*ZOO 2010 – Human Anatomy and Physiology I (4 credits)*

*ZOO 2020 – Human Anatomy and Physiology II (4 credits)*

- Placement at math level 2 (eligible to take MATH 0930). Placement testing within the last five years.
- Completion of NRST 2500 – Role Transition – PN to RN.

## ASSOCIATE OF APPLIED SCIENCE NURSING

### General Education Requirements

Number and Title	Credits
ANTH 1200—Cultural Anthropology .....	3
or	
SOC 1000—Sociology Principles.....	3
ENGL 1010—Introduction to Composition	3
ENGL 2010—Technical Writing .....	3
or	
ENGL 2017—Introduction to Research.....	3
or	
ENGL 2030—Critical Reading and Writing. 3	
College level math course with a designator of	
MATH 1000 or above	
(except MATH 1510).....	3-4
* MOLB 2210—General Microbiology.....	4
PEAC—Activity .....	1
POLS 1000—American and Wyoming	
Government.....	3
or	
HIST 1221—The United States from 1865 ..	3
PSYC 1000—General Psychology .....	4
*ZOO 2010—Human Anatomy and	
Physiology I .....	4
*ZOO 2020—Human Anatomy and	
Physiology II.....	4
<b>TOTAL 32-33</b>	

*\*Any science course required by this Nursing Program must have been completed within the past five years or challenged tested and successfully passed. (unless a bachelor's degree or higher has been earned in a science/health science field). A student may take a course a maximum of two times to earn a 2.0 or better to enter into the Nursing Program or to be allowed to continue in the program once admitted.*

### Core Courses

Number and Title	Credits
NRST 1540—Nursing I.....	4
NRST 1580—Introduction to Medication	
Administration .....	2
NRST 1630—Mental Health Nursing.....	2
NRST 1700—Nursing II .....	3
NRST 1710—Clinical Experience I.....	2
NRST 1720—Clinical Experience II .....	4
NRST 2600—Nursing III.....	3
NRST 2620—Maternal Child Nursing I.....	2
NRST 2730—Clinical Experience III.....	5
NRST 2740—Clinical Experience IV .....	5
NRST 2750—Nursing IV .....	2
NRST 2760—Leadership Management	
(Capstone Course).....	2
NRST 2770—Maternal Child Nursing II.....	2
NRST 2820—Introduction to Pharmacology	2
<b>TOTAL 40</b>	

MINIMUM CREDITS FOR DEGREE = 72-73

**COMPREHENSIVE SKILLS  
CERTIFICATE  
PRACTICAL NURSING**

This certificate program provides a solid foundation in the principles and theories of nursing for students planning to practice as Licensed Practical Nurses in the health care setting. Students must successfully complete general education requirements and core courses with a “C” or better to meet certificate program requirements. Students who successfully complete the certificate program will be eligible to take the National Council Licensure Examination for Practical Nursing.

Admission Criteria: Test of Essential Academic Skills, current certification as nursing assistant, and successful completion of ZOO 2010—Human Anatomy and Physiology I. Contact the Director of Nursing for admission criteria details.

**General Education Requirements**

Number and Title	Credits
CO/M 1025—Communication for Health Care Professionals.....	2
or	
CO/M 1030—Interpersonal Communication	3
ENGL 1010—Introduction to Composition	3
PSYC 1000—General Psychology .....	4
ZOO 2020—Human Anatomy and Physiology II.....	4
<b>TOTAL</b>	<b>13-14</b>

**Core Courses**

Number and Title	Credits
NRST 1000—Fundamentals of Nursing.....	3
NRST 1580—Introduction to Medication Administration .....	2
NRST 1635—Mental Health Nursing for Practical Nursing .....	2
NRST 1705—Clinical Experience I for Practical Nursing .....	2
NRST 1735—Clinical Experience II for Practical Nursing .....	4
NRST 1745—Nursing Care of the Adult I for Practical Nursing .....	4
NRST 1980—Practical Nursing Role Exploration .....	1
NRST 2545—Geriatric Nursing .....	1
NRST 2605—Maternal Child Nursing I for Practical Nursing .....	3
NRST 2615—Nursing Care of the Adult II for Practical Nursing.....	3
NRST 2755—Practical Nurse Practicum .....	3
NRST 2820—Introduction to Pharmacology	2
<b>TOTAL</b>	<b>30</b>

TOTAL CREDITS FOR CERTIFICATE = 47-48

**SKILLS CERTIFICATE  
NURSING ASSISTANT**

This Northwest College certificate is designed to prepare students to take the national Certified Nursing Assistant examination to acquire state certification by providing basic theory, principles, and skills necessary to provide client/resident care in the health care setting. The student will be made aware of how state and federal laws as well as policies and procedures of the institution govern the practice of the nursing assistant. Special emphasis is placed on the role of the nursing assistant in meeting the physical, psychosocial, mental, spiritual, and cultural needs of the client/resident. The student will be introduced to medical vocabulary and terminology to give the students a working knowledge of medical terms, the use of prefixes, suffixes, word roots, and combined forms of words.

Number and Title	Credits
NRST 1200—Medical Terminology.....	2
NRST 1510—Nursing Assistant .....	4

TOTAL CREDITS FOR CERTIFICATE = 6

**Occupational Safety and Health**

The Occupational Safety and Health Program is designed for the science student who likes to work with people. The focus of the program is safety and health. The program is science focused and interdisciplinary in nature. A four-year degree is required for employment as a safety professional.

**ASSOCIATE OF SCIENCE  
OCCUPATIONAL SAFETY AND HEALTH**

**General Education Requirements**

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

**Core Courses**

Number and Title	Credits
BMIS 2000—Computer Information Systems .....	3
or	
ES 1060—Introduction to Engineering Computing .....	3

CHEM 1020—General Chemistry I.....	5
CHEM 1030—General Chemistry II.....	4
MATH 1405—Precalculus Trigonometry.....	3
or	
MATH 1450—Precalculus Algebra and Trigonometry.....	5
ZOO 2010—Human Anatomy and Physiology I.....	4
ZOO 2020—Human Anatomy and Physiology II .....	4
CHEM 2385—Research in the Life and Physical Sciences (Capstone Course) .....	3
or	
PHYS 2385—Research in the Life and Physical Sciences (Capstone Course) .....	3
or	
Other Capstone Course (in consultation with your advisor) .....	1-3
<b>TOTAL</b>	<b>24-28</b>

**Core Electives**

Students who plan to transfer to a four-year OSH program will need to have additional hours beyond the program requirements at Northwest College, thus the following electives are highly recommended.

Number and Title	Credits
BIOL 1000—Principles of Biology.....	4
CO/M 1010—Public Speaking .....	3
ECON 1010—Macroeconomics .....	3
ENGL 2010—Technical Writing.....	3
PHYS 1000—General Psychology.....	4
PHYS 1110—General Physics I.....	4
PHYS 1120—General Physics II.....	4
STAT 2050—Fundamentals of Statistics .....	4

**General Electives**

Number and Title	Credits
CHEM 2300—Introduction to Organic Chemistry .....	4
CHEM 2320—Organic Chemistry I.....	4
MATH 2200—Calculus I .....	5

MINIMUM CREDITS FOR DEGREE = 64

**Occupational Therapy**

See Pre-Occupational Therapy

**Offset Duplicator**

See Graphics

# Outdoor Education and Recreation Leadership

This program provides a solid foundation for students planning careers teaching in a variety of outdoor adventure settings. This program also prepares students for transfer to institutions offering a bachelor's degree in the areas of outdoor recreation leadership, adventure education, and allied fields. Students must successfully complete core courses with a "C-" or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF SCIENCE OUTDOOR EDUCATION AND RECREATION LEADERSHIP

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Two hours of Wellness are fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
HLED 1225—Standard First Aid and CPR	2
OEPR 1100—Introduction to Adventure Education .....	2
OEPR 1550—Introduction to Recreation ...	3
OEPR 2100—Outdoor Education Practicum.....	2
OEPR 2200—Outdoor Programming and Administration (Capstone Course) .....	3
OEPR 2250—Outdoor Leadership.....	3
<b>TOTAL</b>	<b>15</b>

### Core Electives

Students must complete three of the following courses.

Number and Title	Credits
CO/M 1010—Public Speaking.....	3
or	
CO/M 2120—Small Group Communication	3
OEAC 1100—Outdoor Living Skills .....	2
OEAC 1170—Introduction to Mountaineering .....	2

OEPR 1250—River Guide Skills.....	2
OEPR 1620—Challenge Course Facilitation	2
OEPR 1720—Advanced Rock Climbing.....	2
OEPR 2110/EDCI 2110—NOLS Rocky Mountain Outdoor Education.....	4
<b>TOTAL</b>	<b>6-10</b>
Transfer and General Electives selected in consultation with advisor .....	5-14

### Transfer and General Electives

Number and Title	Credits
ANTH 1100—Physical Anthropology .....	3
ANTH 1105—Physical Anthropology Lab..	1
ANTH 1300—Introduction to Archaeology	3
ASTR 1050—Survey of Astronomy.....	4
BIOL 1080—Environmental Science .....	3
BIOL 2400—Ecology .....	3
BOT 2050—Taxonomy of Flowering Plants.	4
EDFD 2100—Educational Psychology.....	3
FCSC 1141—Principles of Nutrition.....	3
GEOL 1030—Geology of Northern Wyoming.....	3
GEOL 1035—Geology of Yellowstone National Park.....	1
GEOL 1100—Physical Geology.....	4
GEOL 1200—Historical Geology.....	4
OEPR 1200—Winter Outdoor Survival.....	1
PEPR 1005—Introduction to Physical Education .....	2
PHTO 1550—Outdoor Photography Seminar.....	2
PSYC 1000—General Psychology.....	4

MINIMUM CREDITS FOR DEGREE = 64

## SKILLS CERTIFICATE CHALLENGE COURSE FACILITATION

This certificate provides the student with a solid foundation in the principles and theories of experiential/adventure education giving them the background and knowledge necessary to begin work as a facilitator.

Number and Title	Credits
OEPR 1100—Introduction to Adventure Education .....	2
OEPR 1620—Challenge Course Facilitation	2
HLED 1225—Standard First Aid and CPR	2

TOTAL CREDITS FOR CERTIFICATE = 6

## Philosophy

Northwest College offers a small number of introductory-level philosophy courses which are open to all students, regardless of their educational or occupational goals. Courses in Critical Thinking and Introduction to Philosophy discuss essential issues in human experience and develop

thinking skills in practical ways. Courses focused on Social and Political Philosophy and on Philosophy of Religion probe historical and contemporary social issues. In addition to fulfilling certain general education requirements, Northwest's offerings in Philosophy and other humanities areas can provide a basis for a major in philosophy (a popular pre-law choice) at four-year institutions.

## Photographic Communications

The Photographic Communications Program prepares students for a career in professional photography. Areas of commercial photography emphasis include studio illustration, portraiture, new digital media, and photojournalism.

With the latest in multimedia and digital technologies combined with traditional and historical processes, this all-encompassing program provides students with a wide array of skills as they develop a personal photographic vision.

From academic to professional endeavors, our full-time faculty bring into the classroom their expertise in this fast-paced, ever-changing industry. Then through project-based assignments and a hands-on approach, students learn real world visual problem solving.

The framework of the program also incorporates courses in business and general education to better prepare the student for a successful career in photography. For the applied science degree in photographic communications, students must complete both the General Education Requirements and the Core Courses.

## ASSOCIATE OF APPLIED SCIENCE PHOTOGRAPHIC COMMUNICATIONS

### General Education Requirements

Number and Title	Credits
ART—Any ART course meeting the Visual & Performing Arts requirement .....	3
BADM 1005—Business Mathematics.....	3
or	
MATH—Any College-Level Mathematics	3-5
BADM 1020—Business Communications ...	3

CO/M 1030—Interpersonal Communication	3
or	
JOUR 1000—Introduction to Mass Media	3
ENGL 1010—English I: Introduction to Composition	3
POLS 1000—American and Wyoming Government	3
or	
HIST 1210—United States History I	3
and	
HIST 1250—History of Wyoming	3
Wellness Education	2
<b>TOTAL 20-25</b>	

### Core Courses

Number and Title	Credits
PHTO 1600—Survey of Photography	3
PHTO 1610—Introduction to Photography	4
PHTO 1630—View Camera/Basic Lighting	4
PHTO 2350—Media Photography	3
PHTO 2510—Studio Illustration I	3
PHTO 2520—Studio Illustration II	3
PHTO 2610—Commercial Portrait I	3
PHTO 2620—Commercial Portrait II	3
PHTO 2650—Digital Imaging I	3
PHTO 2710—Professional Portfolio I	4
PHTO 2720—Professional Portfolio II (Capstone Course)	4
PHTO 2740—Digital Color Photography	3
Choose two of the following courses:	
PHTO—2660 Web Design	3
or	
PHTO—2750 Digital Photo Applications	3
or	
PHTO 2760—Introduction to Digital Multimedia	3
<b>TOTAL 46</b>	

### Electives

Number and Title	Credits
ART 1110—Design 2-D	3
GRAR 1510—Introduction to Graphic Arts	3
JOUR 1100—Reporting and Newswriting I	3
PHTO 1550—Outdoor Photography Seminar	2
PHTO 2385—Photography Theme House	2
PHTO 2960—Photography Field Studies	2

TOTAL CREDITS FOR DEGREE = 66

### SKILLS CERTIFICATE BASIC DIGITAL IMAGING

This certificate is designed for students wishing to develop skills necessary to use Adobe Photoshop and Adobe Go Live in the production of digital images.

Number and Title	Credits
PHTO—2650 Digital Imaging	3
PHTO—2660 Web Design	3

TOTAL CREDITS FOR CERTIFICATE = 6

### SKILLS CERTIFICATE BASIC PHOTOGRAPHIC IMAGING

This certificate is designed for students wishing to develop skills necessary to use basic lighting and photographic techniques in the production of digital images.

Number and Title	Credits
PHTO—1610 Introduction to Photography	4
PHTO—1630 View Camera and Basic Lighting	4

TOTAL CREDITS FOR CERTIFICATE = 8

### SKILLS CERTIFICATE PHOTOGRAPHIC AND DIGITAL PRESERVATION SPECIALIST

Successful completion of this certificate will signify the student's perfection of a variety of digital imaging and restoration skills. The combination of proficiencies in digital imaging and photographic preservation techniques creates a unique set of abilities and knowledge required for employment by museums, libraries, and various organizations throughout the country. The basic goal of this certificate program is for students to learn the necessary technical skills and aesthetic sensibilities required for a professional career in digital preservation and restoration. Ethics of digital imaging restoration will be stressed throughout the entire program.

Number and Title	Credits
PHTO 1600—Survey of Photography	3
PHTO 1610—Introduction to Photography	4
PHTO 2650—Introduction to Digital Imaging I	3
PHTO 2765—Digital and Photographic Preservation	4
PHTO 2660—Web Page Design	3
or	
PHTO 2760—Introduction to Digital Multimedia	3
or	
GRAR 1820—Electronic Publishing: QuarkXPress	3

TOTAL CREDITS FOR CERTIFICATE = 17

## Physical Education

This program provides a solid foundation for students planning careers in physical education, teacher education, and/or coaching. It prepares students for transfer to institutions offering

bachelor's degrees in physical education. Students must successfully complete core courses with a "C-" or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

### ASSOCIATE OF SCIENCE PHYSICAL EDUCATION

#### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33	31-37

*Two hours of Wellness will be fulfilled by taking Core Courses.*

#### Core Courses

Number and Title	Credits
HLED 1006—Personal Health	3
HLED 1225—Standard First Aid and CPR	2
or	
PEPR 1040—Sport First Aid	2
OEPR 1100—Introduction to Adventure Education	2
PEPR 1005—Introduction to Physical Education	2
PEPR 1025—Movement Core II	2
PEPR 2000—Movement Core III	2
PEPR 2069—History and Philosophy of Sport	3
PEPR 2200—Physical Education, Health, and Coaching Practicum (Capstone Course)	2-4
and	

Students must complete three of the following half-credit courses.

PEAC 1050—Beginning Tennis
PEAC 1255—Beginning Golf
PEAC 1257—Beginning Racquetball
PEAC 1265—Floor Hockey
PEAC 1273—Weight Training/Conditioning and

Students must complete one of the following half-credit courses.

PEAC 1254—Beginning Snowboarding
PEAC 1258—Beginning Skiing
PEAC 1259—Beginning Cross-Country Skiing
PEAC 1285—Kayaking
PEAC 1286—Spelunking
PEAC 1287—Rock Climbing
PEAC 1560—Beginning Orienteering
PEAC 1600—Ice Climbing

**TOTAL 20-22**

## Recommended Transfer and General Electives

Number and Title	Credits
FCSC 1141—Principles of Nutrition.....	3
PEAC 1300—Social Dance .....	1
PEPR 2012—Physical Education for Elementary School .....	3
PEPR 2050—Care and Prevention of Athletic Injuries.....	2
PEPR 2100—Theory of Coaching.....	2
PEPR 2110—Coaching Principles.....	2

MINIMUM CREDITS FOR DEGREE = 64

## Transfer and General Electives for a Teacher Education Program in Physical Education

Number and Title	Credits
EDFD 2100—Educational Psychology.....	3
EDFD 2020—Foundations of Education.....	3
EDUC 2100—Practicum in Teaching (Capstone Course).....	3-6
PEPR 2012—Physical Education for Elementary School.....	3
PSYC 1000—General Psychology .....	4
OEPR 1100—Introduction to Adventure Education .....	2

## Transfer and General Electives for a Coaching Endorsement

Number and Title	Credits
HLED 1225—Standard First Aid and CPR 2 or * PEPR 1040—Sport First Aid.....	2
PEPR 2050—Care and Prevention of Athletic Injury/Illness.....	2
PEPR 2110—Coaching Principles.....	2
PEPR 2100—Theory of Coaching .....	2
PSYC 1000—General Psychology .....	4
PSYC 1200—Human Development.....	3

\* Students interested in coaching are strongly encouraged to take Sport First Aid

MINIMUM CREDITS FOR DEGREE = 64

## Physical Therapy

See Pre-Physical Therapy

## Physics

Physics seeks to understand the fundamental laws that govern the universe, from galaxies to subatomic particles. Individuals who want to prepare for transfer to a senior institution should work closely with their advisors to devise suitable associate of science degree programs.

The Associate of Science in Physics degree emphasizes the traditional foundations for physics at the freshman and sophomore level. It provides basic education in physics and cognate areas such as chemistry and mathematics, as well as sufficient flexibility to allow students to transfer to a variety of bachelor's degree programs in physics. Students must successfully complete core courses with a "C-" or better to meet program requirements. Students who are planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF SCIENCE PHYSICS

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Four hours of Science and three hours of Mathematics will be fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
MATH 2200—Calculus I.....	5
MATH 2205—Calculus II.....	5
MATH 2210—Calculus III .....	5
MATH 2310—Applied Differential Equations I (Capstone Course) .....	3
PHYS 1310—College Physics I .....	4
PHYS 1320—College Physics II.....	4
<b>TOTAL</b>	<b>26</b>

Transfer and General Electives selected in consultation with advisor.....19-22

### Transfer and General Electives

Students who are planning to transfer to a four-year program in physics or physics education will need to have additional hours beyond the program requirements at Northwest. These students should take courses from the following list of suggested electives in consultation with their advisors.

Number and Title	Credits
ASTR 1050—Survey of Astronomy.....	4
CHEM 1020—General Chemistry I .....	5
CHEM 1030—General Chemistry II.....	4
ES 1060—Introduction to Engineering Computing .....	3

ES 2110—Statics.....	3
ES 2120—Dynamics .....	3
ES 2210—Electrical Circuit Theory.....	4
ES 2310—Thermodynamics .....	4
PHYS 2320—Modern Physics.....	3

## Political Science

Political Science is the study of the formal and informal institutions and processes by which people seek to regulate themselves in a civil society.

The Political Science Program is designed to offer any student an introduction to the American political process, international relations and comparative politics, and to prepare students for transfer to four-year institutions.

This program allows students to receive an Associate of Arts in Political Science degree. The core provides students the basic coursework in the field while allowing them the flexibility to tailor their program to their individual needs. Students must successfully complete core courses with a "C-" or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

Students interested in international relations should also study a foreign language.

## ASSOCIATE OF ARTS POLITICAL SCIENCE

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	36-42

*Six hours of Social Science will be fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
POLS 1000—American and Wyoming Government.....	3
Capstone Course (in consultation with advisor) .....	3
<b>TOTAL</b>	<b>6</b>

## Core Electives

Students must complete nine credits from the following list of approved courses.

Number and Title	Credits
POLS 2000—Current Issues in American Government.....	3
POLS 2010—Comparative Government.....	3
POLS 2120/CRMJ 2120—Introduction to Criminal Justice.....	3
POLS 2210/CRMJ 2210—Criminal Law.....	3
POLS 2310—Introduction to International Relations.....	3
POLS 2410—Introduction to Public Administration.....	3
POLS 2460—Introduction to Political Theory.....	3
<b>TOTAL</b>	<b>9</b>

General electives selected in consultation with advisor..... 13-19

MINIMUM CREDITS FOR DEGREE = 64

## Practical Nursing

See Nursing

## Pre-Law

Most U.S. law colleges and universities require a bachelor of arts degree or a bachelor of science degree for admission. While few specify a particular pre-law curriculum, most emphasize competencies in 1) reading comprehension and verbal and written forms of expression, 2) critical understanding of human institutions and values, and 3) creative power of thinking. Northwest College provides a solid foundation in many of the key subject areas and helps students develop the skills necessary for a successful career in law.

## Pre-Occupational Therapy and Pre-Physical Therapy

The courses required for these programs parallel those found at four-year institutions and should transfer without difficulty. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College

in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF SCIENCE PRE-OCCUPATIONAL THERAPY

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Eight hours of Science and three hours of Social Science are fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
BIOL 1010—General Biology I.....	4
CHEM 1000—Introduction to Chemistry... or CHEM 1020—General Chemistry I.....	5
PSYC 1000—General Psychology.....	4
or SOC 1000—Sociological Principles.....	3
ZOO 2010—Human Anatomy and Physiology I.....	4
ZOO 2020—Human Anatomy and Physiology II.....	4
BIOL 2395—Biological Research (Capstone Course).....	1
<b>TOTAL</b>	<b>21-22</b>

Transfer and General Electives selected in consultation with advisor..... 16-20

### Recommended Transfer and General Electives

Number and Title	Credits
CO/M 1010—Public Speaking.....	3
ENGL 2017—Introduction to Research.....	3
MATH 1400—College Algebra.....	4
NRST 1200—Medical Terminology.....	1
STAT 2050—Fundamentals of Statistics.....	3

MINIMUM CREDITS FOR DEGREE = 64

## ASSOCIATE OF SCIENCE PRE-PHYSICAL THERAPY

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Four hours of Science are fulfilled by taking Core Courses.*

## Core Courses

Number and Title .....	Credits
BIOL 1010—General Biology I.....	4
BIOL 2020—General Biology II.....	4
MOLB 2210—General Microbiology.....	4
ZOO 2010—Human Anatomy and Physiology I.....	4
ZOO 2020—Human Anatomy and Physiology II.....	4
BIOL 2395—Biological Research (Capstone Course).....	1
<b>TOTAL</b>	<b>21</b>

Transfer and General Electives selected in consultation with advisor..... 10-16

### Recommended Transfer and General Electives

Students should choose from these courses which are designed to fulfill common requirements at various transfer institutions. Students should consult with their advisor and the appropriate transfer college catalog.

CHEM 1020—General Chemistry I.....	5
CHEM 1030—General Chemistry II.....	4
CO/M 1010—Public Speaking.....	3
ENGL 2017—Introduction to Research.....	3
MATH 1450—Precalculus Algebra and Trigonometry.....	5
MATH 2345—Survey of Calculus.....	5
PHIL 2420—Logic I: Critical Thinking.....	3
PHYS 1110—General Physics I.....	4
PHYS 1120—General Physics II.....	4
PSYC 1000—General Psychology.....	4
STAT 2050—Fundamentals of Statistics.....	4

MINIMUM CREDITS FOR DEGREE = 64

## Pre-Optometry

The courses required in this program parallel those found at four-year institutions and should transfer without difficulty. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF SCIENCE PRE-OPTOMETRY

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Four hours of Science are fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
BIOL 1010—General Biology I.....	4
BIOL 2020—General Biology II .....	4
BIOL 2023—Biology of Plants and Fungi....	4
CHEM 1020—General Chemistry I .....	5
or	
CHEM 1000—Introduction to Chemistry ...	4
ZOO 2010—Human Anatomy and Physiology I .....	4
ZOO 2020—Human Anatomy and Physiology II .....	4
BIOL 2395—Biological Research (Capstone Course).....	1
<b>TOTAL 25-26</b>	
Transfer and General Electives selected in consultation with advisor .....	10-15

### Recommended Transfer and General Electives

Number and Title	Credits
CHEM 1030—General Chemistry II.....	4
CHEM 2300—Introduction to Organic Chemistry .....	4
or	
CHEM 2320—Organic Chemistry I .....	4
CHEM 2340—Organic Chemistry II.....	4
CO/M 1010—Public Speaking .....	3
ENGL 2017—Introduction to Research.....	3
MATH 1450—Precalculus Algebra and Trigonometry.....	5
MATH 2345—Survey of Calculus.....	5
STAT 2050—Fundamentals of Statistics.....	3
PHIL 2420—Logic I: Critical Thinking .....	3
PHYS 1110—General Physics I.....	4
PHYS 1120—General Physics II .....	4
PSYC 1000—General Psychology .....	4

MINIMUM CREDITS FOR DEGREE = 64

## Pre-Pharmacy

The courses required in this program parallel those found at four-year institutions and should transfer without difficulty. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond

the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF SCIENCE PRE-PHARMACY

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Four hours of Science are fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
BIOL 1010—General Biology I.....	4
BIOL 2020—General Biology II .....	4
CHEM 1020—General Chemistry I .....	5
CHEM 1030—General Chemistry II .....	4
MOLB 2210—General Microbiology.....	4
BIOL 2395—Biological Research (Capstone Course).....	1
<b>TOTAL 22</b>	

Transfer and General Electives selected in consultation with advisor .....

10-15

### Recommended Transfer and General Electives

Number and Title	Credits
CHEM 2320—Organic Chemistry I.....	4
CHEM 2340—Organic Chemistry II.....	4
CO/M 1010—Public Speaking .....	3
ENGL 2017—Introduction to Research.....	3
MATH 1450—Precalculus Algebra and Trigonometry.....	5
MATH 2345—Survey of Calculus.....	5
PHIL 2420—Logic I: Critical Thinking .....	3
PHYS 1110—General Physics I.....	4
STAT 2050—Fundamentals of Statistics.....	3

MINIMUM CREDITS FOR DEGREE = 64

## Prepress

*See Graphics*

## Pre-Professional Sciences

This program includes areas in **Pre-Dentistry, Pre-Medicine, and Pre-Veterinary Medicine**. The courses required

in this program parallel those found at four-year institutions and should transfer without difficulty. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF SCIENCE PRE-DENTISTRY, PRE-MEDICINE, and PRE-VETERINARY MEDICINE

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Eight hours of Science are fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
BIOL 1010—General Biology I.....	4
BIOL 2020—General Biology II .....	4
CHEM 1020—General Chemistry I .....	5
CHEM 1030—General Chemistry II .....	4
BIOL 2395—Biological Research (Capstone Course).....	1
<b>TOTAL 18</b>	

Transfer and General Electives selected in consultation with advisor .....

16-22

### Recommended Transfer and General Electives

Number and Title	Credits
BIOL 2023—Biology of Plants and Fungi....	4
BIOL 2200—Genetics (offered alternate years).....	4
CHEM 2320—Organic Chemistry I.....	4
CHEM 2340—Organic Chemistry II.....	4
CO/M 1010—Public Speaking .....	3
ENGL 2017—Introduction to Research.....	3
MATH 1450—Precalculus Algebra and Trigonometry.....	5
MATH 2345—Survey of Calculus.....	5
MOLB 2210—General Microbiology.....	4
PHIL 2420—Logic I: Critical Thinking .....	3
PHYS 1110—General Physics I.....	4
PHYS 1120—General Physics II .....	4
STAT 2050—Fundamentals of Statistics .....	4
ZOO 2400—Vertebrate Natural History.....	4

MINIMUM CREDITS FOR DEGREE = 64

# Production Agriculture

The Production Agriculture Program is designed to provide marketable, entry-level training in management of production agriculture enterprises. The program stresses the applied aspects of crop and livestock production, as well as business management. Students acquire necessary background in marketing, finance, management, range science, animal science, and crop and soil sciences. The program includes the flexibility for students to develop greater expertise in their particular area of interest. Some courses in this associate of applied science program will transfer to four-year institutions.

## ASSOCIATE OF APPLIED SCIENCE PRODUCTION AGRICULTURE

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	20-23

### Core Courses

Number and Title	Credits
AGEC 1010—Agricultural Economics I .....	3
AGEC 2010—Farm and Ranch Business Records .....	3
AGEC 2020—Farm and Ranch Business Management (Capstone Course).....	4
AGRI 1010—Computers in Agriculture.....	2
Agroecology Electives.....	8
(select from any courses with the following designators: AECL, CROP, RGMG)	
Animal Science Electives .....	8
(select from any courses with the following designators: ANSC, FDSC)	

**TOTAL 28**

### Recommended Electives

Number and Title	Credits
Agriculture Electives selected in consultation with advisor from any courses with the following designators: AECL, AGECE, ANSC, CROP, FDSC, RGMG,.....	15

MINIMUM CREDITS FOR DEGREE = 64

## COMPREHENSIVE SKILLS CERTIFICATE PRODUCTION AGRICULTURE

Number and Title	Credits
AGEC 1010—Agricultural Economics I.....	3
or	
AGEC 1020—Agricultural Economics II.....	3
AGEC 2010—Farm and Ranch Business .....	
Records .....	3
AGEC 2020—Farm and Ranch Business Management (Capstone Course).....	4
AGEC 2300—Agricultural Marketing .....	3
AGRI 1010—Computers in Agriculture.....	2
Animal Science elective .....	4
Agroecology .....	4
(select from any courses with the following designators: AECL, CROP, RGMG)	
BADM 1005—Business Mathematics or equivalent.....	3
CO/M 1010—Public Speaking .....	3
or	
ENGL Freshman English .....	3
Electives.....	4

TOTAL CREDITS FOR CERTIFICATE = 32

## Professional Desktop Publishing

See *Graphics*

## Professional Farrier

See *Equine Studies*

## Psychology

Psychology deals with individual human development. Study in psychology gives insight into our behavior and the behavior of others and prepares one for a variety of human services careers. It also provides part of the training needed for a variety of careers requiring an ability to work with other people.

This program allows students to specialize in psychology while working on an associate of arts degree. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

## ASSOCIATE OF ARTS PSYCHOLOGY

### General Education Requirements

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	36-42

*Six hours of Social Science will be fulfilled by taking Core Courses.*

### Core Courses

Number and Title	Credits
PSYC 1000—General Psychology .....	4
PSYC 2000—Research Psychological Methods (Capstone Course) .....	4
<b>TOTAL 8</b>	

### Core Electives

Students must complete nine credits from the following list of approved courses.

Number and Title	Credits
PSYC 1200—Human Development .....	3
or	
PSYC 2300—Child Psychology .....	3
PSYC 2080—Biological Psychology .....	3
PSYC 2200—Human Sexuality .....	3
PSYC 2330—Psychology of Adjustment .....	3
PSYC 2340—Abnormal Psychology.....	3
PSYC 2380—Social Psychology.....	3
<b>TOTAL 9</b>	

General electives selected in consultation with advisor .....

MINIMUM CREDITS FOR DEGREE = 64

## Radio Production

See *Film, Radio, and Television*

## Range Management

The Range Management program is designed for transfer to range science, rangeland ecology, or renewable resource programs. It includes courses in applied plant, soil, and animal sciences. Graduates find positions in land management, range livestock management, and wildlife management. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should con-

sult with their advisor and the appropriate four-year college catalog.

**ASSOCIATE OF SCIENCE  
RANGE MANAGEMENT**

**General Education Requirements**

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	31-37

*Eleven credits of General Education may be fulfilled by taking Core Courses or Core Electives.*

**Core Courses**

Number and Title	Credits
AECL 1000—Agroecology.....	4
AECL 2010—Ecological Web: Soil .....	4
AECL 2395—Plant Science Research Methods (Capstone Course) .....	2
RGMG 1000—Introduction to Range Management.....	1
RGMG 2000—Principles of Range Management.....	3
RGMG 2490—Rangeland Plant Identification .....	2
<b>TOTAL</b>	<b>16</b>

**Core Electives**

Students must take two courses from the following list of approved courses.

Number and Title	Credits
AGEC 1010—Agricultural Economics I.....	3
AGRI 1010—Computers in Agriculture.....	2
ANSC 1022—Animal Science I.....	4
ANSC 1024—Animal Science II .....	4
ENTO 1001—Insect Biology .....	4
<b>TOTAL</b>	<b>5-8</b>

General Electives selected in consultation with advisor .....13-18

**Transfer and General Electives**

Number and Title	Credits
BIOL 2400—Ecology .....	3
BOT 2050—Taxonomy of Flowering Plants	4
BOT 2100—Forest Management .....	3
CHEM 1000—Introduction to Chemistry...	5
STAT 2050—Fundamentals of Statistics.....	3

MINIMUM CREDITS FOR DEGREE = 64

**Recreation**

**See Outdoor Education and Recreation Leadership**

**Resource Management**

*See Natural Resource Biology*

**Robotics Technology**

*See Welding*

**Screenwriting**

*See Film, Radio, and Television*

**Social Science**

A two-year program in social science allows students to explore a variety of disciplines. It is a broad-based exploration of anthropology, archaeology, economics, geography, history, political science/criminal justice, and/or psychology or sociology. The core provides students the basic coursework in the field while allowing them the flexibility to tailor their program to their individual needs. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

**ASSOCIATE OF ARTS  
SOCIAL SCIENCE**

**General Education Requirements**

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	36-42

*Six hours of Social Science will be fulfilled by taking Core Electives.*

**Core Electives**

After completing the general education requirements, an additional 18 credit hours is required for the social science degree. The credit hours must be selected from courses found in at least four of the subject areas listed: anthropology, archaeology, economics, geography, history, political science/criminal justice,

psychology, or sociology. Six credits must be 2000 level and be from the four areas already chosen. Credits used to satisfy a general education requirement that have any of the above designators may be used to satisfy the requirements for this program. Students are also required to take a Capstone Course selected in consultation with their advisor.

**TOTAL 21**

General electives selected in consultation with advisor.....10-22

MINIMUM CREDITS FOR DEGREE = 64

**Social Work**

Those engaged in social work seek to apply the knowledge and insights of such fields as psychology and sociology to the identification, prevention and treatment of personal and social problems. Students who wish to pursue a degree in social work should follow the suggested program of study for sociology, in consultation with an advisor.

**Sociology**

Sociology seeks to understand the social and cultural dimensions of life and to explain human behavior. Sociology contributes to a better informed citizenry, qualifies students for a variety of occupations, and provides excellent preparation for advanced studies in law, medicine, theology, social work, business, criminal justice, and other fields.

This program allows students to focus on sociology for their associate of arts degree. The core provides students the basic coursework in the field while allowing them the flexibility to tailor their program to their individual needs. Students must successfully complete core courses with a “C-” or better to meet program requirements. Students planning to transfer to a four-year program may need to have additional hours beyond the program requirements at Northwest College in order to transfer in as a junior. These students should consult with their advisor and the appropriate four-year college catalog.

**ASSOCIATE OF ARTS  
SOCIOLOGY**

**General Education Requirements**

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	36-42

*Six hours of Social Science will be fulfilled by taking Core Courses.*

**Core Courses**

Number and Title	Credits
SOC 1000—Sociological Principles.....	3
SOC 1100—Social Problems .....	3
SOSC 2395—Seminar in Social Science Research (Capstone Course) or other Capstone Course (in consultation with advisor) .....	3
<b>TOTAL</b>	<b>9</b>

**Core Electives**

Students must complete six credits from the following list of approved courses.

Number and Title	Credits
SOC 1005—Risky Behaviors .....	3
SOC 1200—Introduction to Social Work ....	3
SOC 2325—Marriage and Family .....	3
SOC 2380/PSYC 2380—Social Psychology...	3
SOC 2400/CRMJ 2400—Criminology .....	3
SOC 2420—History of Crime and Justice ....	3
SOC 2490—Topics Courses in Sociology.....	3
<b>TOTAL</b>	<b>6</b>

General electives selected in consultation with advisor.....13-19

MINIMUM CREDITS FOR DEGREE = 64

**Spanish**

*See Modern Languages*

**Television Production**

*See Film, Radio, and Television*

**Travel and Tourism**

This degree trains students to work in entry-level management jobs in a variety of travel and tourism industries. The program concentrates on polishing various generalized entrepreneurial skills, including writing, organizing, and quantitative analysis. Specific skills relevant to the travel and tourism industry are cultivated through classroom and actual practical experiences.

**ASSOCIATE OF APPLIED SCIENCE  
TRAVEL AND TOURISM**

**General Education Requirements**

Number and Title	Credits
BADM 1005—Business Mathematics .....	3
or	
MATH—Any College-Level Mathematics 3-5	
BADM 1020—Business Communication.....	3
CO/M 1030—Interpersonal Communication	3
ENGL 1010—English I: Introduction to Composition.....	3
POLS 1000—American and Wyoming Government.....	3
or	
HIST 1221—The United States from 1865 ..	3
or	
HIST 1210—United States History I .....	3
and	
HIST 1250—History of Wyoming .....	3
GEOL 1035—Geology of Yellowstone National Park.....	1
or	
GEOL 1030—Geology of Northern Wyoming.....	3
<b>TOTAL</b>	<b>16-23</b>

**Core Courses**

Number and Title	Credits
ACCT 1050—Practical Accounting.....	3
or	
ACCT 2010—Principles of Accounting I....	4
BADM 1050—Introduction to Travel and Tourism .....	3
BADM 1400—Introduction to Hospitality ..	3
BADM 2010—Business Law.....	3
BADM 2395—Capstone in Business (Capstone Course).....	1
BADM 2970—Internship/Practicum Travel and Tourism .....	1-6
BMIS 2000—Computer Information Systems	3
MGT 2100—Principles of Management .....	3
MKT 2100—Principles of Marketing.....	3
<b>TOTAL</b>	<b>23-29</b>

General Electives selected in consultation with advisor.....Up to 8

**Recommended Electives**

Number and Title	Credits
ACCT 2110—Microcomputer Accounting ..	2
BADM 2030—Business Ethics.....	3
BUSN 2000—Introduction to International Business .....	3
CMAP 1890—World Wide Web Authoring	1
ECON 1020—Microeconomics.....	3
G&R 1250—Geography of Travel and Tourism .....	3

MINIMUM CREDITS FOR DEGREE = 64

**Veterinary**

*See Pre-Professional Sciences*

**Veterinary Assistant**

This program provides the knowledge and animal handling skills required to be an integral team player within veterinary practices, research facilities, or other animal-related facilities. Students will learn to recognize behavioral signs and to care for a patient's basic needs under the direction of the veterinarian or designate. In addition, students will learn veterinary practice management skills including cleaning facilities and equipment, booking appointments, communicating with clients, and other receptionist duties. Students become skilled in the care and handling of small and large animals, as well as office management.

**ASSOCIATE OF APPLIED SCIENCE  
VETERINARY ASSISTANT**

**General Education Requirements**

Number and Title	Credits
Students should refer to the Graduation Requirements on pages 25-33.....	20-23

**Core Courses**

Number and Title	Credits
ANSC 1022—Animal Science I.....	4
ANSC 1024—Animal Science II .....	4
ANSC 1330—Veterinary Practice Orientation .....	3
ANSC 1980—Cooperative Education (clinical experience) .....	3
ANSC 2020—Livestock Feeds and Feeding .	4
or	
EQST 1510—Equine Nutrition.....	2
ANSC 2320—Livestock Health Management.....	2
ANSC 2385—Veterinary Assistant Capstone (Capstone Course).....	1
ANSC 2430—Comparative Anatomy and Physiology of Domestic Animals.....	4
ANSC 2970—Animal Care Internship (clinical experience) .....	3
<b>TOTAL</b>	<b>26-28</b>

**Recommended Electives**

Students are encouraged to gain additional work experience through the summer months at a veterinary practice in their home area. Additional courses may be selected from animal science, equine science or business.

MINIMUM CREDITS FOR DEGREE = 64

# Web Design and Application

See *Graphics*

## Welding Technology

The Welding Technology Program is designed to give the student a solid background in the latest techniques, procedures, and welding processes. Students are encouraged to complete the two-year program, although Northwest College certificates are available options.

### ASSOCIATE OF APPLIED SCIENCE WELDING TECHNOLOGY

#### Core Courses

Number and Title	Credits
ENGL—Freshman Level English .....	3
BADM 1020—Business Communication.....	3
MATH 1510—Technical Mathematics I (or equivalent) .....	3
POLS 1000—American and Wyoming Government.....	3
or	
HIST 1210—United States History I .....	3
and	
HIST 1250—History of Wyoming .....	3
WELD 1555—Welding Technology Safety and Problem Solving.....	2
WELD 1650—Print Reading .....	3
WELD 1705—Welding Processes.....	4
WELD 1765—Advanced Welding Processes4	
WELD 1800—Materials Evaluation .....	3
WELD 1860—Welding Fabrication .....	4
WELD 1870—Advanced Metal Fabrication Techniques .....	4
WELD 2670—Welding Inspection Technology .....	3
WELD 2680—Welding Metallurgy .....	3
WELD 2700—Welding Certification (Plate)4	
WELD 2710—Welding Certification (Pipe) 4	
WELD 2750—Metals Production .....	4
WELD 2985—Welding Seminar (Capstone Course).....	4
Wellness Education .....	2
* General Education Requirements.....	6
Electives.....	3
<b>TOTAL 69-72</b>	

TOTAL CREDITS FOR DEGREE = 69-72

\* Students should refer to the *Graduation Requirements* on pages 25-33.

### COMPREHENSIVE SKILLS CERTIFICATE WELDING TECHNOLOGY

#### Core Courses

Number and Title	Credits
MATH 1510—Technical Mathematics I (or equivalent) .....	3
WELD 1555—Welding Technology Safety and Problem Solving.....	2
WELD 1650—Print Reading .....	3
WELD 1705—Welding Processes.....	4
WELD 1765—Advanced Welding Processes4	
WELD 1800—Materials Evaluation .....	3
WELD 1860—Welding Fabrication .....	4
WELD 1870—Advanced Metal Fabrication Techniques .....	4
WELD 2750—Metals Production.....	4
Elective .....	3

TOTAL CREDITS FOR CERTIFICATE = 34

### SKILLS CERTIFICATE ADVANCED WELDING TECHNOLOGY

Students are provided a solid background in combination welding, the newest methods of fabrication, and pipe welding techniques. This certification allows students to continue their education to earn an Associate of Applied Science in Welding Technology degree if they so desire.

#### Core Courses

Number and Title	Credits
HLED 1225—Standard First Aid and CPR 2	
MATH 1510—Technical Mathematics I.....	3
WELD 1555—Safety/Problem Solving.....	2
WELD 1650—Print Reading .....	3
WELD 1705—Welding Processes.....	4
WELD 1765—Advanced Welding Processes4	
WELD 1800—Materials Evaluation .....	3
WELD 1860—Welding Fabrication .....	4
WELD 1870—Advanced Metal Fabrication Techniques .....	4
WELD 1940—Robotics Technology.....	4
WELD 2670—Welding Inspection Technology.....	3
WELD 2680—Welding Metallurgy .....	3
WELD 2700—Welding Certification (Plate)4	
WELD 2710—Welding Certification (Pipe) 4	
WELD 2750—Metals Production.....	4
<b>TOTAL 51</b>	

#### Recommended Electives

WELD 1920—Basic Pipe Welding.....	3
WELD 2970—Welding Internship.....(1-6)	

MINIMUM CREDITS FOR CERTIFICATE = 51

### SKILLS CERTIFICATE GMAW WELDING

This certificate is designed for students to develop the knowledge and skills necessary for GMAW Welding.

#### Core Courses

Number and Title	Credits
MATH 1510—Technical Mathematics I.....	3
WELD 1555—Welding Technology Safety and Problem Solving.....	2
WELD 1650—Print Reading .....	3
WELD 1700—General Welding.....	3
WELD 1770—GMAW - FCAW .....	4
WELD 1860—Welding Fabrication .....	4
WELD 1870—Advanced Metal Fabrication Techniques .....	4
WELD 2750—Metals Production.....	4
<b>TOTAL 27</b>	

Elective

Any other (3 credit or more) Welding class... 3

TOTAL CREDITS FOR CERTIFICATE = 30

### SKILLS CERTIFICATE GTAW WELDING

This certificate is designed for students to develop the knowledge and skills necessary for GTAW Welding.

#### Core Courses

Number and Title	Credits
MATH 1510—Technical Mathematics I.....	3
WELD 1555—Welding Technology Safety Problem Solving .....	2
WELD 1650—Print Reading .....	3
WELD 1700—General Welding.....	3
WELD 1785—GTAW Welding .....	4
WELD 1860—Welding Fabrication .....	4
WELD 1870—Advanced Metal Fabrication Techniques .....	4
WELD 2750—Metals Production.....	4
<b>TOTAL 27</b>	

Elective

Any other (3 credit or more) Welding class... 3

TOTAL CREDITS FOR CERTIFICATE = 30

### SKILLS CERTIFICATE ROBOTICS TECHNOLOGY

Students who complete this certification program will acquire advanced skills that are necessary in the planning, setup, operation, and safety requirements of using a Computer Numeric Controlled (CNC) plasma cutting machine.

## Core Courses

Number and Title	Credits
MATH 1510—Technical Mathematics I .....	3
WELD 1555—Welding Technology Safety and Problem Solving.....	2
WELD 1705—Welding Processes .....	4
WELD 1765—Advanced Welding Processes	4
WELD 1860—Welding Fabrication .....	4
WELD 1870—Advanced Metal Fabrication Techniques.....	4
WELD 1940—Robotics Technology .....	4

TOTAL CREDITS FOR CERTIFICATE = 25

## Writing

*See English*

## Wildlife Management

*See Natural Resource Biology*

## Word Processing

*See Business Technology*