

Interpreting Course Descriptions

The courses listed in this catalog are an indication of what may be offered within any given semester. The College reserves the right to make additions or deletions to the list of offerings during the year and to withdraw courses for which adequate enrollment cannot be maintained. Students should consult the official list of courses offered each semester published in the Semester Class Schedule.

Undergraduate Course Prerequisites

Courses beyond the freshman year usually have "prerequisites." This means that certain lower-level courses must be taken before the student may register for the advanced course.

The prerequisite for undergraduate courses may be "consent of instructor." The student must secure the consent of the instructor of the course before registering for it. Consent of instructor is usually required for courses in which there is limited laboratory space or equipment, or in which specific skills are required.

Unless otherwise specified, prerequisite courses must be completed with a grade of "C-" or better. In some cases, students must demonstrate competency at a specific placement level on placement examination(s).

Numbering of Courses

Courses numbered 1000 to 1999 are introductory courses suitable for freshman students. Courses from 2000 to 2999 are primarily intended for sophomore students.

Courses numbered under 1000 may or may not be transferable to other colleges or universities. They do not meet degree requirements at Northwest College.

Subject Area Designators

The three (3) or four (4) letters preceding the course number indicate the subject area the course is in. Course

descriptions are arranged alphabetically by the following designators:

Agriculture	AGRI
Agricultural Economics	AGEC
Agroecology	AECL
Animal Science	ANSC
Crop Science	CROP
Entomology	ENTO
Food Science	FDSO
Horticulture	HORT
Range Management	RGMG
Soil Science	SOIL
Agriculture Technology	AGTK
Anthropology	ANTH
Art	ART
Astronomy	ASTR
Aviation	AVTN
Biology	BIOL
Botany	BOT
Business	BUSN
Accounting	ACCT
Business Administration	BADM
Finance	FIN
Management	MGT
Management Information Systems	BMIS
Marketing	MKT
Business Office Technology	BOTK
Statistics	STAT
Chemistry	CHEM
Communication and Mass Media	CO/M
Computer Applications	CMAP
Computer Science	COSC
Criminal Justice	CRMJ
Developmental Studies	DVST
Economics	ECON
Education	EDUC
Counselor Education	CNSL
Curriculum & Instruction	EDCI
Early Childhood	EDEC
Educational Foundations	EDFD
Exceptional Children	EDEX
Library Science	LIBS
Engineering Science	ES
Electrical Apprenticeship	ELAP
Engineering Technology	ENTK
English	ENGL
Equine Studies	EQST
Family and Consumer Science	FCSC
Geography and Recreation	G&R
Geology	GEOL
Graphic Arts	GRAR
History	HIST
Human Development	HMDV
Humanities	HUM
Journalism	JOUR
Languages	
French	FREN
Greek	GRK
Hebrew	HEBR
Spanish	SPAN
Mathematics	MATH
Statistics	STAT
Molecular Biology	MOLB
Music	MUSC
Nursing Studies	NRST
Outdoor Education	
Activity	OEAC
Professional	OEPR
Philosophy	PHIL
Photographic Communications	PHTO
Physical & Health Education	HLED
PE Activities & Dance	PEAC
Varsity Sports	PEAT
Professional PE	PEPR
Physics	PHYS
Political Science	POLS
Postal Service Management	POST
Psychology	PSYC
Social Science	SOSC
Sociology	SOC
Welding Technology	WELD
Zoology	ZOO

Special Course Numbers

The following courses may be offered in transfer or vocational fields

1460 or 2460 (transfer); 1960 or 2960 (vocational):

Field Studies (1-4)

A combination of classroom instruction with participation in the actual field being studied.

1465 or 2465 (transfer); 1965 or 2965 (vocational):

Directed Studies/Research Problems (1-3)

Special projects and research carried out under the direction of faculty.

1470 or 2470 (transfer); 1970 or 2970 (vocational):

* Internship/Practicum (1-6)

Work experience related to a chosen field of study. (approximately 40 hrs work experience equates to 1 credit hour)

1475 or 2475 (transfer); 1975 or 2975 (vocational):

[0975 (below college-level)]

* Independent Studies (1-4)

A course designed and taken under a special contract with a faculty member.

1480 or 2480 (transfer); 1980 or 2980 (vocational):

* Cooperative Education (1-6)

A planned academic program allowing students to blend classroom theory with related work experience. *Prerequisite: Consent of Cooperative Education Director and approval of appropriate faculty member.* (6.5 hours lecture per student, 70 hours work experience equates to 1 credit hour)

1485 or 2485 (transfer); 1985 or 2985 (vocational):

Seminar (1-3)

In-depth examination of a specific issue or subject.

1490 or 2490 (transfer); 1990 or 2990 (vocational):

Topics (1-4)

Courses that are not part of the regular catalog curriculum. Designed to meet special needs or interests.

1495 or 2495 (transfer); 1995 or 2995 (vocational):

Workshop (1-3)

Specific training or instruction with the emphasis on skills development. Involves interactive participation among class members and instructors.

** A maximum of 12 hours of independent study, cooperative education, and internship credits may be used to fulfill requirements for AA, AS, or AAS degrees at Northwest College. Not more than 6 of these hours may be in any one of the 3 areas. These courses normally will count as elective credits unless otherwise specified by the department.*

ACCOUNTING (ACCT)**ACCT 1050 Practical Accounting (3)**

Students acquire a basic understanding of accounting principles and procedures used to record, classify, summarize, and report financial data. Students also gain a foundation to perform accounting tasks as well as assist with making business decisions. Prior knowledge of accounting is not necessary.
(3 hrs lec)

ACCT 2010 Principles of Accounting I (4)

Students learn the assumptions, principles, and conventions upon which a sound accounting system is based with an emphasis on formation and communication of financial information found on income statement, balance sheet, and statement of cash flow. Students consider use of financial information for decision making purposes and become conversant in the basic language of business. Emphasizes problem solving analysis both manually and on the computer.
(3 hr lec, 2 hrs lab)

ACCT 2020 Principles of Accounting II (4)

A continuation of ACCT 2010. Students advance their accounting knowledge and skills with an emphasis on presentation and analysis of corporate financial statements; management accounting concepts and practices used in operations planning and control; and short-term and long-range management decision making. *Prerequisite: ACCT 2010. BMIS 2000 is recommended.*
(3 hrs lec, 2 hrs lab)

ACCT 2110 Microcomputer Accounting (2)

Introduces students to computerized integrated accounting software using individual modules for general ledger, accounts receivable, accounts payable, payroll, inventory, and job costs. Reinforces each module with practical applications. Course culminates with a comprehensive accounting simulation. *Prerequisite: ACCT 1050 or ACCT 2010 with a "C-" or better.*
(1 hr lec, 2 hrs lab)

ACCT 2410 Intermediate Accounting I (3)

Covers accounting principles pertaining to income determination and the balance sheet with underlying conceptual framework for development of generally accepted accounting principles. Topics include proper presentation of financial statements, present value concepts, recognition, and measurement of assets and liabilities.
(3 hrs lec, 1 hr lab)

AGROECOLOGY (AECL)**AECL 1000 Agroecology (4)**

Students acquire introductory understanding of the interactions that affect agricultural systems. Comparisons are made between developed and developing countries. Students explore challenges and opportunities facing food production and our global society.
(3 hrs lec, 2 hrs lab)

AGRICULTURE ECONOMICS (AGEC)**AGEC 1010 Agricultural Economics I (3)**

Introduction of basic economic principles and reasoning, emphasizing agriculture.
(3 hrs lec)

AGEC 1020 Agricultural Economics II (3)

Economic principles as they apply to agricultural production and marketing. Covers relation of agriculture to the general economy of the country.
(3 hrs lec)

AGEC 2010 Farm-Ranch Business Records (3)

Explores fundamentals of farm and ranch business accounting, analysis, and budgets. Covers the development of effective decision-making methods using records, financial statements, and tax reporting. Includes case farm record-keeping exercise.
(2 hrs lec, 2 hrs lab)

AGEC 2020 Farm-Ranch Business Management (4)

Course covers economic principles, business methods and science applied to organization and operation. Explores measurements of size of business and rate and efficiency of operations. *Prerequisite: Successful completion of at least 30 credit hours.*
(3 hrs lec, 2 hrs lab) *Capstone Course*

AGEC 2100 Advanced Computerized Agriculture Records Management (2)

An advanced course covering advanced computerized financial records and analysis, computerized production records, and computerized crops production records. Student works within a self-paced format and selects one of the three areas of concentration for study. Actual business records of the student used and entered into the computer for more effective analysis and decision making. *Prerequisite: AGECE 2010.*
(1 hr lec, 2 hrs lab)

AGEC 2300 Agricultural Marketing (3)

Covers the role of agricultural products in the national economy and trade; includes costs, margins, marketing alternatives, transportation, governmental influence, and competition. *Prerequisite: ECON 1010, AGECE 1010, or equivalent.*
(3 hrs lec)

AGEC 2400 Farm Credit and Finance (2)

Covers various financial agencies available to the manager; responsibilities, liabilities, and rewards of using credit; interest calculations; discounting and investments. *Prerequisite: AGECE 1010 or AGECE 2010.*
(2 hrs lec)

AGRICULTURE (AGRI)**AGRI 1010 Computers in Agriculture (3)**

Designed to familiarize the student with computer applications related to agricultural situations. Provides the student opportunities to use computers to solve a variety of problems using an assortment of software programs. *Prerequisite: Keyboarding skills recommended.*
(2 hrs lec, 2 hrs lab)

AGRICULTURE TECHNOLOGY (AGTK)**AGTK 1530 Principles of Technology I (3)**

Covers the physical principles underlying today's technological world. Practical applications of physics, mathematics, and technology as used in mechanical fluid, electrical, and thermal systems. *Prerequisite: Placement at math level 2 within one year prior to enrollment.*
(2 hrs lec, 2 hrs lab)

AGTK 1540 Principles of Technology II (3)

Continuation of AGTK 1530. Topics include momentum, waves and vibrations, energy converters, transducers, radiation, optics, and time constants. *Prerequisite: AGTK 1530.*
(2 hrs lec, 2 hrs lab)

ANIMAL SCIENCE (ANSC)**ANSC 1022 Animal Science I (4)**

Provides an overview of opportunities associated with the production of domestic animals for food, clothing, power, and recreation. Students become familiar with breeds and management of beef cattle, dairy cattle, sheep, swine, horses, and poultry.
(3 hrs lec, 2 hrs lab)

ANSC 1024 Animal Science II (4)

Enables students to become familiar with the biological functions of farm-ranch animals. Analyzes products produced by farm-ranch animals. *Prerequisite: ANSC 1022.*
(3 hrs lec, 2 hrs lab)

ANSC 1100 Artificial Insemination (2)

Anatomy of the male and female reproductive system and the physiology of the endocrine and reproductive systems as they relate to a successful artificial insemination program. Labs cover actual practice and techniques in insemination, collecting, handling, storing, and evaluation of semen.
(1 hr lec, 2 hrs lab)

ANSC 1210 Livestock Judging I (2)

Fall semester judging of all types of livestock. Emphasizes individual breed characteristics covering strong and weak points of each.
(.5 hr lec, 3 hrs lab)

ANSC 1220 Livestock Judging II (2)

Spring semester judging of all types of livestock. Emphasizes individual breed characteristics covering strong and weak points of each. *Prerequisite: ANSC 1210.*
(.5 hr lec, 3 hrs lab)

ANSC 1250 Field Experience: Livestock Exhibition (3)

Designed to give the student experience in exhibiting animals at open class fairs and in preparation of livestock for shows and sales. Class time includes duties and responsibilities of a herdsman in preparation, care, and exhibiting livestock. A practicum deals with actual show-ring experience. *Prerequisite: ANSC 1022.*
(.5 hr lec, 5 hrs lab)

ANSC 2020 Feeds and Feeding (4)

Covers the importance of livestock nutrition, physiology of digestion, types of feeds and

determinations of rations for all classes of livestock. *Prerequisite: CHEM 1000 recommended.*
(3 hrs lec, 2 hrs lab)

ANSC 2230 Livestock Judging III (2)

Fall semester competitive livestock judging only. Selected students represent the college in local, regional, and national contests. Students participate in the fall semester. *Prerequisite: ANSC 1220 and written consent of instructor.*
(1 hr lec, 2 hrs lab)

ANSC 2240 Livestock Judging IV (1)

Spring semester competitive livestock judging only. Selected students represent the college in local, regional, and national contests. Students participate in the spring semester. *Prerequisite: ANSC 2230 and written consent of instructor.*
(.5 hr lec, 1 hr lab)

ANSC 2320 Livestock Health and Management (2)

A basic review of the major diseases that affect bovine, ovine, and swine. A portion of the class covers specific anatomy affected by diseases, a review of appropriate pharmacology, and the development of a general herd health management program that agriculture producers can adapt to their own operation.
(2 hrs lec)

ANSC 2430 Comparative Anatomy/Physiology of Domestic Animals (4)

Covers comparative anatomy and the physiology of digestion, circulation, nervous system, reproduction and urinary systems, muscular and skeletal systems, and environment of farm animals.
(3 hrs lec, 2 hrs lab)

ANSC 2550 Public Speaking for Livestock Judges (1)

Designed to improve speaking skills used in judging livestock. Subject matter includes organization, delivery, and speaking skills involved in providing oral critiques of different groups of livestock.
(.5 hr lec, 1 hr lab)

ANTHROPOLOGY (ANTH)

ANTH 1100 Physical Anthropology (3)

Commonly referred to as Biological Anthropology, Physical Anthropology studies the biological basis of humankind. Addresses questions regarding human origins and human variation. Course seeks answers to these questions by analyzing evolutionary theory, cell biology, human genetics, race and human diversity, primate evolution, primate social behavior, and ecology and human origins.
(3 hrs lec)

ANTH 1105 Physical Anthropology Lab (1)

Optional lab operates in conjunction with ANTH 1100. Lab is advised for those specializing in anthropology and those transferring to schools having a four-credit anthropology course with lab. *Prerequisite: Previous or concurrent enrollment in ANTH 1100.*
(2 hrs lab)

ANTH 1200 Introduction to Cultural Anthropology (3)

Provides a wide perspective for the understanding of humankind, language, food-getting strategies, social and economic systems, political organization, marital and family structure, religion, art, music, etc. Accomplished in part by the study and comparison of a variety of cultures.
(3 hrs lec)

ANTH 1300 Introduction to Archaeology (3)

Introduces the theory and method of archaeological science, with an overview of cultural evolution in the Old World up to the development of early civilization. Includes a summary of Wyoming archaeology.
(3 hrs lec)

ANTH 2200 World Ethnography: (3)

Provides an understanding of cultural behavior of peoples in various geographical areas of the world. Indicates the specific geographic area for each semester offered, such as Middle East, Africa, South America, South Pacific, Mediterranean, American Southwest. *A student may take this course twice.*
(3 hrs lec)

ANTH 2210 North American Indian Cultures (3)

A survey of the origin and development of Native American cultures in North America, examining briefly each cultural zone or area.
(3 hrs lec)

ANTH 2300 Archaeological Methods (3)

A study of the history and methods of archaeological excavation. Includes selection of sites, excavation techniques and technologies, and report writing.
(2 hrs lec, 2 hrs lab)

ANTH 2310 Archaeological Field Methods (1-6)

Field experiences in archaeology in the United States or outside the United States. Field schools present instruction in mapping, stratigraphy, excavation techniques and technology, photography, record keeping, regional survey, artifact storage, and preservation. Some excavation sites located in Wyoming and in Israel.
(2 hrs lab per credit hour)

ANTH 2350 Biblical Archaeology (3)

A study of the archaeological context of the Bible lands, relating Syro-Palestinian archaeology to the cultures of the ancient Mediterranean and Near East.
(3 hrs lec)

ANTH 2470 Internship: Anthropology (1-6)

Available to the serious student who desires to observe and participate in a demanding and rewarding professional off-campus experience.
(1-6 hrs lec)

ART (ART)

ART 1010 Introduction to Art (3)

Students undertake an introductory exploration of major art and artifacts of western civilization. Discussion addresses esthetics, craft, and art from non-western cultures and the importance of art in society. Through hands-on art-appreciation

activities, students experiment with different media including drawing, sculpture, ceramics, and mixed media. Museum and gallery tours scheduled. *Only for students not specializing in art.*
(3 hrs lec)

ART 1050 Drawing I (3)

An introduction to the vocabulary and skill of drawing for both the experienced and inexperienced student. Emphasis placed on mastering traditional drawing techniques, along with increasing the student's confidence in his or her skill and visual literacy.
(2 hrs lec, 2 hrs lab)

ART 1060 Drawing II (3)

A continuation and expansion of ART 1050. Emphasis placed on continued development of strength in observational skills and visual thinking abilities. Stress placed on expanded approaches to drawing through incorporation of design concepts, exploration of a broad range of ideas, and experimentation with a variety of media. *Prerequisite: ART 1050.*
(2 hrs lec, 2 hrs lab)

ART 1110 Design: 2-D (3)

A foundation course which introduces the student to the processes of visual perception and how these processes function as a basis for understanding and creating two-dimensional works. *Requires no art background.*
(2 hrs lec, 2 hrs lab)

ART 1120 Design: 3-D (3)

Students address formal constructions and aspects of visual thinking associated with the three-dimensional form such as structure, organization, metaphor, and spatial quality. They explore various media, techniques, and concepts through a series of projects. Students examine conceptual issues while learning about contemporary and historical art movements.
(2 hrs lec, 2 hrs lab)

ART 1130 Design: Color (3)

An introduction to and an intensive exploration of the phenomena and operation of light/color. Investigation of the four properties of color, additive and subtractive color, color phenomena, color interaction, the spatial capabilities of color, color operations, and the graphic structures required for certain color operations; color systems (including the Munsell System); color composition and some of the associative/psychological aspects of color through a series of structured exercises using acrylic paint/mixed media.
(2 hrs lec, 2 hrs lab)

ART 1250 Beginning Water-based Media I (3)

A basic course in transparent watercolor, which will concentrate on the understanding of color, various approaches to handling the watercolor medium, and observational studies emphasizing the shapes of light and dark.
(2 hrs lec, 2 hrs lab)

ART 2010 Art History I (3)

An introduction to the major arts of the world with emphasis on painting, sculpture, and architecture. From prehistoric times to approximately 1500 A.D.
(3 hrs lec)

ART 2020 Art History II (3)

An introduction to the major arts of the world with an emphasis on painting, sculpture, and architecture. This course covers the period from 1500 to the present. (3 hrs lec)

ART 2050 Life Drawing I (3)

A continuation of drawing courses, with emphasis on the human figure. Emphasizes physiology of the body through study of skeletal structure and muscular organization. *Prerequisite: ART 1050.* (2 hrs lec, 2 hrs lab)

ART 2060 Life Drawing II (3)

Continuation of ART 2050, with further study of the anatomical factor and emphasis on the expressive factor. *Prerequisite: ART 2050.* (2 hrs lec, 2 hrs lab)

ART 2090 Printmaking I (3)

Investigation and experimentation with processes and properties of print media, including intaglio, photo intaglio, relief, and monoprint employing safe, non-toxic methods. *Prerequisite: ART 1050.* (2 hrs lec, 2 hrs lab)

ART 2092 Printmaking II: Serigraphy I (3)

An introduction to block-out methods. Includes use of paper, touse, hand-cut and photographic films, and techniques used for printing on various substrates. Uses water-based inks and covers processes for gathering and preparing inks from plant materials and plant-based powdered pigments. Uses water-based commercial inks for fabric printing. (2 hrs lec, 2 hrs lab)

ART 2100 Computer Graphics I (3)

Provides an overview of using the computer for a variety of electronic graphic applications. Students work on a number of exercises using word, draw, and paint programs emphasizing graphic design principles. (2 hrs lec, 2 hrs lab)

ART 2105 Computer Graphics II (3)

A continuation of ART 2100 emphasizing more advanced graphic design programs on the computer. Includes applied problems in editorial, promotional, and layout graphics. *Prerequisite: ART 1110, ART 2120, and ART 2100.* (2 hrs lec, 2 hrs lab)

ART 2110 Typography (3)

Explores concepts of basic typographic style, families, characteristics, and appropriateness of type and letterform in the field of graphic design. Utilizes design capabilities of the computer, pen, pencil, and brush. Includes an awareness of typographic terms, equipment, and methods of working in a professional design environment. (2 hrs lec, 2 hrs lab)

ART 2120 Graphic Design I (3)

Offers an introductory overview to the field of visual communication. Includes a basic understanding of the related fields of print production, photography, and computer graphics. Students gain an understanding of visual communication theory used in a variety of traditional graphic design applications. (2 hrs lec, 2 hrs lab)

ART 2125 Graphic Design History (3)

A survey of the history of graphic design. Covers major styles, movements, and artists. Explores graphic design within the context of changing technology, cultural mores, and the major fine art movements. (3 hrs lec)

ART 2130 Graphic Design II (3)

A continuation of ART 2120. Includes applied problems in editorial and promotional graphics, advertising, and editorial layout. *Prerequisite: ART 2120 and previous or concurrent enrollment in ART 2125.* (2 hrs lec, 2 hrs lab)

ART 2210 Painting I (3)

A basic painting course using the oil medium. Stresses a thorough understanding of color, observation, and analysis of subject matter and design of the two-dimensional surface. Technical information on pigments, building supports, grounds, mediums, and basic painting techniques covered. *Prerequisite: ART 1050 and ART 1110 or ART 1130.* (2 hrs lec, 2 hrs lab)

ART 2220 Painting II (3)

A continuation of ART 2210. Further exploration of shape and color relationships and more concentrated consideration of the organization and structure of the two-dimensional surface. *Prerequisite: ART 2210.* (2 hrs lec, 2 hrs lab)

ART 2310 Sculpture I (3)

An introduction to the fundamentals of sculpture and three-dimensional form. Exploration of various media, techniques, and concepts through a series of assigned projects. Includes an emphasis on the methods and materials used in three-dimensional design. *Prerequisite: Art 1120.* (2 hrs lec, 2 hrs lab)

ART 2400 Advanced Studio (2-3)

A unique living and learning experience for students specializing in graphic design and studio art majors. Students develop and deliver after-school art programs for community elementary schools while also pursuing individual creative work in the studio. Students not residing in the Art House are eligible to participate in the after-school art teaching program for 2 credits. Program is supervised by a full-time faculty member in the Art Department. *Prerequisite: ART 1050, ART 1110, or ART 2120 and successful completion of at least 30 credit hours. May be repeated once for credit.* (1 hr lec, 2-4 hrs lab) **Capstone Course**

ART 2410 Ceramics I (3)

An introductory course in hand building, glazing, and firing clay objects. Coil, slab, pinch, and wheel construction methods covered. Emphasis on forming methods and understanding design. (2 hrs lec, 2 hrs lab)

ART 2420 Ceramics II (3)

Advanced methods of clay construction, glazing, firing, and form analysis. Wheel throwing, glaze mixing, equipment construction, kiln stacking, and utility in form construction emphasized. (2 hrs lec, 2 hrs lab)

ART 2465 Art Portfolio (2)

Students learn about portfolios: how to plan and design them; how to display art work by reproducing it both graphically and photographically; how to organize and physically assemble portfolios; and finally, how to use them as an integral portion of their resume for interviews. *Prerequisite: Successful completion of at least 30 credit hours and consent of instructor.* (2 hrs lec) **Capstone Course**

ART 2479 Special Projects: (3)

Students demonstrate advanced skills in graphic design and visual communication. Projects are client-based and deal directly with professional expectations. Emphasis is on professional conduct, deadlines and time management, writing proposals, negotiating fees and contracts, budget management, research, collaboration, conceptualizing, preparing plans and comprehensives, presentations, and incorporating professional feedback. *Prerequisite: ART 2120, ART 2130 (concurrent enrollment), ART 2100, and successful completion of at least 30 credit hours.* (2 hrs lec, 2 hrs lab) **Capstone Course**

ASTRONOMY (ASTR)**ASTR 1002 Observational Astronomy (1)**

A hands-on observational course for education and enjoyment. Students compare telescopes, learn how to use different telescopes, and learn where to point them in the sky. Some constellation identification done to build a repertory of interesting objects to observe. Opportunity for astrophotography available for those who are interested. Some discussion of the celestial objects observed. (1 hr lec, 1 hr lab)

ASTR 1005 Introduction to Astronomy (4)

A description of the general principles, objects, recent developments, theories, and speculation in astronomy, as well as the methods and equipment by which astronomy is studied. Observations of the sun, moon, planets, stars, groups of stars, and deep-sky objects made, conditions permitting. Some computer simulations included. *Prerequisite: Placement at math level 2.* (3 hrs lec, 2 hrs lab)

ASTR 1050 Survey of Astronomy (4)

An algebra-based course in observational and laboratory astronomy. Topics covered include light, gravity, optical instruments, frame of reference, the sun, planets, satellites, comets, stars, groups of stars, and cosmology. Experiments include spectroscopy, comparison of optical instruments, Kepler's Laws, and observations of as many different astronomical phenomena as possible, including planets, asteroids, comets, deep sky objects, and the sun in white and Hydrogen-alpha light. *No more than 4 hours credit can be earned in ASTR 1005 and ASTR 1050.* *Prerequisite: Placement at math level 3 or above.* (3 hrs lec, 2 hrs lab)

AVIATION (AVTN)**AVTN 2500 Basic Aeronautics (3)**

A course in aerodynamics and theory of flight, aircraft structures and power plants, meteorology,

dead reckoning and radio navigation, air traffic control, flight planning and safety, and FAA regulations. (3 hrs lec)

BUSINESS ADMINISTRATION (BADM)

BADM 1000 Introduction to Business (3)

A general introduction to principal business activities and the functions of management in planning, operating, organizing, and controlling an enterprise. (3 hrs lec)

BADM 1005 Business Mathematics (3)

Course enables students to apply basic mathematic and problem-solving skills with selected business/consumer situations encountered in business and personal lives. Major topics include areas of banking, marketing, retailing, taxes, finance, insurance, and basic statistics. *Prerequisite: Completion of MATH 0920 or placement at math level 2 within one year prior to enrollment. This course fulfills math requirement only for the AAS degree.* (3 hrs lec)

BADM 1020 Business Communication (3)

Applies principles of written and spoken business communication in business environments through reviewing case studies; writing specific types of business letters, memos, and reports; and delivering oral presentations. *Prerequisite: A grade of "C-" or better in ENGL 1010.* (3 hrs lec)

BADM 1050 Introduction to Travel and Tourism (3)

Introduction to the travel and tourism industry. Covers transportation, hospitality management, marketing, tour packaging, recreation, leisure studies, and other topics related to tourism and travel in the Rocky Mountain area. (3 hrs lec)

BADM 1060 Centralized Reservation Systems (2)

Provides an understanding of computerization common within travel and hospitality industries. Emphasizes microcomputer skills and develops familiarity with a commonly used travel software program. *Prerequisite: CMAP 1800 or BMIS 2000.* (1 hr lec, 2 hrs lab)

BADM 1400 Introduction to Hospitality (3)

An introduction to management of food, beverage, and lodging, with an emphasis on maximizing visitor satisfaction. *Prerequisite: BADM 1000 or BADM 1050.* (3 hrs lec)

BADM 2010 Business Law (3)

Provides an overview of business-related legal topics including the legal environment of businesses, contracts, the Uniform Commercial Code, property rights, and social responsibility. (3 hrs lec)

BADM 2100 Small Business Practices (3)

Offers basic principles of marketing, production, operations, finance, accounting, and personnel required to operate any small business. Employs

a problem-solving methodology within a case study orientation that integrates course material and requires students to apply knowledge to situational problems. *Prerequisite: Completion of BADM 1005, or MATH 0930 or above.* (3 hrs lec)

BADM 2395 Capstone in Business (1)

Students demonstrate their level of achievement by integrating the skills and knowledge they have developed throughout their course of study into a comprehensive report and presentation. The final project is a case study that requires students to integrate what they have learned in all aspects of their business study along with quantitative and communication skills. *Prerequisite: Successful completion of at least 30 credit hours.* (1 hr lec) **Capstone Course**

BIOLOGY (BIOL)

BIOL 1000 Principles of Biology (4)

Students learn principles that are important for achieving sound scientific reasoning and methodology. Students study the following topics: cell biology, physiology, genetics, evolution, ecology, and the interactions of humans with their environment. All topics are considered within the context of the human experience. This course will fulfill the lab science general education requirement for students **not specializing** in the biological or physical sciences or health and physical education. (3 hrs lec, 2 hrs lab)

BIOL 1010 General Biology I (4)

Students study the following topics: ecology, evolution, genetics, the chemistry of life, cell structure and function, respiration, and photosynthesis. This introductory biology course is designed for students **specializing** in the biological or physical sciences or health and physical education. *Prerequisite: Placement at math level 2.* (3 hrs lec, 2 hrs lab)

BIOL 1080 Environmental Science (3)

Intended to attract students interested in the environment. Concerns conservation of natural resources. Course focuses upon modern environmental problems. (3 hrs lec)

BIOL 2020 General Biology II (4)

A phylogenetic survey of living organisms which includes the study of kingdoms *animalia*, *plantae*, *protista*, *fungi*, and *monera*. Emphasizes evolution of structure and function. *Prerequisite: BIOL 1010.* (3 hrs lec, 2 hrs lab)

BIOL 2200 Genetics (3)

A study of the principles of heredity. Includes basic Mendelian genetics, nature and function of genetic material, population genetics, and evolution. Emphasizes practical application to artificial selection in plant and animal breeding, as well as human genetics. *Prerequisite: BIOL 1010.* (3 hrs lec)

BIOL 2310 Introduction to Geographic Information Systems (3)

Students acquire an introductory-level understanding of the principles and practices of

geographic information systems (GIS), both as an interactive spatial database and as a powerful analytical tool. Students learn the theory of mapping and spatial data analysis as well as learn to use GIS software through exercises and projects. (2 hrs lec, 2 hrs lab)

BIOL 2395 Biological Research: A Capstone Experience (1)

Students have the opportunity to design biological experiments and to organize, analyze, and interpret data. Students write a scientific paper and orally present their results to both peers and faculty. *Prerequisite: BIOL 1010 and successful completion of at least 30 credit hours.* (1 hr lec) **Capstone Course**

BIOL 2400 Ecology (3)

A study of ecosystems, energy flows, habitats, natural cycles, environmental influences, succession, population, and speciation. *Prerequisite: One semester of biological science.* (3 hrs lec)

BIOL 2410 Field Ecology Lab (1)

Gives students the opportunity to investigate natural communities and actively participate in study and analysis of water, soil, climate, and organisms associated with characteristic habitats. *Prerequisite: BIOL 2400 or concurrent registration.* (2 hrs lab)

BIOL 2420 Studies in Rocky Mountain Ecology (4)

Introduction to the field study of the ecology of the Rocky Mountains. Emphasizes the interrelationships between geology, soils, climate, plants, and wildlife as found in the Yellowstone-Teton-Absaroka mountain area of northwestern Wyoming. Necessary concepts introduced and illustrated through field observations. *Prerequisite: Consent of instructor.* (3 hrs lec, 2 hrs lab)

BUSINESS MANAGEMENT INFORMATION SYSTEMS (BMIS)

BMIS 2000 Computer Information Systems (3)

Introduction to computer and information systems. Course content includes study of hardware, software, computer architecture, information processing, data communications, information management, and social issues in computing. Incorporates application experiences in operating system, word processing, spreadsheet, and database software. *Prerequisite: Minimum of 25 wpm typing speed.* (2 hrs lec, 2 hrs lab)

BOTANY (BOT)

BOT 2050 Taxonomy of Flowering Plants (4)

Designed to give students an understanding of the principles and techniques of plant taxonomy and biosystematics. Laboratories review the characteristics of major plant families and acquaint students with local flowering plants, methods of identifying them, and their distributions. *Prerequisite: BIOL 1010.* (3 hrs lec, 2 hrs lab)

BOT 2100 Forest Management (3)

An introduction to the principles and goals of forestry. Includes biology of trees and forest ecosystems, management objectives and methods, and commercial aspects of the forest industry. (3 hrs lec)

BUSINESS OFFICE TECHNOLOGY (BOTK)**BOTK 1640 Keyboarding Applications I (2)**

Designed for students with little or no prior keyboarding or word processing experience. Students become proficient in data entry by touch on the standard QWERTY keyboard of microcomputers, learn basic word processing commands, and apply these skills to produce basic documents for personal use, college course work, or on the job. Individually tailored, computerized instruction enables students at any level of keyboarding ability to increase their speed and accuracy.

(1 hr lec, 2 hrs lab)

BOTK 1955 Professional Development (2)

Designed to help students develop the professional image and attitude needed for success in any career. Includes consideration of nutrition and health, dressing for success, interview skills, communication skills, presentation skills, business ethics and etiquette, stress and time management, and human relations. Ideal for students planning to work in public jobs such as banking, teaching, and all areas of business.

(2 hrs lec)

BOTK 2510 Legal Terminology (1)

A study of definitions of legal terms and procedures, designed primarily for students wishing to become legal stenographers and secretaries. *Prerequisite: BOTK 1640 or equivalent.*

(1 hr lec)

BOTK 2600 Medical Transcription (3)

Combines keyboarding, word processing, and machine transcription to transcribe realistic medical dictation. Emphasizes vocabulary and terms of the medical profession by using medical tapes and supplementary materials. *Prerequisite: BOTK 1640 and NRST 1200.*

(2 hrs lec, 2 hrs lab)

BOTK 2620 Medical Coding (2)

An introduction to medical coding. Demonstrates to students interested in the medical secretary and medical records fields how to classify diseases and procedures from the three-volume Classification of Diseases books used by hospitals and the Current Procedural Terminology books used in doctors' offices. *Prerequisite: NRST 1200.*

(2 hrs lec)

BOTK 2700 Shorthand: Speedwriting (3)

Using alphabetic and/or symbolic outlines, students develop the listening and psychomotor skills needed for taking notes for business and/or personal use. Presents theory and focuses on developing speed and accuracy in dictation and transcription. Language arts skills reviewed and stressed. *Prerequisite: BOTK 1640.*

(2 hrs lec, 2 hrs lab)

BOTK 2900 Office Systems and Procedures (3)

Designed for those students interested in pursuing a career as an administrative assistant. Emphasizes procedures used in supervision, organization, written and oral communication, time management, decision making, information management, planning meetings, travel arrangements, job seeking, and advancement.

Prerequisite: CMAP 1715 and successful completion of at least 30 credit hours.

(3 hrs lec)

Capstone Course

BOTK 2950 Employment Orientation (1)

Students acquire information regarding self-evaluation, career fields, and job acquisition skills. Students gain practical experience in preparing cover letters, job application letters, resumes, and application forms. Mock interviews help students sharpen interview skills. *Prerequisite: Successful completion of at least 30 credit hours recommended.*

(1 hr lec)

BOTK 2970 Internship: (2)

Focuses on practical experience in an actual office for two weeks. Students spend one week of preparation on campus prior to two weeks of work experience in a city such as Denver or Billings. Testing conducted by temporary help placement agencies. Students placed in a work situation can earn full pay from the agency. *Students must pay for all living expenses in the town of temporary employment. Prerequisite: BOTK 2900 and consent of instructor.*

(10 hrs lec, 80 hrs lab)

BUSINESS (BUSN)**BUSN 2000 Introduction to International Business (3)**

A broad survey of the field of international business which introduces the basic concepts of international business activity and theory. Reviews major foreign environmental forces—financial, economic and socioeconomic, physical, sociocultural, political, legal, labor, competitive, and distributive—within the context of strategic management issues.

(3 hrs lec)

CHEMISTRY (CHEM)**CHEM 1000 Introduction to Chemistry (5)**

Principles of chemistry with some applications in inorganic. Chemistry for life science students and other students not requiring a rigorous preparation in theories and principles. *CHEM 1000 and CHEM 2300 satisfy full-year requirements for general, organic and biochemistry. Prerequisite: Placement at math level 3 or above or concurrent enrollment in MATH 0930.*

(5 hrs lec, 2 hrs lab)

CHEM 1010 Principles of Chemistry (4)

A one-semester course which covers the development of the fundamental ideas and methods of chemistry as applied to scientific and social problems. A student may not receive credit for both CHEM 1010 and CHEM 1000.

Prerequisite: Placement at math level 2.

(3 hrs lec, 2 hrs lab)

CHEM 1020 General Chemistry I (5)

Principles and theories of chemistry, designed for science and related concentrations. Students acquire knowledge of atomic and molecular structures; periodic law; ionic theory; behavior and properties of gaseous, liquid, and solid states of matter; plus some study of nonmetallic elements. *Prerequisite: High school chemistry preferred. Concurrent registration in MATH 1400 or above or equivalent math background, or completion of CHEM 1000.*

(4 hrs lec, 3 hrs lab)

CHEM 1030 General Chemistry II (4)

Continues CHEM 1020. Students acquire knowledge of oxidation-reduction reactions, additional nonmetals, groups on the periodic chart, radioactivity, nuclear chemistry, and organic chemistry. *Prerequisite: CHEM 1020.*

(3 hrs lec, 3 hrs lab)

CHEM 1090 Fundamentals of the Physical Universe (4)

Applies fundamental principles of chemistry and physics to real life situations. Designed primarily for students specializing in elementary education. Equivalent to PHYS 1090. *Prerequisite: Placement at math level 3 one year prior to enrollment.*

(3 hrs lec, 2 hrs lab)

CHEM 2149 Nuclear Century (3)

Students acquire an understanding and appreciation for the development of nuclear energy and the social, psychological, political, and environmental issues associated with it. This course is team taught by a historian with a chemist or a physicist. *This course is the same as HIST 2149 and PHYS 2149. This course is approved for honors credit.*

(3 hrs lec)

CHEM 2230 Quantitative Analysis (4)

Fundamental concepts of quantitative analysis, application, and techniques of gravimetric, volumetric, and instrumental analysis.

Prerequisite: MATH 1400 or equivalent, CHEM 1000 or CHEM 1030.

(2 hrs lec, 6 hrs lab)

CHEM 2300 Introduction to Organic Chemistry (4)

Students learn basic principles and methods of organic chemistry including nomenclature, structure, reactions, reaction mechanisms, and stereochemistry. They also acquire introductory knowledge of nuclear magnetic resonance, infrared, ultraviolet, and mass spectral analysis of organic compounds. *Prerequisite: CHEM 1000 and CHEM 1020. NOT for students who have taken CHEM 2320 and CHEM 2340.*

(4 hrs lec)

CHEM 2320 Organic Chemistry I (4)

The first semester of a continuing course studying aliphatic compounds of carbon. Includes nomenclature, structure, preparation, reactions, reaction mechanisms, and stereochemistry. Introduces nuclear magnetic resonance, ultraviolet, infrared, and mass spectral analysis of organic compounds. *Prerequisite: CHEM 1020, CHEM 1030, or equivalent.*

(3 hrs lec, 3 hrs lab)

CHEM 2340 Organic Chemistry II (4)

Aromatic compounds stressed. Emphasizes functional groups of compounds covered first semester along with others. Covers fats, carbohydrates, and proteins in the latter part of course as background for biochemistry.

Prerequisite: CHEM 2320.

(3 hrs lec, 3 hrs lab)

CHEM 2485 Chemistry Capstone Seminar (1)

Students design and implement an independent laboratory project involving either chemical syntheses or chemical analysis. Students are evaluated on their ability to organize their laboratory notebook, integrate scientific literature into their project, provide a thirty-minute project-based presentation before the Physical Science Division Faculty, and respond to questions about their work. *Prerequisite:* Concurrent registration in CHEM 2340 and successful completion of at least 30 credit hours.

(.5 hr lec, 1 hr lab)

Capstone Course

COMPUTER APPLICATIONS (CMAP)**CMAP 1610 Windows I (1)**

Provides the student with basic understanding of the Microsoft Windows operating environment. Students master the basic concepts of Windows, including multitasking, memory, disk, program and file management, icons, pull-down menus, pointing devices, and printing.

(.5 hr lec, 1 hr lab)

CMAP 1615 Operating Systems (3)

Students become versed in various operating systems. Students will acquire the basic skills necessary in the use of multi-user, multitasking operating systems. Topics include user accounts, the file system, directories, the editor, a mail system, I/O commands, file commands, and scripting. *Prerequisites:* COSC 1000, CMAP 1610 and CMAP 1620.

(2 hrs lec, 2 hrs lab)

CMAP 1620 Windows II (1)

In this advanced Windows course, students acquire information needed to manage, support, and troubleshoot the Windows Registry. Students learn ways to increase or modify the system's performance using RegEdit as well as DAT files. They also explore Registry editing tools.

Prerequisite: CMAP 1610.

(.5 hr lec, 1 hr lab)

CMAP 1650 Local Area Networks I (3)

Students enhance their skills with computer networking technologies. Course is designed to serve the needs of information systems professionals and other individuals, as well as those who are interested in obtaining Microsoft or Novell certification on this topic. *Prerequisite:* BMIS 2000 and CMAP 1610.

(2 hrs lec, 2 hrs lab)

CMAP 1675 Microcomputer Office Skills (1-4)

This course features a flexible, open-entry, open-exit enrollment model that allows students to focus on specific competencies to be achieved. Students may choose Ten-Key Mastery (1), Records/Information Management (1), and Machine Transcription (2).

(2 hrs lab for each credit hour)

CMAP 1680 Microcomputer Applications: (1-3)

Specialized studies in microcomputer applications. Students acquire knowledge and skills regarding new and current software application packages.

(.5 lec, 1 hr lab for one-credit hour, 2 hrs lab for each additional credit hour)

CMAP 1700 Word Processing I: (1)

A study of word processing basic applications and their uses for personal and professional opportunities. *Course does not apply toward an AAS degree in BOTK. Prerequisite:* CMAP 1610 and keyboarding skill of 30 wpm or better.

(.5 hr lec, 1 hr lab)

CMAP 1705 Word Processing II: (1)

A study of word processing advanced applications and their uses for personal and professional opportunities. *Course does not apply toward an AAS degree in BOTK. Prerequisite:* CMAP 1700 or equivalent.

(.5 hr lec, 1 hr lab)

CMAP 1715 Word Processing: (3)

Students learn word processing software skills required to create, format, edit, and print business documents. Students become familiar with the concepts, equipment and terminology of word processing used in business offices. *Prerequisite:* Demonstrated keyboarding proficiency of 45 wpm or better and BMIS 2000.

(2 hrs lec, 2 hrs lab)

CMAP 1750 Spreadsheet Applications I: (1)

Students acquire knowledge and skills to use electronic spreadsheet applications and their uses for personal and professional opportunities.

Prerequisite: CMAP 1610 or equivalent.

(.5 hr lec, 1 hr lab)

CMAP 1800 Database Applications I: (1)

Students acquire knowledge and skills to use database applications for personal and professional opportunities. *Prerequisite:* CMAP 1610 or equivalent.

(.5 hr lec, 1 hr lab)

CMAP 1850 Desktop Publishing I: (3)

Students enhance ability to prepare professional documents using desktop publishing software. They explore graphic design techniques, principles of page layout, terminology, and applications in a Windows environment. Students create fliers, brochures, newsletters, and business cards, plus build skill in using style sheets, templates, and the importation of data created in other software programs. *Prerequisite:* BMIS 2000, CMAP 1610, demonstrated keyboarding proficiency of 45 wpm or better, and basic word processing skills.

(2 hrs lec, 2 hrs lab)

CMAP 1890 World Wide Web Authoring (1)

Students develop preliminary skills to plan, create, and maintain a Web page. Skills include links, graphics, animation, tables, forms, and other enhancements for sites on the World Wide Web. *Prerequisite:* CMAP 1680.

(.5 hr lec, 1 hr lab)

CMAP 1920 Computer Hardware Maintenance (3)

Students engage in a comprehensive study of how to maintain, manage, and troubleshoot the PC computer. Students learn to diagnose and solve

problems that occur in the hardware and software operations. Preparation for the industry recognized A+ technician certification is emphasized.

Prerequisite: BMIS 2000, CMAP 1610, and CMAP 1620.

(2 hrs lec, 2 hrs lab)

CMAP 1930 LAN Wiring and Network Technology (3)

Students gain the necessary background and skills to physically connect network topologies. An in-depth study of the OSI 7-layer model of network communications is accomplished.

Topics include basic transmission media, network computing, different network services and parts, and various protocols. *Prerequisite:* CMAP 1650.

(2 hrs lec, 2 hrs lab)

CMAP 1950 LAN Services and Support (3)

Students learn to install network-related hardware in a hands-on format. Skills include prevention, diagnosis, and resolution of hardware-related problems, as well as network management in the Netware environment. *Prerequisite:* CMAP 1650, CMAP 1680, and CMAP 1930.

(2 hrs lec, 2 hrs lab)

CMAP 2520 Telecomputing/Internet (3)

Students learn basic concepts of data communications. Topics include communication standards, various transmission methods, types of media, equipment and interface, communication codes, protocols and architectures, terminal emulation, and data communication products.

Prerequisites: BMIS 2000 and CMAP 1680.

(2 hrs lec, 2 hrs lab)

CMAP 2630 Presentation Graphics (3)

Students acquire skills necessary to make effective visual presentations for business, education, communications, or other fields where presentations may be used to accomplish or enhance a task. Students use a combination of software packages to develop advanced presentation graphic skills. *Prerequisites:* Keyboarding skill of 45 wpm or better, at least intermediate-level word processing skill, and intermediate-level experience on a PC.

(2 hrs lec, 2 hrs lab)

CMAP 2900 Advanced Integrated Computer Applications (3)

An advanced course in computer and information systems. Introduces advanced concepts in hardware, software, computer architecture, information processing, data communications, and information management. Incorporates advanced integrated application experiences in operating system, word processing, spreadsheet, database, and presentation graphics software.

Prerequisite: BMIS 2000.

(2 hrs lec, 2 hrs lab)

CMAP 2970 Internship: (1-6)

Students acquire hands-on work experience in a business setting related to the area of study they are specializing in. Students apply their knowledge to real-world problems, receive guidance from on- and off-campus professionals, and gain an assessment of their professional competencies. *Prerequisite:* Successful completion of at least 30 credit hours in appropriate option.

(2 hours lab for each credit hour)

COUNSELOR EDUCATION (CNSL)

CNSL 2410 Educational Guidance for Elementary and Middle Schools (2)

An introductory course primarily for teachers, teachers-in-training, and counselors. Covers individual and group guidance and counseling techniques in the elementary and middle schools. Emphasizes the role of teachers and counselors in providing guidance, counseling, and experiences for children to promote social, emotional and psychological growth. *A course approved by the State of Wyoming's Professional Teaching Standards Board for teacher certification credit. Prerequisite: Wyoming teacher certification.* (2 hrs lec)

COMMUNICATION AND MASS MEDIA (CO/M)

CO/M 1010 Public Speaking (3)

An introductory course with emphasis on oral communication theory and practice. Provides a basic understanding of the significance of oral communication as well as instruction and practice in the basic skills of public speaking. (3 hrs lec)

CO/M 1030 Interpersonal Communication (3)

Concerned with communication on a person-to-person and small group level. Considers verbal and nonverbal areas, with instruction designed to provide insight into improving communication with others through discovery and relevant theory. (3 hrs lec)

CO/M 1040 Introduction to Human Communication (3)

Explores significant aspects of human communication. Focuses on the role of communication in current affairs, business, and personal relations. Discusses practical application of theory to communication problems in everyday life. (3 hrs lec)

CO/M 1060 Beginning Forensics (1)

Introduces beginning forensics students to basic research, critical thinking, and organizational skills for the development of competent collegiate forensic speaking abilities. Requires attendance at minimum of two competitive tournaments per semester in debate and/or individual events. *May be repeated once for credit.* (2 hrs lab)

CO/M 1200 Beginning Sign Language (SEE II) (2)

Focuses on acquisition of basic vocabulary using Signing Exact English (SEE II). Emphasis on accuracy, finger spelling, expressiveness, as well as understanding of language principles and systems, deaf culture, and philosophy of signing. Includes an introduction to transliteration. (2 hrs lec)

CO/M 1220 Intermediate Sign Language (SEE II) (2)

Emphasis on clear, expressive signing; reversal skills; enhanced vocabulary; signing principles; and philosophy related to the method known as

Signing Exact English. Some review of CO/M 1200 vocabulary. *Prerequisite: CO/M 1200.* (2 hrs lec)

CO/M 1260 Early Intervention for the Deaf (2)

Explores early identification of hearing loss, the importance of early intervention, early intervention methods, how hearing loss affects understanding of language and speech, and deaf culture. (2 hrs lec)

CO/M 2010 Leadership Skills (1)

Educates potential Resident Assistants in areas of student growth and development. Emphasizes dealing with resident students in an effective manner. Explores theory and experiential learning situations. *Prerequisite: Consent of Director of Residential Life.* (.5 hr lec, 1 hr lab)

CO/M 2020 Advanced Sign Language (2)

Course focuses on enhancement of interpreting/transliterating skills. Additional sign language vocabulary learned through knowledge of Sign Language Families of Signs. Students learn appropriate facial and body expression, enhancement of receptive and expressive sign language skills, increased understanding of sign language principles, various sign language systems, deaf culture, and the philosophy of signing. *Prerequisite: CO/M 1220.* (2 hrs lec)

CO/M 2060 Forensics (1)

Develops basic skills in contest and public service speaking by refining the speaking and thinking competence of students. Requires attendance at two competitive tournaments per semester in debate and/or individual events. *May be repeated once for credit.* (2 hrs lab)

CO/M 2070 Introduction to Forensic Tournament Administration (1)

A practical application course for students interested in the administration of forensics tournaments. Students learn through instruction and hands-on application of procedures designed to run both computerized individual events and computerized debate programs. Students receive information that includes specific procedures, ethical considerations, and financial applications. *May be repeated once for credit.* (1 hr lec)

CO/M 2080 Introduction to Forensic Research (1)

Designed to introduce students to materials used to prepare speeches for competitive purposes and provide opportunities for students to develop skills necessary to analyze, synthesize, and utilize information from a variety of sources. *May be repeated once for credit.* (1 hr lec)

CO/M 2090 Introduction to Persuasion (3)

Introduces rhetorical theory and communication practices as related to the field of persuasion. Emphasizes persuasive campaigns, techniques, psychological factors, and persuasive applications in our society. (3 hrs lec)

CO/M 2110 Nonverbal Communication (3)

Designed to acquaint people with the nonverbal aspects of communication. Studies areas such as kinesics, proxemics, paralinguistics, and touch. *Prerequisite: CO/M 1030.* (3 hrs lec)

CO/M 2120 Small Group Communication (3)

Instruction and practice in group communication and problem solving. Provides the format of study for understanding dynamics of group discussion with leadership, interpersonal relations procedures, and creative and critical thinking. (3 hrs lec)

CO/M 2125 Family Communication (3)

Designed to explore the patterns of communication in family relationships. Uses a systems approach which provides a perspective for describing family interaction patterns and processes and considers external influences on the development of family relationships. Descriptive, not prescriptive, in nature. Not designed as a counseling or therapy class. Information presented assists understanding of the vitality of communication in the development of functional and dysfunctional family relationships. (3 hrs lec)

CO/M 2150 Argumentation (3)

Instruction in the principles of argumentative speaking. Practices various types of debate with emphasis on analysis, evidence, reasoning, case construction, and delivery. (3 hrs lec)

CO/M 2250 Organizational Communication (3)

An overview of organizational communication theory and practice. Emphasis on communication patterns and roles. Includes attention to dyadic, group, public, and mediated experiences in organizations. *Prerequisite: CO/M 1030 and CO/M 1040.* (3 hrs lec)

CO/M 2485 Sophomore Seminar: Communication (2)

Student integrates knowledge from courses in the student's area of specialization and skills from the general education program. The focus for students is an intermediate view of the field, its history, current developments, and future directions. Student completes and presents a significant project that reflects the chosen career area or discipline. *Prerequisite: Successful completion of at least 30 credit hours.* (2 hrs lec) *Capstone Course*

COMPUTER SCIENCE (COSC)

COSC 1000 Computer Programming (3)

Students develop entry-level structured programming skills using current programming software. Topics to be covered include input/output, arithmetic, looping, and decision structures. Students gain an understanding of the uses and flexibility of the selected programming language(s). *Prerequisite: MATH 1400, or MATH 1450 or placement at math level 4 within one year prior to enrollment.* (2 hrs lec, 2 hrs lab)

COSC 1008 Program Design and Development (3)

Introduction to programming and algorithms. Covers sequence, iteration and selection statements, procedures and functions, data types up to strings and arrays, and correctness analysis and complexity. Lectures presented in a programming language independent fashion. Successful completion prepares students to take the beginning computer science sequence. *Prerequisite: MATH 0930 or placement at math level 3 within one year prior to enrollment.* (2 hrs lec, 2 hrs lab)

COSC 1010 Introduction to Computer Science I (4)

Introduces algorithms in searching, sorting, and symbolic computing. Uses recursion in the process of solving problems and introduces numerical methods. Covers complex data types (records, dynamic) and structures (linked lists). Introduces concepts of software engineering, such as data abstraction and modular design. Correctness analysis, verification, and complexity explained in lecture and used in labs. Covers necessary mathematics as needed. *Prerequisite: COSC 1120 or equivalent.* (3 hrs lec, 2 hrs lab)

COSC 1020 Introduction to Computer Science II (4)

Covers data structures and abstraction in detail in relation to information representation, modular and object systems, architecture, assembly, and data representation at the machine level. Introduces necessary mathematics as needed. *Prerequisite: COSC 1010 or equivalent.* (3 hrs lec, 2 hrs lab)

COSC 2115 Programming for Business (3)

Students develop an understanding of an advanced programming language. Students become familiar with object-oriented design, abstract data types, objects, inheritance, encapsulation, polymorphism, functions, and stream input and output. *Prerequisite: COSC 1000 and MATH 1400 or higher.* (2 hrs lec, 2 hrs lab)

COSC 2150 Computer Organization (3)

An introductory course in assembly language programming. Includes macros, subroutines, interrupts, hardware structure, and machine code. *Prerequisite: Two college-level programming courses. COSC 2300 recommended.* (3 hrs lec)

COSC 2240 Systems Analysis and Design (3)

Students acquire and demonstrate knowledge in the concepts and techniques used in process analysis and the design and implementation of online business systems. Course work includes case analysis and presentation to demonstrate acquired skills. *Prerequisite: CMAP 1650 and CMAP 1930.* (2 hrs lec, 2 hrs lab)

COSC 2300 Discrete Structures (3)

An introductory course covering the mathematics most used in the analysis of algorithms. Logic and proof covered with some emphasis on proof by induction. Counting, combinatorics, probability, relations, discrete functions and Boolean algebras

with applications to switching circuits covered. Graph theory, machine arithmetic, and finite differencing techniques also introduced. *This course is the same as MATH 2300. Prerequisite: A grade of "C-" or better in MATH 2200 or MATH 2350.* (3 hrs lec)

COSC 2401 C Programming (3)

ANSI C program design, with functions, arrays, structures, files, macros, library development and dynamic memory allocation. Requires many out-of-class programming assignments. *Prerequisite: Concurrent enrollment in COSC 2150.* (3 hrs lec)

CRIMINAL JUSTICE (CRMJ)**CRMJ 2120 Introduction to Criminal Justice (3)**

An exploration of the police, courts, and correctional agencies that oversee American justice. Examines process and philosophies that underlie the establishment of the modern criminal justice system. *This course is the same as POLS 2120.* (3 hrs lec)

CROP (CROP)**CROP 2000 Plants, Agriculture, Civilization (4)**

Covers the importance of crop plants in feeding the world. Botany and plant physiology presented so as to provide a basis for understanding plant growth, reproduction, and response to environmental factors. Commercial crop production, marketing, land use planning, government programs, research achievements, and research needs addressed. *Prerequisite: BIOL 1010.* (3 hrs lec, 2 hrs lab)

CROP 2200 Forage Crop Science (3)

Studies major forage grasses and legumes with emphasis on production practices, harvest, storage, utilization, and pasture management. (2 hrs lec, 2 hrs lab)

DEVELOPMENTAL STUDIES (DVST)**DVST 0104 Conversational English for Non-native English Speakers (3)**

Course designed for students with weak conversational abilities in English compared to reading and writing skills in English. Prepares students to understand academic lectures and note-taking methods. Course helps student feel confident and at ease when asking and answering questions in a typical classroom setting. (3 hrs lec)

DVST 0106 Reading and Writing for Non-native English Speakers (3)

Course intended for students who don't possess English as a native language. Class focuses on sharpening reading, writing, and composing skills as a means of facilitating and refining comprehension and communication in English. Course provides practice in what constitutes a "good" essay in the United States. (3 hrs lec)

DVST 0108 English Conversation and Composition for Non-native English Speakers (4)

Course combines the four language skills covered in DVST 0104 and DVST 0106. Students cultivate listening, speaking, reading, and writing skills using individual learning styles to prepare for college-level classes. (4 hrs lec)

DVST 0510 Fundamentals of Reading I (1-3)

A reading course designed to improve the student's overall reading ability. Addresses specific weaknesses in skills-vocabulary, reading for the main idea, and word attack skills. *May be repeated to a maximum of 4 credit hours. Prerequisite: Placement at reading level 1.* (1-3 hrs lec)

DVST 0520 Fundamentals of Reading II (1-3)

Designed for students who need improvement in mastering basic reading skills. Areas of need determined and individual/small group instruction provided. Course goals promote individual achievement, create positive attitudes toward reading, and demonstrate practical application of learned skills and techniques. *Prerequisite: DVST 0510 or placement at reading level 2.* (1-3 hrs lec)

DVST 0600 Basic Writing I (3)

For students whose background in English has not prepared them for regular college English classes. Emphasizes grammar and mechanics. *Prerequisite: Placement at English level I.* (3 hrs lec)

DVST 0610 Basic Writing II (3)

A continuation of DVST 0600. Designed for students whose background in English has not prepared them for college-level writing. Course covers instruction and provides writing practice in the organization of short compositions. Reviews sentence elements and usage as necessary. *Prerequisite: Successful completion of DVST 0600 or placement at English level 2.* (3 hrs lec)

DVST 0890 Basic Skills Development (1)

First course required for Academic Success Program. Designed to help students study quickly and efficiently. Study techniques, note-taking, test-taking, and listening skills comprise much of course content. *Must be taken in conjunction with HMDV 1000.* (1 hr lec)

ECONOMICS (ECON)**ECON 1010 Macroeconomics (3)**

The study of how economic society is organized and uses scarce resources to provide for its material wants. National income analysis, business cycles, the banking system, and monetary and fiscal policy. (3 hrs lec)

ECON 1020 Microeconomics (3)

Course emphasizes value and price theory, monopoly and public policy, markets for productive goods and services, labor economics, alternative forms of economic organization, and international trade. (3 hrs lec)

**EDUCATION – CURRICULUM/
INSTRUCTION (EDCI)****EDCI 1010 Field Experience: Prospective Teachers (1)**

Provides an overview of teaching. Requires observation, interview, and reflection on teaching as a profession. Observations and interviews may be conducted in the student's hometown during semester breaks. *Pass/Fail only.*
(9 hrs lec, 20 hrs lab/semester)

EDCI 1410 Elementary School Math Seminar I (1)

A hands-on application course designed to examine some of the methods used to teach mathematics topics covered in MATH 1100. *Prerequisite: Previous or concurrent enrollment in MATH 1100.*
(1 hr lec)

EDCI 1420 Elementary School Math Seminar II (1)

A hands-on application course designed to accompany MATH 1105. Topics mirror those taught in MATH 1105 and focus on the NCTM Professional Standards for Teaching Mathematics. *Previous or concurrent enrollment in MATH 1105.*
(1 hr lec)

EDCI 1430 Life Science in the Elementary School (1)

Course provides material, curricula, and teaching strategies in life science appropriate for elementary school. *Prerequisite: Previous or concurrent enrollment in BIOL 1010.*
(1 hr lec)

EDCI 1440 Physical Science in the Elementary School (1)

Designed to cover a selection of basic physical science concepts, materials, and curricula appropriate for elementary school. Requires observation and participation in an assigned elementary classroom during science teaching activities. *Prerequisite: Previous or concurrent enrollment in CHEM 1090 or PHYS 1090.*
(1 hr lec)

EDCI 1450 Earth Science in the Elementary School (1)

Designed to cover a selection of basic earth science concepts, materials, and curricula appropriate for elementary schools. Emphasizes methods and materials to facilitate elementary students' exploration of the earth and human interaction with it. *Prerequisite: Previous or concurrent enrollment in GEOL 1100.*
(1 hr lec)

EDCI 2200 Early Childhood Practicum (3-5)

Students observe and participate in programs and settings with young children. Students learn through lecture and practical applications in a supervised experience. *Prerequisite: EDEC 1020, FCSC 2121, and successful completion of at least 30 credit hours.*
(1.5 hrs lec, 6-12 hrs lab) **Capstone Course**

EDCI 2340 Using Computer Technology in Teaching (2)

Designed to equip teachers and prospective teachers with information, skills, and insights necessary for successful integration of computer-

based technologies into classroom teaching. Includes modeling of techniques, teacher strategies, appropriate applications of computer-based technologies in specific content areas, and consideration of computer-based issues facing educators. *A course approved by the State of Wyoming's Professional Teaching Standards Board for teacher certification credit.*
Prerequisite: Wyoming teacher certification.
(2 hrs lec)

EDCI 2400 Middle School Curriculum (2)

A basic professional course for the preparation of middle school educators. Includes a review of the reorganization of junior high school leading to the establishment of the middle school philosophy, the teacher, and the unique function of the middle school. *A course approved by the State of Wyoming's Professional Teaching Standards Board for teacher certification credit.*
Prerequisite: Wyoming teacher certification.
(2 hrs lec)

EDCI 2415 Integrating Reading Methods in the Content Area (2)

Course provides teachers or prospective secondary education teachers with expanded knowledge of reading and writing procedures relating to a variety of disciplines. Includes estimating students' reading abilities, developing techniques for vocabulary enhancement, creating new writing strategies, and developing reading-related study skills. *A course approved by the State of Wyoming's Professional Teaching Standards Board for teacher certification credit.*
Prerequisite: Wyoming teacher certification.
(2 hrs lec)

EDCI 2450 Adventure Education for Public School Teachers (2)

Provides training in the philosophy, skills, applications, and programming of Adventure Education in the public school setting. Includes one full day lab devoted to the presentation of an adventure education activity for a specific audience. *One credit may be used to fulfill Wellness Education Requirements. This course is the same as OEPR 2450.*
(2 hrs lec, .5 hr lab)

**EDUCATION – EARLY
CHILDHOOD (EDEC)****EDEC 1020 Introduction to Childhood Education (3)**

An introduction to the field of early childhood education. Emphasizes developmentally appropriate practices and basic skills for working with young children. Focuses on professional opportunities and programs.
(3 hrs lec)

EDEC 2020 Child Guidance (3)

Emphasizes the dynamics that affect children's behavior. Examines appropriate and inappropriate guidance and discipline techniques and current theories, including behavior modification.
(3 hrs lec)

EDEC 2485 Seminar: Operating Early Childhood Programs (3)

Studies information and procedures relating to organizing and administering group child care programs. Includes grant writing and funding,

governmental requirements, and record keeping. Covers guidelines for developmentally appropriate practices for care givers and programs. *Prerequisite: Previous or concurrent enrollment in EDEC 1020.*
(3 hrs lec)

**EDUCATION – EXCEPTIONAL
CHILDREN (EDEX)****EDEX 2190 Gifted Students (2)**

Course provides students with the means to identify gifted and talented students. Studies the history and philosophy of gifted education, curriculum models and strategies for the classroom, and differentiated instruction. *A course approved by the State of Wyoming's Professional Teaching Standards Board for teacher certification credit.*
Prerequisite: Wyoming teacher certification.
(2 hrs lec)

EDEX 2320 Introduction to Teaching Special Learners (3)

An introduction to special education. Considers characteristics of children with special learning needs. Examines services required to meet the needs of these children with an emphasis on services in the least restrictive environment. Includes at least 15 hours of field experience. *Prerequisite: PSYC 1000.*
(2.5 hrs lec, 1 hr lab)

EDEX 2330 Integrating Exceptional Children (2)

Reviews information a teacher needs to help provide an individualized, appropriate program of education for a handicapped learner and to meet the unique needs of the learner in the regular classroom. Emphasis placed on new rules and regulations governing services for handicapped children and implications of these for the classroom teacher. *A course approved by the State of Wyoming's Professional Teaching Standards Board for teacher certification credit.*
Prerequisite: Wyoming teacher certification.
(2 hrs lec)

**EDUCATIONAL
FOUNDATIONS (EDFD)****EDFD 2020 Foundations of Education (3)**

Historic, philosophic, and social foundations of American education explored in relation to contemporary curricular organization and instructional approaches. Emphasizes the nature of teacher and learner, the nature of knowledge, the relationship of government to education, and the roles of government in society. *Prerequisite: Second semester standing and grade of "C-" or better in ENGL 1010 or equivalent.*
(3 hrs lec)

EDFD 2100 Educational Psychology (3)

Focuses on principles of learning applied to the instructional process for K-12 students. Provides comprehensive coverage of concepts of behavioral, cognitive, and developmental paradigms. Topics include conditioning, information processing, cognitive development, social learning, motivation, and management strategies applied to the teaching and learning

process. *Prerequisite: Grade of "C-" or better in PSYC 1000.*
(3 hrs lec)

EDFD 2470 Growth and Development of the Middle School Child (2)

Focuses on human growth and development as it applies to adolescence. Instructs teachers, prospective teachers, and administrators in the physical, cognitive, social, and emotional implications of instruction and education for adolescents. Course addresses common problems of adolescence, societal expectations, pressures, and the nature of families. Emphasizes educational and instructional strategies and practices within this context. *A course approved by the State of Wyoming's Professional Teaching Standards Board for teacher certification credit.*
Prerequisite: Wyoming teacher certification.
(2 hrs lec)

EDUCATION (EDUC)

EDUC 2100 Public School Practicum: Observation and Participation (3-6)

Provides an extensive practicum experience for prospective educators. The instructional process includes lesson planning, evaluation, classroom dynamics, management, and communication. Opportunities for students to implement course content by working as an assistant to a classroom teacher in the public schools. *Prerequisite: Must have written consent of Director and successful completion of at least 30 credit hours.*
(1.5 hrs lec, 6-12 hrs lab) **Capstone Course**

ELECTRICAL APPRENTICESHIP (ELAP)

ELAP 1515 Electrical Apprenticeship I (5)

Provides the beginning electrical apprentice with necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics include safety, introduction to the National Electrical Code, basic electrical theory, lighting and appliance circuits, and wiring methods. First course in a series of eight. *Prerequisite: Status as a first-year Electrical Apprentice with an Independent Electrical Contractor and registration with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety as an apprentice electrician.*
(5 hrs lec)

ELAP 1525 Electrical Apprenticeship II (5)

Provides the first-year electrical apprentice with necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics include series and parallel circuits, electric power, electrical theorems, special outlets, service calculations, and applications of the National Electrical Code. Second course in a series of eight. *Prerequisite: ELAP 1515, status as a first-year Electrical Apprentice with an Independent Electrical Contractor, and registration with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety as an apprentice electrician.*
(5 hrs lec)

ELAP 1535 Electrical Apprenticeship III (5)

Provides the second-year electrical apprentice with

necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics include safety, AC electricity, inductance, capacitance, transformers, motors, and applications of the National Electrical Code. Third course in a series of eight. *Prerequisite: ELAP 1525, status as a second-year Electrical Apprentice with an Independent Electrical Contractor, and registration with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety as an apprentice electrician.*
(5 hrs lec)

ELAP 1545 Electrical Apprenticeship IV (5)

Provides the second-year electrical apprentice with necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics include wiring methods, branch and feeder circuits, motor calculations, transformer sizing, and applications of the National Electrical Code. Fourth course in a series of eight. *Prerequisite: ELAP 1535, status as a second-year Electrical Apprentice with an Independent Electrical Contractor, and registration with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety as an apprentice electrician.*
(5 hrs lec)

ELAP 1555 Electrical Apprenticeship V (5)

Provides the third-year electrical apprentice with necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics include safety, blueprint reading, construction procedures, grounding and ground fault calculations, and service calculations based on the National Electrical Code. Fifth course in a series of eight. *Prerequisite: ELAP 1545, status as a third-year Electrical Apprentice with an Independent Electrical Contractor, and registration with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety as an apprentice electrician.*
(5 hrs lec)

ELAP 1565 Electrical Apprenticeship VI (5)

Provides the third-year electrical apprentice with necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics include industrial and commercial services, alarm systems, hazardous locations, and applications of the National Electrical Code. Sixth course in a series of eight. *Prerequisite: ELAP 1555, status as a third-year Electrical Apprentice with an Independent Electrical Contractor, and registration with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety as an apprentice electrician.*
(5 hrs lec)

ELAP 1575 Electrical Apprenticeship VII (5)

Provides the fourth-year electrical apprentice with necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics include safety, motor controls, power distribution, solid state controls, and programmable controllers. Seventh course in a series of eight. *Prerequisite: ELAP 1565, status as a fourth-year Electrical Apprentice with an Independent Electrical Contractor, and registration with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety as an apprentice electrician.*
(5 hrs lec)

ELAP 1585 Electrical Apprenticeship VIII (5)

Provides the fourth-year electrical apprentice with necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics include advanced motor controls, branch and feeder circuits, service entrance and grounding calculations based on the National Electrical Code, and review for the State Journeyman Exam. Eighth course in a series of eight. *Prerequisite: ELAP 1575, status as a fourth-year Electrical Apprentice with an Independent Electrical Contractor, and registration with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety as an apprentice electrician.*
(5 hrs lec)

ENGLISH (ENGL)

ENGL 1010 English I: Introduction to Composition (3)

Emphasizes the writing of personal, informative, persuasive, and argumentative prose. Includes critical reading and class discussion. *Prerequisite: Successful completion of DVST 0610 or placement at English level 3.*
(3 hrs lec)

ENGL 1020 English II: Introduction to Literature (3)

A reading and writing course devoted to the study of the content and technique involved in poems, short stories, plays, and occasionally novels. *Prerequisite: Successful completion of ENGL 1010.*
(3 hrs lec)

ENGL 1210 English as a Second Language (3)

Provides non-native speakers of English with instruction in this area. The course is designed for students from other countries who are attending school in the United States for the first time. Students will cultivate speaking, listening, reading, and writing skills using individual learning styles. *Prerequisite: TOEFL score of 500 or consent of instructor.*
(3 hrs lec)

ENGL 2000 Introduction to Language (3)

A practical introduction to the study of language, including history and structure of the language, the study of meaning, the relationship between language and thought, and the relationship between language and social interaction.
(3 hrs lec)

ENGL 2010 Technical Writing (3)

Designed to familiarize students with job-related writing, emphasizing the roles audience and environment play in successful communication. Includes correspondence, document design, and report writing. *Prerequisite: Completion of ENGL 1010 with a "C-" or better.*
(3 hrs lec)

ENGL 2017 Introduction to Research (3)

Designed to provide students with a variety of research skills and methods. Includes primary and secondary research. Introduces various documentation styles, including APA and MLA. *Prerequisite: Completion of ENGL 1010 with a "C-" or better.*
(3 hrs lec)

ENGL 2030 Critical Reading and Writing (3)

Focuses upon the twin skills of analytical reading and interpretive writing. The connection between reading and writing is the ability to use critical thinking, and a study of critical thinking within the course provides the foundation for the other two skills. *Prerequisite: Successful completion of ENGL 1010 with a "C-" or better.*
(3 hrs lec)

ENGL 2050 Creative Writing – Prose I (3)

Emphasizes the writing of fiction and nonfiction prose.
(3 hrs lec)

ENGL 2080 Creative Writing – Poetry I (3)

Emphasizes the writing of poetry, with attention to various poetic forms.
(3 hrs lec)

ENGL 2170 The Bible as Literature (3)

Examines portions of the Revised Standard version of the Bible in terms of literary form, including some of the history of writing and translation.
(3 hrs lec)

ENGL 2210 English Literature I (3)

Covers English literature from Anglo-Saxon times to the Age of Reason. Stresses in-depth study of authors and periods.
(3 hrs lec)

ENGL 2220 English Literature II (3)

Covers English literature from Romanticism to the present. Stresses in-depth study of authors and periods.
(3 hrs lec)

ENGL 2230 Introduction to Shakespeare (3)

Introduces selected Shakespearean sonnets, comedies, histories, and tragedies, placing them in their historical context.
(3 hrs lec)

ENGL 2280 Introduction to Mythology (3)

Gives an understanding of the meaning of mythology and its impact on literature. Uses readings of mythological interest in Greek and Roman literature and examines the use of mythological names and ideas for analogy or allusion in general literature.
(3 hrs lec)

ENGL 2310 American Literature I (3)

Surveys the history of literature of the United States through the Colonial, National, and Romantic periods.
(3 hrs lec)

ENGL 2320 American Literature II (3)

Surveys the history of literature of the United States from the rise of Realism to the present.
(3 hrs lec)

ENGL 2400 Introduction to Folklore (3)

Surveys the areas of folklore and studies folklore's importance to history, literature, and everyday life. *Credit cannot be earned in both HUM 2030 and ENGL 2400.*
(3 hrs lec)

ENGL 2410 Literary Genres: (3)

Attempts to impart an understanding and appreciation of either prose fiction, poetry, drama,

or nonfiction prose as a genre. Includes an examination of the history and development of each literary type. Not confined to any era or country. *May be repeated for a maximum of 12 credit hours.*
(3 hrs lec)

ENGINEERING TECHNOLOGY (ENTK)**ENTK 1510 Drafting I (3)**

A beginning class in mechanical drawing. Students learn drafting principles and acquire practice with drawing equipment. Skills learned include care and use of drafting equipment, free-hand lettering, multiview and isometric projections, auxiliary views dimensioning, assembly drawings, threads, and sections.
(2 hrs lec, 2 hrs lab)

ENTK 1520 Drafting II (3)

A continuation of ENTK 1510. Includes gears, cam, assembly drawings, intersections and developments, and electronic diagrams. *Prerequisite: ENTK 1510 and concurrent enrollment in ENTK 2500.*
(2 hrs lec, 2 hrs lab)

ENTK 1530 CAD Applications: (3)

A beginning course using the computer as a drawing tool. Includes instruction in the use of computers, plotters, digitizers, etc. Subject areas include orthographic and isometric projection, dimensioning, sketching, and plotting. *This course may not be substituted for ENTK 2500.*
(2 hrs lec, 2 hrs lab)

ENTK 1710 Architectural Drafting I (3)

Students acquire the skills and knowledge necessary for drawing residential floor plans. Building upon basic skills of free-hand line technique and lettering, students will develop complete plot plans, foundation plans, and floor plans. *Prerequisite: ENTK 1510.*
(2 hrs lec, 2 hrs lab)

ENTK 1720 Architectural Drafting II (3)

A continuation of ENTK 1710. Advanced technical topics include foundation, electrical, framing, plot plans, air conditioning, and solar. *Prerequisite: ENTK 1710.*
(2 hrs lec, 2 hrs lab)

ENTK 1750 Commercial Architectural Drafting (3)

Instruction and practice in commercial design and construction. Includes plot, foundation, and floor plans. Emphasizes work with schedules, specifications, and design presentation drawings. *Prerequisite: ENTK 1710.*
(2 hrs lec, 2 hrs lab)

ENTK 1800 Cartography I (3)

Drafting instruction relative to reading and creating topographical maps for surveying and construction industries. *Prerequisite: ENTK 1510 and MATH 1450.*
(2 hrs lec, 2 hrs lab)

ENTK 2070 Engineering Surveying (3)

Principles of surveying and map making. Operation and use of surveying instruments, including Total Station and Data Collector.

Measurement of distances, horizontal and vertical curves, open and closed traverse, area and volume calculations, and land subdivisions. Conversion of field data to electronic formats such as Geographic Information Systems (GIS) and CAD programs. *Prerequisite: MATH 1405 or MATH 1450.*
(2 hrs lec, 3 hrs lab)

ENTK 2500 Computer Aided Drafting I (3)

Provides a general understanding of and basic skill development for using computer aided drafting (CAD) equipment. Includes an introduction to computer graphics, graphic commands, plotting, three-dimension graphics, isometric plotting, axonometric plotting, and perspective drawing. *Prerequisite: ENTK 1510.*
(2 hrs lec, 2 hrs lab)

ENTK 2505 Computer Aided Drafting II (3)

A continuation of ENTK 2500. Emphasizes intermediate CAD techniques, including methods of improving productivity, customizing CAD, and three-dimensional concepts. *Prerequisite: ENTK 2500.*
(2 hrs lec, 2 hrs lab)

ENTK 2510 Computer Aided Drafting III (3)

Designed to acquaint the user with AutoCAD's programming language, terminology, and programming techniques. Macro covered. *Prerequisite: ENTK 2505.*
(2 hrs lec, 2 hrs lab)

ENTK 2530 Computer Aided Drafting 3-D (3)

In this advanced course, students work with presentation graphics. They develop knowledge and skills related to constructing three-dimensional objects through experience with applying surfaces plus rendering and creating 3-D and animated presentations, logos, and walk-throughs. In conjunction with daily assignments, students complete and present a final capstone project. *Prerequisite: ENTK 2500, ENTK 2505, and successful completion of at least 30 credit hours.*
(2 hrs lec, 2 hrs lab) **Capstone Course**

ENTOMOLOGY (ENTO)**ENTO 1001 Insect Biology (4)**

Designed to provide students with an introduction to insects and related arthropods. Introduces aspects of insect biology, behavior, life history, and diversity in relation to various ways insects affect humans.
(3 hrs lec, 2 hrs lab)

EQUINE STUDIES (EQST)**EQST 1505 Basic Horsemanship (1)**

For those with little riding experience or those who wish to improve riding skills. Covers leading, grooming, bridling, saddling, and stable management plus use of seat, hands, and legs to influence control of horse. Uses either English or western tack. *Prerequisite: Consent of instructor.*
(1 hr lec, 2 hrs lab)

EQST 1510 Equine Nutrition (2)

Includes study of essential nutrients, digestive physiology, and the varying nutrient requirements from birth to maturity. *Prerequisite: MATH 1510 or MATH 1400.*
(2 hrs lec)

EQST 1520 Horse Production I (3)

A study of health care, common health problems, and preventing and treating illness. Includes the mechanics of movement, learning theory, behavior, and equine limitations. (3 hrs lec)

EQST 1525 Horse Production II (3)

A study of stable design and maintenance. This course examines breeds, genetics, safety factors, record management, and legal aspects of the horse industry. *Prerequisite: EQST 1520.* (3 hrs lec)

EQST 1530 Saddlery (1)

A course for equestrians designed to answer questions about what makes saddlery function, saddle manufacture, and what to look for in buying saddles and tack. Covers both English and western using live models, slides, and demonstrations. (1 hr lec)

EQST 1540 Applied Horse and Stall Care I (2)

Students responsible for twice daily feeding and stall care. Covers proper watering, grooming, foot and veterinary care; aisleway, arena, and tack maintenance; and specific adherence to rules and procedures concerning horses in the Equine Center. Emphasizes basic health and horse care records; types of feed, composition, and evaluation of additives and supplements; and safe handling of horses. (1 hr lec, 2 hrs lab)

EQST 1545 Applied Horse and Stall Care II (2)

Students responsible for twice daily feeding and stall care. Covers proper watering, grooming, foot and veterinary care; aisleway, arena, and tack maintenance; and specific adherence to rules and procedures concerning housing horses in the Equine Center. Emphasizes stable designs, geographic locations, space needs, costs, operational needs, long-term planning, and records. *Prerequisite: EQST 1540 with a "C-" or better.* (1 hr lec, 2 hrs lab)

EQST 1550 Equine Evaluation I (2)

Anatomy and conformation of the horse as related to various breeds judged. Specific rules and regulations of breed associations. Includes lecture, visual appraisal, judging terminology, and preparation of oral reasons. (1 hr lec, 2 hrs lab)

EQST 1560 Equine Artificial Insemination (2)

Discussion of the anatomy of the reproductive systems and physiology of the reproductive and endocrine systems as they relate to successful artificial insemination. Labs involve practice of collection, evaluation, and insemination techniques. (1 hr lec, 2 hrs lab)

EQST 1650 Equine Evaluation II (2)

Designed for students who have completed EQST 1550 and who are second-year level judges. All classes of horses judged with emphasis on competitive judging. Oral reasons presentation stressed. *Prerequisite: EQST 1550.* (1 hr lec, 2 hrs lab)

EQST 1680 Horse Handling and Behavior (2)

Management of the horse on the ground. Topics

include foal/stallion handling, restraints, behavior of horses, and general management of a horse facility.

(1 hr lec, 2 hrs lab)

EQST 1805 Farrier Science I (2)

Course covers proper methods of trimming and shoeing to promote equine soundness and performance. Students learn to understand and recognize good basic foot care. Prepares students for understanding and performing correct, corrective, and therapeutic shoeing taught in more advanced classes. (1 hr lec, 2 hrs lab)

EQST 1810 Farrier Science II (3)

Studies conformation and gaits. Introduces corrective and therapeutic shoeing. Students learn to balance and shoe straight, gentle horses. *Prerequisite: EQST 1805.* (1.5 hrs lec, 3 lab)

EQST 1815 Production Shoeing I (3)

Designed to provide students with information and skills in basic forge work, trimming, and shoeing. *Prerequisite: EQST 1805 or concurrent enrollment.* (1 hr lec, 4 hrs lab)

EQST 1820 Production Shoeing II (3)

A continuation of EQST 1815. Course provides more advanced information and skills in forge work, trimming, and shoeing. *Prerequisite: EQST 1815, EQST 1810, or concurrent enrollment.* (1 hr lec, 4 hrs lab)

EQST 1960 Specialized Applications in Equine Studies: (1-3)

Course addresses a diversity of equine subjects. Topics vary and may be drawn from areas within the equine field. Utilizes lecture, lab, or clinic format for student instruction. Jumping, dressage, western riding, veterinary care, stable management, and other related subjects exemplify areas of instruction. *Course may be repeated using different topic titles. A maximum of 6 credits may apply toward the Equine Riding and Training degree.*

EQST 2500 Equine Health Management (2)

A basic review of the major diseases that affect equine. A portion of the class covers specific anatomy affected by diseases, a review of appropriate pharmacology, and the development of a general herd health management program that agriculture producers can adapt to their own operation. (2 hrs lec)

EQST 2510 Competitive Equine Judging (2)

Designed for students who have completed EQST 1550 and EQST 1650. Students compete in intercollegiate horse judging. *Prerequisite: EQST 1550 and EQST 1650.* (2 hrs lec)

EQST 2520 Equine Breeding (3)

Management of the stallion and the mare in breeding. Topics include types of breeding practices, behavior and psychology of handling stallions, the mare in the breeding role, hormone cycles, artificial aids such as light and drug therapy, actual foaling of a mare, growth of the foal in the uterus, recognition of foaling

problems, and care of the newborn foal and mare.

Prerequisite: ANSC 2430.

(2 hrs lec, 2 hrs lab)

EQST 2540 Applied Horse and Stall Care III (2)

Students responsible for twice daily feeding and stall care. Covers proper watering, grooming, foot and veterinary care; aisleway, arena, and tack maintenance; and specific adherence to rules and procedures concerning housing horses in the Equine Center. Emphasizes budgets, marketing, records, available computer programs, total management of facilities, and stable record for horse. *Prerequisite: EQST 1540 and EQST 1545 with a "C-" or better.* (1 hr lec, 2 hrs lab)

EQST 2545 Applied Horse and Stall Care IV (2)

Students responsible for twice daily feeding and stall care. Covers proper watering, grooming, foot and veterinary care; aisleway, arena, and tack maintenance; and specific adherence to rules and procedures concerning housing horses in the Equine Center. Emphasizes design and budget of stable facility, justified designs and budgets, and stable record for horse. *Prerequisite: EQST 1540, EQST 1545, and EQST 2540 with a "C-" or better.* (1 hr lec, 2 hrs lab)

EQST 2550 Training the Young Horse I (2)

For the student desiring further knowledge in colt breaking including theory and techniques used in training a young horse, lunging, ground driving, problems that occur in riding a horse the first time, and the training sequence for achieving a "green broke" horse. *Class limited to 6 students. Prerequisite: Successful completion of at least 30 credit hours, EQST 2680, and EQST 2690 with a "C-" or better.* (1 hr lec, 2 hrs lab)

EQST 2555 Training the Young Horse II (2)

Preparation of green broke horse for advancement to a level appropriate for showing at futurities or preparation for marketing of young broke horses. *Class limited to 6 students. Prerequisite: Successful completion of at least 30 credit hours and EQST 2550 with a "C-" or better.* (1 hr lec, 2 hrs lab)

EQST 2680 Western and English Horsemanship I (3)

Instruction in proper western horsemanship and English equitation for the student specializing in equestrian studies. *Students must attend a minimum of three weekend (Saturdays and/or Sundays, specific dates noted on course syllabus) clinics or horse shows to pass this course. Prerequisite: Admittance to the Equine Riding and Training Program.* (1 hr lec, 3 hrs lab, 1 hr arr lab)

EQST 2690 Western and English Horsemanship II (3)

Continued instruction in development of rider and horse combination in western and English riding. *Students must attend a minimum of three weekend (Saturdays and/or Sundays, specific dates noted on course syllabus) clinics or horse shows to pass this course. Prerequisite: EQST 2680 with a "C-" or better.* (1 hr lec, 3 hrs lab, 1 hr arr lab)

EQST 2800 Fundamentals of Teaching Riding (3)

A methods course to prepare the prospective riding teacher. Includes knowledge of seat and its application to dressage, jumping, western riding, class control, and lunge line work; kinesiology of riding; and psychological problems. *Students must attend a minimum of three weekend (Saturdays and/or Sundays, specific dates noted on course syllabus) clinics or horse shows to pass this course.*

(2 hrs lec, 2 hrs arr lab)

EQST 2810 Training and Development of the Western Horse I (3)

Includes specialized training techniques in developing the flying lead, change, spins, and the sliding stop. *Students must attend a minimum of three weekend (Saturdays and/or Sundays, specific dates noted on course syllabus) clinics or horse shows to pass this course. Prerequisite: EQST 2680 with a "C-" or better.*

(1 hr lec, 3 hrs lab, 1 hr arr lab)

EQST 2820 Training and Development of the Western Horse II (3)

Work done in one area of the student's choice. Includes finishing techniques with emphasis on correct form and fundamentals. *Students must attend a minimum of three weekend (Saturdays and/or Sundays, specific dates noted on course syllabus) clinics or horse shows to pass this course. Prerequisite: EQST 2810 with a "C-" or better.*

(1 hr lec, 3 hrs lab, 1 hr arr lab)

EQST 2830 Training and Development of the English Horse I (3)

Course work includes schooling the horse in areas of dressage and jumping. Includes riding training level tests and jump courses. *Students must attend a minimum of three weekend (Saturdays and/or Sundays, specific dates noted on course syllabus) clinics or horse shows to pass this course. Prerequisite: EQST 2690 with a "C-" or better.*

(1 hr lec, 3 hrs lab, 1 hr arr lab)

EQST 2840 Training and Development of the English Horse II (3)

Work done in the area of the student's choice. Includes finishing techniques with emphasis on correct form and fundamentals. *Students must attend a minimum of three weekend (Saturdays and/or Sundays, specific dates noted on course syllabus) clinics or horse shows to pass this course. Prerequisite: EQST 2830 with a "C-" or better.*

(1 hr lec, 3 hrs lab, 1 hr arr lab)

ENGINEERING SCIENCE (ES)**ES 1000 Orientation to Engineering (1)**

Introduction to skills and professional development related to engineering. Includes the engineering method, ethics, how to think and communicate visually, and the history and design of engineering. Provides activities to help the student transition to the rigorous engineering curriculum. *Recommended for all entering freshmen engineering students.*

(.5 hr lec, 1 hr lab)

ES 1060 Introduction to Engineering Computing (3)

Introduces the use of computers in solving a wide variety of engineering and science-oriented problems. Includes documentation and report writing, computing tools for writing reports and presenting data in graphical form, equation solving, and manipulation of tabular data.

Prerequisite: Previous or concurrent enrollment in MATH 2200.

(2 hrs lec, 2 hrs lab)

ES 2110 Statics (3)

A vector approach to mechanics of stationary particles and rigid bodies. Considers external forces, moments, frictional forces, and fluid statics.

Prerequisite: MATH 2200.

(3 hrs lec)

ES 2120 Dynamics (3)

Principles of particles and rigid body motion developed in vector form and applied to engineering problems, emphasizing force-mass acceleration, work-energy, and impulse-momentum. *Prerequisite: Previous or concurrent enrollment in MATH 2205 and PHYS 1310.*

(3 hrs lec)

ES 2210 Electrical Circuit Theory (4)

Basic concepts of electric circuit theory including dependent sources, network theorems, first and second order circuits and phasers. *Prerequisite: Previous or concurrent enrollment in PHYS 1320.*

(4 hrs lec, 3 hrs lab)

ES 2310 Thermodynamics (4)

Introductions of thermodynamic variables, processes, and laws, followed by derivation of thermodynamics relations applied to real physical problems. Concepts include mass, energy and entropy balances; availability; reversible and irreversible processes. *Prerequisite: MATH 2205 and ES 2120 or PHYS 1310.*

(4 hrs lec)

ES 2330 Fluid Dynamics/Mechanics (3)

Students study incompressible flow of ideal and real fluids at rest and in motion. Fluids may be liquids, vapors, gases, or combinations of these. The effects of static forces and compressibility are given special attention. Kinematics, dynamics, flow, flow resistance, and physical effects of flow are considered in detail for moving fluids. Potential and stream functions and similitude and dimensional analysis are also studied.

Prerequisite: ES 2110 and previous or concurrent enrollment in ES 2310.

(3 hrs lec)

ES 2410 Mechanics of Materials (3)

Analysis of design of members subjected to various types of loadings. Includes the mechanics of deformable bodies. *Prerequisite: ES 2110.*

(3 hrs lec)

FAMILY AND CONSUMER SCIENCE (FCSC)**FCSC 1141 Principles of Nutrition (3)**

Emphasizes the relationship of food to maintenance of health. Includes the human needs for energy and nutrients and their importance to the individual and society. Also stresses the

importance of diet throughout the life cycle. (3 hrs lec)

FCSC 2121 Child Development (4)

Covers growth and developmental patterns in physical, social, intellectual, and emotional areas in relation to children ages birth through eight. Includes opportunities to observe principles of growth in children through an assignment in a field experience setting and identifies developmentally appropriate activities to foster development of the whole child.

(3 hrs lec, 2 hrs lab)

FOOD SCIENCE (FDSC)**FDSC 2060 Fresh Meat Processing (3)**

Provides study of the fabrication of carcasses into cuts, associated processing techniques, selection, preparation, and utilization of meat. Explores concerns and opportunities of the producer, packer, processor, retailer, and food service. *Prerequisite: Consent of instructor.*

(1.5 hrs lec, 3 hrs lab)

FDSC 2160 Meat, Poultry, and Game Products (2)

Designed to enable students to properly care for and process game carcasses. Covers field care and aging; preparing sausage, and jerky; and curing/smoking poultry, fish and wild game.

(1 hr lec, 2 hrs lab)

FINANCE (FIN)**FIN 2000 Principles of Banking (3)**

Provides an insight into U.S. commercial banking and financial activities. Presents a broad overview of the history, functions, and regulations concerning the U.S. monetary system.

(3 hrs lec)

FIN 2075 Banking Applications (1-3)

Specialized studies from the American Institute of Banking designed to address topics relevant to banking professions. Meets guidelines established by the American Institute of Banking for advanced credit.

(1-3 hrs lec)

FRENCH (FREN)**FREN 1010 First Year French I (4)**

Introduces the essentials of French necessary for oral and written communication. Uses *French in Action*, an interactive, multimedia course which combines video, audio, and text to help students use real, unsimplified French in the context of actual communication in French.

(4 hrs lec)

FREN 1020 First Year French II (4)

Continuation of FREN 1010 employing the *French in Action* method. *Prerequisite: FREN 1010 or one year high school French.*

(4 hrs lec)

FREN 1050 Conversational French I (1-2)

Primarily for those who want to develop and enhance their ability to speak French. Provides a setting where useful vocabulary is incorporated into learned and spontaneous conversations and

where cultural differences can be discussed as they pertain to everyday situations. Intended for students who have minimal proficiency or no previous French language experience. *Not intended for transfer.*
(1-2 hrs lec)

FREN 2030 Second Year French I (4)

Consists of a review of French grammar and vocabulary with emphasis on conversational practice and reading French literature. Requires weekly use of the language lab. *Prerequisite: Two years of high school French or completion of FREN 1020.*
(4 hrs lec)

FREN 2040 Second Year French II (4)

Continuation of FREN 2030. More concentration on conversation, composition, literature and culture. *Prerequisite: Three years of high school French or FREN 2030.*
(4 hrs lec)

FREN 2210 Intermediate Conversation and Composition I (3)

Continues the study of oral and written skills in French. Prepares students for upper division courses in advanced composition and conversation. *Prerequisite: Four years of high school French or FREN 2040.*
(3 hrs lec)

FREN 2230 French Play Production (1)

Students study and perform one play by a well-known French playwright. Briefly examines the biography of the author and the period in which the play was written. *Prerequisite: FREN 1020.*
(1 hr lec)

FREN 2460 Field Studies: (1-3)

Course offers students the opportunity to travel in a French-speaking country. On-campus portion of course focuses on language, culture, and practical travel considerations. Students electing three credits will select one aspect of the host culture to study and evaluate during the field experience. *Prerequisite: Consent of instructor.*
(1-3 hrs lec)

GEOGRAPHY AND RECREATION (G&R)

G&R 1000 Introduction to Geography (3)

A regional geography approach used, involving an intensive, systematic consideration of the regions and countries of the world. Studies the physical and cultural dimensions of each region.
(3 hrs lec)

G&R 1250 Geography of Travel and Tourism (3)

Describes the world in terms of travel destinations and physical, cultural, and economic geographical knowledge. Provides information on international travel requirements and air and surface travel abroad. Emphasis on common tourist destinations throughout the world.
(3 hrs lec)

GEOLOGY (GEOL)

GEOL 1030 Geology of Northern Wyoming (3)

A survey of the physical features, processes, and history of the mountains of Northern Wyoming. Emphasis on Big Horn Basin and Mountains, Absaroka and Beartooth Mountains, and Yellowstone and Grand Teton National Parks. *For the non-geologist; does not fulfill lab credit. Two required Saturday field trips.*
(3 hrs lec)

GEOL 1035 Geology of Yellowstone National Park (1)

Introduction to the rocks, landscapes, and thermal features of the Park. Emphasis placed upon hot springs and geysers, volcanic activity, glaciations, and stream erosion. Material covered during a two-day field trip through the Park. *For the non-geologist; does not fulfill lab science credit. Limited enrollment and fee.*
(2 hrs lab—delivered through 24 clock hours in the field)

GEOL 1100 Physical Geology (4)

An introduction to the materials and processes of the earth. Emphasizes minerals, rocks, structures, and landforms. Required field trips emphasize geology of the area. *Prerequisite: Placement at math level 2.*
(3 hrs lec, 3 hrs lab)

GEOL 1200 Historical Geology (4)

An introduction to the geological history of the earth. Emphasis upon the physical development of the continents, plate tectonics, and evolution of the fossil record. Required field trips to localities of historical interest. *Prerequisite: Placement at math level 2.*
(3 hrs lec, 3 hrs lab)

GEOL 2325 Dinosaurs of Wyoming (2)

Designed to familiarize students with dinosaurs that once inhabited Wyoming and other western states. Explores the paleontological research in and near Wyoming, dinosaur taxonomy, the Mesozoic environment, theories concerning lifestyles and extinction of dinosaurs, and the relationship of dinosaurs to the human race. *Field trip required.*
(2 hrs lec)

GRAPHIC ARTS (GRAR)

GRAR 1510 Introduction to Graphic Arts (3)

A study of the basic principles and processes of the printing industry. Begins with an overview of the four major printing processes and uses a lecture/lab method of instruction to familiarize the student with layout and design, electronic publishing, camera, image assembly, plate making, presswork, and bindery operations.
(2 hrs lec, 1.5 hrs lab)

GRAR 1610 Offset Production I (3)

Students refine their skills with the process of offset lithography. Projects provide opportunities to apply their skills and understanding of image concept and design, image assembly, film conversion (including both process camera and imagesetter output), platemaking, duplicator presswork, and bindery operations. Course prepares students for GRAR 1620 where students may produce materials for NWC.
(2 hrs lec, 2 hrs lab)

GRAR 1620 Offset Production II (4)

A continuation of GRAR 1610. Allows concentration in the following areas: art and copy preparation, process camera, image assembly, offset duplicator presswork, and bindery. Course stresses the production of quality materials. *Prerequisite: GRAR 1610 and GRAR 1720.*
(2 hrs lec, 4 hrs arranged lab)

GRAR 1720 Imaging for Print Reproduction (3)

Students acquire essential information and experience to employ either photomechanical imaging or electronic digital imaging processes. Skills learned include graphic arts photography, some special effects camera work, photographic and digital halftoning, electronic scanning, PostScript via a film imagesetter, imaging applications, and production of color separations. *Prerequisite: GRAR 1510.*
(2 hrs lec, 2 hrs lab)

GRAR 1800 Introduction to Macintosh (3)

Course offers practice and useful experience on the Macintosh computer system. Provides a firm foundation in the basics of the Macintosh operating system and various word processing, graphics, and page layout program software. Encourages students to work on the Macintosh in areas of individual interest. Students gain a solid understanding of the Macintosh and related computer hardware.
(2 hrs lec, 2 hrs lab)

GRAR 1810 Electronic Publishing: PageMaker (3)

Students come to understand the impact of the microcomputer on the publishing industry. Students will use PageMaker 6.5, Adobe Table, Photoshop (scanning and file touch up), and a variety of peripherals including color scanners, color printers, and imagesetters. Projects enable students to explore various capabilities and reinforce concepts learned in lecture and demonstrations. *Prerequisite: GRAR 1510 and GRAR 1800.*
(2 hrs lec, 2 hrs lab)

GRAR 1820 Electronic Publishing: QuarkXPress (3)

Students gain first-hand experience with current applications, techniques, and equipment used in the generation of type and images in the area of electronic publishing. Additional skill and knowledge is gained regarding QuarkXPress, font installation and management, building a type library, typography, mark-up, methods to speed up design and productions work, preflighting for service bureaus, and imagesetting to film. *Prerequisite: GRAR 1510 and GRAR 1800.*
(2 hrs lec, 2 hrs lab)

GRAR 1850 Advanced Electronic Publishing (3)

Advanced publishing procedures utilizing Adobe Photoshop and Luminous Trapwise computer applications. Explores digital image manipulation, scanning digital images and saving in appropriate file formats, manual and digital trapping techniques, and integration of multiple file formats into a single electronic graphics file. *Prerequisite: GRAR 1510, GRAR 1800, and GRAR 1810.*
(2 hrs lec, 2 hrs lab)

GRAR 1950 Preflighting/Image Assembly (3)

Students become familiar with preflighting electronic files for imagesetting and image assembly (stripping) techniques employed in today's prepress field. Discussions and activities will help students learn advanced stripping techniques, composite films, imposition considerations related to press and bindery, electronic imposition software, trapping software, and imagesetting. *Prerequisite: GRAR 1510.* (2 hrs lec, 2 hrs lab)

GRAR 2650 Literary/Art Magazine Production (3)

A practical introduction to producing and distributing literary/art magazines. Includes critical examination of literary magazines from colleges, universities, and independent presses from throughout the nation. Culminates in a student-generated, student-edited, and student-published magazine. *This course is the same as JOUR 2250.* *Prerequisite: Student must complete application and interview for admission.* (3 hrs lec)

GRAR 2710 Estimating (3)

Provides experience in estimating offset printed materials using pricing catalogs, computer estimation programs, and student developed BHRs (budgeted hourly rates) for various printing equipment and associated processes. Students analyze proposed print jobs to determine required operations and supplies, proper pricing routines, and estimate time needed for completion of each stage of the job. *Prerequisite: GRAR 1620.* (3 hrs lec)

GRAR 2750 Magazine Editing and Management (3)

Provides practical experience in editing and managing a literary/arts magazine. Includes planning, decision-making, marketing, personnel management, networking, and advertising. *This course is the same as JOUR 2270.* *Prerequisite: Successful completion of at least 30 credit hours. Student must complete application and interview for admission.* (3 hrs lec) *Capstone Course*

GRAR 2810 Advanced Press (3)

Designed to give the student hands-on experience with a Heidelberg SORD offset press. Emphasizes inter-working and mechanics of the press, sheet control, signature printing, and the four-color process. *Prerequisite: GRAR 1620 and consent of instructor.* (6 hrs lab)

GREEK (GRK)**GRK 1015 Elementary Biblical Greek I (4)**

Introduces the essentials of grammar and vocabulary necessary for reading Greek. Gives practice in reading, understanding, writing, and pronouncing Greek. (4 hrs lec)

GRK 1025 Elementary Biblical Greek II (4)

Continuation of GRK 1015. *Prerequisite: GRK 1015.* (4 hrs lec)

GRK 2035 Intermediate Biblical Greek (4)

Readings in Biblical and Hellenistic Greek. *Prerequisite: GRK 1025.* (4 hrs lec)

GRK 2150 Selected Readings in Biblical Greek (1)

Designed for students who have completed at least GRK 1025 and would like to continue reading a variety of Greek texts on a regular basis. May be taken for credit even after completion of GRK 2035. Different Greek texts read each time the course is offered in order to avoid repetition. *Prerequisite: GRK 1015 and GRK 1025 or equivalent. May be repeated once for credit.* (1 hr lec)

HEBREW (HEBR)**HEBR 1010 First Year Hebrew I (4)**

A brief course which provides the essentials for reading and translating Biblical Hebrew. Emphasizes fundamentals of grammar and reading. (4 hrs lec)

HEBR 1020 First Year Hebrew II (4)

A continuation of HEBR 1010. *Prerequisite: HEBR 1010.* (4 hrs lec)

HEBR 2150 Selected Readings in Hebrew (1)

Designed for students who have completed HEBR 1020 and would like to continue reading a variety of Hebrew texts on a regular basis. Different Hebrew texts will be read each time the course is offered in order to avoid repetition. *Prerequisite: HEBR 1020. May be repeated for credit.* (1 hr lec)

HISTORY (HIST)**HIST 1110 Western Civilization I (3)**

A survey of western civilization from ancient times through the 16th century, including the ancient Near East, Greece, Rome, Byzantium, Islamic civilization, and medieval Europe. (3 hrs lec)

HIST 1120 Western Civilization II (3)

A survey of western civilization from the Renaissance and Reformation through the 20th century. (3 hrs lec)

HIST 1210 United States History I (3)

A foundation course for programs in American history. Surveys the history and culture of the United States from before discovery to approximately the time of the Civil War. Emphasizes the historical and Constitutional roots of American values and beliefs. *Along with HIST 1250, this course meets statutory requirements for instruction in principles and provisions of the constitutions of the U.S. and Wyoming.* (3 hrs lec)

HIST 1221 The United States from 1865 (3)

Surveys American history from approximately the time of the Civil War to the present. Emphasis on the development of constitutional, socio-political, cultural, and economic factors that explain the

emergence of the United States as a global power. *Meets statutory requirements for instruction in principle and provisions of the Constitutions of the United States and Wyoming.* (3 hrs lec)

HIST 1229 History of Yellowstone (3)

Course examines the historical development of Yellowstone National Park from prehistoric times to the present. Students learn how Yellowstone's historical development paved the way towards the current issues it faces today. Students explore what makes Yellowstone unique as a national park and as an ecosystem. Examines how various people expressed their feelings towards Yellowstone through art, photography, and literature. (3 hrs lec)

HIST 1250 History of Wyoming (3)

The history and politics of a western state, exploring its physical environment, culture, constitution, and prospects from its beginning to the present. *Along with HIST 1210, this course meets statutory requirements for instruction in principles and provisions of the constitutions of the United States and State of Wyoming.* (3 hrs lec)

HIST 1280 History of Montana (3)

A survey of Montana history. Covers the development of the territory and state and examines the social, economic, cultural, and political patterns in its relations to the nation. (3 hrs lec)

HIST 1290 History of the United States West (3)

A history of the changing frontier in the United States, its native peoples, and the westward movement of Americans from colonial times to the 20th century. Special focus on the trans-Mississippi west, the role of physical geography, and the interaction of various cultures. (3 hrs lec)

HIST 2070 The Holocaust: A Survey (3)

Examines the Nazi campaign to persecute and exterminate European Jews. Includes the broader dimensions of Nazi racial policies aimed at gypsies, Slavs, the disabled, and other groups. Explores the complicity of nations and governments throughout the world, as well as the verdicts at Nuremberg. Seeks to apply the lessons of the Holocaust to current discussions of intolerance, racism, and genocide. *This course is approved for honors credit.* (3 hrs lec)

HIST 2112 Revolutionary Europe (3)

Students analyze the major revolutionary movements and upheavals from the French Revolution of 1789 through the Russian, German, and Austrian Revolutions of 1917-19. (3 hrs lec)

HIST 2115 20th Century Europe (3)

Social, economic, political, and intellectual history of Europe from the First World War to Gorbachev and the Soviet collapse, including the relationship of developments to physical, political, and cultural geography. (3 hrs lec)

HIST 2120 Ancient Greece (3)

Study begins with prehistoric times, traces the rise of the Greeks, the Dark Ages, the Age of Expansion, the Classical Period, the Hellenistic Age, and the arrival of the Romans. Topics include language, literature, religion and mythology, athletics, warfare, law and democracy, theatre, education, science, philosophy, and political history. (3 hrs lec)

HIST 2130 Ancient Rome (3)

Students examine the Rise of the Roman State, the character of Roman culture and social development, as well as the impact of Roman imperialism on the Euro-Mediterranean World. To conclude, students analyze the Roman decline and the extension of Rome's legacy into the Byzantine Era. (3 hrs lec)

HIST 2140 Ancient Near East (3)

Course encompasses the rise and development of civilization in Mesopotamia, Syria, Palestine, Anatolia, Egypt, and Arabia from prehistory to Alexander the Great. Topics include religion, literature, art, architecture, language, and political history. (3 hrs lec)

HIST 2149 Nuclear Century (3)

Students acquire an understanding and appreciation for the development of nuclear energy and the social, psychological, political, and environmental issues associated with it. This course is team taught by a historian with a chemist or a physicist. *This course is the same as PHYS 2149 and CHEM 2149. This course is approved for honors credit.* (3 hrs lec)

HIST 2290 North American Indians (3)

Presents the history of North American Indians starting with the pre-Columbian era and tracing developments through the Colonial Period, the revolutionary independence struggles, and the problems of native people under national regimes through the 19th and 20th centuries. Special emphasis on the experiences of Indians in the United States and Canada, including cultures of the eastern woodlands, plains, Rocky Mountain and Pacific areas, and the Arctic. (3 hrs lec)

HIST 2470 Internship: History (1-6)

Available to a serious student who desires to observe and participate in a demanding and rewarding professional off-campus experience. *Prerequisite: Consent of the on-campus instructor.* (2 hrs lab per credit hour)

**HEALTH EDUCATION (HLED)
(Professional Courses)****HLED 1005 Risky Behaviors (3)**

Designed to increase a student's awareness of the social influence of drugs, alcohol, STDs, and sexual assault from a multi-disciplinary perspective (health, physiological, and sociological). Presents in logical form accurate, current information from the biological, health, and sociological sciences essential for making sound decisions regarding lifestyle choices. *Course fulfills one credit of non-activity based wellness education or three credits of social science.* (3 hrs lec)

HLED 1006 Personal and Community Health (3)

Presents in logical form a body of knowledge from biological and social sciences essential for sound decisions in health maintenance and a proper sense of health values. (3 hrs lec)

HLED 1225 Standard First Aid and CPR (2)

Prepares students to cope when emergency first aid or CPR is needed. Emphasizes accident prevention and treatment of injuries. Uses Red Cross materials for CPR. (2 hrs lec)

HLED 1270 Wellness (3)

Explores the relationship between diet, exercise, and health in a lecture/lab format. A transdisciplinary approach emphasizing the integration of concepts and processes relevant to the pursuit of optimal well-being. (3 hrs lec)

HLED 1271 Diet and Exercise (2)

Introduces an understanding of basic nutrition and exercise facts relating to weight loss and fitness. Encourages development and use of a total physical fitness program. (2 hrs lec)

**HUMAN DEVELOPMENT
(HMDV)****HMDV 1000 College Studies I (1)**

A suggested course for all incoming freshmen. Students learn skills for success in college. Students practice study skills, determine their learning style, and become acquainted with services available at Northwest College. Also, students learn basic library research skills, how to use campus computers, and critical thinking skills. (1 hr lec)

HMDV 1010 College Studies II (1)

Students refine and expand skills for success in college. Skills include time management, interpersonal communication, relationship building, and academic and career planning. This course complements HMDV 1000 and offers a student study-skills help for an entire semester. (1 hr lec)

HMDV 1200 Academic and Career Orientation (1)

Designed to assist students in determining strengths, abilities, interests, personality type, and values in relation to making mature and realistic career decisions. Involves individual counseling to aid in setting personal, educational, and vocational goals. (1 hr lec)

HMDV 2000 Tutor Training (1)

A recommended course for student tutors and students planning to tutor in the Success Center. Successful completion of the course allows the student to become eligible for Tutor Certification through the College Reading and Learning Association. *Prerequisite: Consent of instructor.* (1 hr lec)

HORTICULTURE (HORT)**HORT 1100 Introduction to Horticulture (3)**

Exposes the student to the far-reaching aspects of horticulture and provides a working knowledge of the basic principles of horticultural practices. (3 hrs lec)

HORT 1150 Plant Propagation (3)

Provides general information pertaining to the types of propagation, equipment, and supplies. Covers propagation of horticultural plants including grafting, cutting, bulb division, and direct seeding. *Prerequisite: BIOL 1010 and HORT 1100.* (2 hrs lec, 2 hrs lab)

HORT 1550 Plant Materials (3)

Selection of plant material in the landscape including the identification, physical characteristics, habitat requirements, maintenance characteristics, and ornamental value of trees, shrubs, and flowers. Emphasis on plants adaptive to the Big Horn Basin. (2 hrs lec, 2 hrs lab)

HORT 1600 Special Applications: (1-3)

Course addresses a diversity of subjects within the field of horticulture. Areas of emphasis vary and may be selected from topics of interest to practitioners within the field or to new and evolving issues. Utilizes lecture, lab, and seminar format for student instruction. *Course may be repeated using different topic titles.* (1 hr lec, 4 hrs lab for 3 hr course)

HUMANITIES (HUMN)**HUMN 2030 Introduction to Folklore (3)**

Surveys the areas of folklore and studies folklore's importance to history, literature, and everyday life. *Credit cannot be earned in both ENGL 2400 and HUMN 2030.* (3 hrs lec)

HUMN 2380 Popular Culture (3)

A study of film, music, print and broadcast media, and other forms of popular cultural expression. Emphasizes popular arts of the last two centuries, especially in the United States. Discusses distinctions between popular and "elite" arts and explores rationales and critical bases for the study of popular culture. (3 hrs lec)

HUMN 2420 Introduction to Cross-Cultural Studies (3)

An interdisciplinary course that draws upon the humanities, the arts, the social sciences, and personal experience to illustrate cultural diversity throughout the world and to explore processes of international communication. (3 hrs lec)

HUMN 2440 Dialogues in the Humanities (3)

Through interdisciplinary methods, students compare defining moments in human experience. Students examine how particular individuals and cultures redefine and express recurrent historical themes. Students integrate multiple disciplinary methods as a way of exploring traditional concerns in the humanities. Themes will vary from semester to semester. *Prerequisite: Successful completion of at least 30 credit hours.* (3 hrs lec)

Capstone Course

HUMN 2445 U.S. Culture and Language for Foreign Students (3)

Designed to give English speaking and listening experience to beginning students whose first language is not English. Course content surveys U.S. values and behaviors and their sources. *Prerequisite: 500 TOEFL score.* (3 hrs lec)

HUMN 2450 Introduction to Film (3)

Introduces the study of film as a modern form of art, providing an historical overview of themes and techniques. Examines cinema as an expression of both personal and social values. (3 hrs lec)

HUMN 2460 Field Studies: (1-3)

Course offers students the opportunity to travel to various destinations (i.e., Great Britain, Hawaii, etc.) to explore the cultures of those sites. The on-campus portion of the course focuses on the destination's history, culture, and travel peculiarities. *Prerequisite: Consent of instructor.* (1 hr lec, 4 hrs lab)

JOURNALISM (JOUR)**JOUR 1000 Introduction to Mass Media (3)**

An overview of mass media, newspapers, magazines, books, radio, television, and films. A study of their historical development with emphasis on understanding the techniques of expression and impact on American culture. A survey of the content of mass media and consideration of contemporary problems and trends. (3 hrs lec)

JOUR 1010 Publications Production I (1 or 2 by recommendation of instructor)

Consists of production of the campus newspaper. Class members given staff positions on the basis of application and experience. *May be repeated once for credit.* (2-4 hrs lab)

JOUR 1020 Webcasting Practicum I (1-2)

Students acquire webcasting skills through producing and maintaining a campus news Web site that uses text, photographs, audio and video components, as well as animation and multimedia elements. Class members staff an online campus radio and TV station for webcasting, including live coverage of campus events. Class members are given staff positions on the basis of application and experience. (2-4 hrs lab)

JOUR 1100 Reporting and Newswriting I (3)

Covers writing hard news stories with emphasis on news sources, news gathering techniques, and in-depth reporting. (3 hrs lec)

JOUR 2010 Publication Production II (1-2)

Students refine newspaper production skills through production of the campus newspaper. Class members are given staff positions on the basis of application and experience. *Prerequisite: JOUR 1010.* (2-4 hrs lab)

JOUR 2000 Broadcast Production (3)

Students acquire an introduction to fundamental technical production concepts in radio, television, and motion pictures. Students learn video and audio production techniques, including handling digital video cameras; lighting; sound; basic announcing; pre-production planning; set construction; production of music, radio drama, news, sports, public affairs, and related programming; and editing and effects using non-linear computer editing systems and related software. Students will produce projects for webcasting. *Prerequisite: JOUR 1100.* (3 hrs lec)

JOUR 2020 Webcasting Practicum II (1-2)

Students produce campus news Web sites using text, photographs, audio and video components, as well as animation and multimedia elements. Class members staff an online campus radio and TV station for webcasting, including live coverage of campus events. Class members are given staff positions on the basis of application and experience. *Prerequisite: JOUR 1020.* (2-4 hours lab)

JOUR 2100 Reporting and Newswriting II (3)

Intermediate newswriting, applying skills learned in JOUR 1100. Special emphasis on public affairs reporting. *Prerequisite: JOUR 1100.* (3 hrs lec)

JOUR 2140 News Editing (3)

An advanced course concerned with evaluation and preparation of news for placement on page makeup, headline writing, and actual makeup of dummy pages. Covers correct procedure for checking and correcting final page proofs. (3 hrs lec)

JOUR 2250 Literary/Art Magazine Production (3)

A practical introduction to producing and distributing literary/art magazines. Includes critical examination of literary magazines from colleges, universities, and independent presses from throughout the nation. Culminates in a student-generated, student-edited, and student-published magazine. *This course is the same as GRAR 2650.* *Prerequisite: Student must complete application and interview for admission.* (3 hrs lec)

JOUR 2270 Magazine Editing and Management (3)

Provides practical experience in editing and managing a literary/arts magazine. Includes planning, decision-making, marketing, personnel management, networking, and advertising. *This course is the same as GRAR 2750.* *Prerequisite: Student must complete application and interview for admission.* (3 hrs lec)

LIBRARY SCIENCE (LIBS)**LIBS 2280 Literature for Children (3)**

Surveys children's literature for concentrations in elementary education, library science, and other disciplines interested in evaluating and using children's books according to needs, interests, and abilities of children. (3 hrs lec)

MATHEMATICS (MATH)**MATH 0900 Prealgebra (3)**

A course in basic skills including addition, subtraction, multiplication, division of whole numbers, fractions, decimals, averages, exponents and roots, percents, ratios and proportions, and basic algebra. (3 hrs lec)

MATH 0920 Beginning Algebra (5)

Designed to provide a comprehensive review of the basic operations of algebra. Covers such topics as signed numbers, laws of exponents, linear equations, and quadratic equations. *Prerequisite: A grade of "C-" or better in MATH 0900 or placement at math level 1 within one year prior to enrollment.* (5 hrs lec)

MATH 0930 Intermediate Algebra (5)

Emphasis on algebraic manipulation. Covers such topics as linear and quadratic equations and inequalities; graphs and functions; polynomial, rational, and radical expressions; logarithms, and exponentials. *Prerequisite: A grade of "C-" or better in MATH 0920 or placement at math level 2 within one year prior to enrollment.* (5 hrs lec)

MATH 1000 Problem Solving (3)

Designed to acquaint the student with the usefulness of mathematics. Accomplished by an in-depth exploration of a variety of applied problems and the methods, models, and strategies used to solve them. Primarily for students who do not intend to take calculus. *Prerequisite: A grade of "C-" or better in MATH 0930 or placement at math level 3 within one year prior to enrollment.* (3 hrs lec)

MATH 1050 Finite Mathematics (3)

Designed for business, social science, and behavioral science students. Introduces the student to sets, logic, probability, matrices, and linear programming. Stresses applications to the disciplines mentioned. *Prerequisite: A grade of "C-" or better in MATH 0930 or placement at math level 3 within one year prior to enrollment.* (3 hrs lec)

MATH 1100 Theory of Arithmetic I (3)

Designed primarily for prospective elementary teachers. Offers an understanding of the structural language of the real number system. *Prerequisite: A grade of "C-" or better in MATH 0930 or placement at math level 3 within one year prior to enrollment.* (3 hrs lec)

MATH 1105 Theory of Arithmetic II (3)

A continuation of MATH 1100 presenting an exploration of various aspects of mathematics including algebra, geometry, statistics, and probability. *Prerequisite: A grade of "C-" or better in MATH 1100.* (3 hrs lec)

MATH 1400 College Algebra (4)

Course covers functions, matrices, polynomials, logarithms, conic sections, counting, probability, and series. *Credit cannot be earned in both MATH 1400 and MATH 1450.* *Prerequisite: A grade of "C-" or better in MATH 0930 or placement at math level 3 within one year prior to enrollment.* (4 hrs lec)

MATH 1405 Precalculus Trigonometry (3)

Course uses the functional approach to trigonometry and covers computation, applications, identities, inverse functions, complex numbers, and the analytic geometry of trigonometric functions. *Credit cannot be earned in both MATH 1405 and MATH 1450. Prerequisite: A grade of "C-" or better in MATH 1400 or placement at math level 4 within one year prior to enrollment.* (3 hrs lec)

MATH 1450 Precalculus Algebra and Trigonometry (5)

Designed primarily for those students intending to take the MATH 2200-MATH 2210 sequence and covers the topics from precalculus algebra and precalculus trigonometry in one semester. *Credit cannot be earned in both MATH 1450 and MATH 1400 or both MATH 1450 and MATH 1405. Prerequisite: A grade of "C-" or better in MATH 0930 or placement at math level 3 within one year prior to enrollment.* (5 hrs lec)

MATH 1510 Technical Mathematics I (3)

A comprehensive review of mathematic fundamentals and applications of algebra and trigonometry to technology. *Prerequisite: A grade of "C-" or better in MATH 0900 or placement at math level 1 within one year prior to enrollment. May not be used to satisfy the mathematics requirement for AA and AS degrees.* (3 hrs lec)

MATH 2200 Calculus I (5)

Introduces the calculus and analytic geometry of algebraic functions of one variable. The first semester of a three-semester sequence course. *Prerequisite: A grade of "C-" or better in MATH 1405 or MATH 1450 or placement at math level 5 within one year prior to enrollment.* (5 hrs lec)

MATH 2205 Calculus II (5)

The second of three courses in the calculus sequence. Covers the calculus of transcendental functions, techniques of integration, and isolated topics which may include infinite series, analytic geometry, indeterminate forms, and polar coordinates. *Prerequisite: A grade of "C-" or better in MATH 2200 or equivalent.* (5 hrs lec)

MATH 2210 Calculus III (5)

The last of three courses in the calculus sequence. Covers vectors, functions of two or more variables, and any of the isolated topics not covered in MATH 2205. *Prerequisite: A grade of "C-" or better in MATH 2205.* (5 hrs lec)

MATH 2250 Elementary Linear Algebra (3)

A theory course which introduces the algebra of matrices followed by a study of vector spaces. *Prerequisite: A grade of "C-" or better in MATH 2210.* (3 hrs lec)

MATH 2300 Discrete Structures (3)

An introductory course covering the mathematics most used in the analysis of algorithms. Logic and proof covered with some emphasis on proof by induction. Counting, combinatorics, probability,

relations, discrete functions, and Boolean algebras with applications to switching circuits covered. Graph theory, machine arithmetic, and finite differencing techniques also introduced. *This course is the same as COSC 2300. Prerequisite: A grade of "C-" or better in MATH 2200 or MATH 2350.* (3 hrs lec)

MATH 2310 Applied Differential Equations I (3)

Students show mastery of solutions and applications of ordinary differential equations including a brief look at Laplace transforms. Students complete their understanding by completing a group project and presenting their results to Physical Science Division faculty. *For students specializing in Engineering, Physical Science, and Mathematics. Prerequisite: Successful completion of at least 30 credit hours and a grade of "C-" or better in MATH 2210.* (3 hrs lec) **Capstone Course**

MATH 2350 Business Calculus (5)

Students develop introductory level tools to apply calculus to business. Students address limits, derivatives, and integrals of functions of one variable with applications throughout. *Students may not receive credit in both MATH 2350 and MATH 2200. Prerequisite: A grade of "C-" or better in MATH 1400, or MATH 1450 or placement at math level 4 within one year prior to enrollment.* (5 hrs lec)

MATH 2355 Business Math (4)

Students develop more advanced mastery of business and economic applications of mathematics based on techniques covered in MATH 2350. Students work with linear equations and programming, probability and statistics, Markov processes and game theory, plus complete a mandatory computer-based spreadsheet component. *Prerequisite: A grade of "C-" or better in MATH 2350, BMIS 2000, and STAT 2005. Student cannot receive credit for both MATH 1050 and MATH 2355.* (4 hrs lec)

MANAGEMENT (MGT)**MGT 2100 Principles of Management (3)**

Covers objectives, planning, organization of resources, human relations, coping with change and conflict, and controlling as management responsibilities. Includes appropriate behavioral and management science applications to the management process. *Prerequisite: BADM 1000 or six hours of business-related courses.* (3 hrs lec)

MGT 2470 Internship: Management (3)

Students acquire management experience through internships with businesses in the Big Horn Basin. Students receive guidance from college and internship-site supervisors plus receive a structured assessment of their work performance. Designed for students in the last semester of the management program. *Prerequisite: Successful completion of at least 30 credit hours and recommended enrollment in MGT 2100 or MKT 2100.* (1 hr lec, 6 hrs lab) **Capstone Course**

MARKETING (MKT)**MKT 1000 Sales (3)**

Covers fundamentals of selling, emphasizing the sales agent's personal responsibilities and obligations to a company and its customers. (3 hrs lec)

MKT 1300 Advertising (3)

An introduction to the role and use of advertising. Basic processes of planning, implementing, and controlling the advertising effort studied. Consumer analysis, promotional objectives, media selection, and evaluation represent major areas of study. (3 hrs lec)

MKT 2100 Principles of Marketing (3)

Covers management's role in product planning, pricing, distribution, and promotion of goods and services. Emphasizes the application of the marketing concept in current business practices. *Prerequisite: BADM 1000 or six hours of business-related courses.* (3 hrs lec)

MOLECULAR BIOLOGY (MOLB)**MOLB 2210 General Microbiology (4)**

A study of bacteria, fungi, parasites and viruses; their morphology, physiology, classification, isolation, and sterilization. *Prerequisite: BIOL 1010 and CHEM 1000.* (3 hrs lec, 3 hrs lab)

MOLB 2220 Pathogenic Microbiology (4)

Continues the study of microorganisms with particular reference to those of medical importance. Laboratory emphasis on isolation, cultivation, and identification of pathogenic bacteria, fungi, and parasites. *Prerequisite: MOLB 2210.* (3 hrs lec, 4 hrs lab)

MUSIC (MUSC)**MUSC 1000 Introduction to Music (3)**

An examination of musical style elements for aesthetic, expressive, and cultural meanings. Many styles of music will be heard and analyzed, with emphasis on classic selections. Develops informed, perceptive listeners. (3 hrs lec)

MUSC 1030 Written Theory I (3)

A study of diatonic harmony and melody. Utilizing a computer, this course emphasizes scales, intervals, keys, triads, melodic organization, and four-part chorale writing. Involves analysis, composing melodies, and harmonizing with primary and secondary triads. (3 hrs lec)

MUSC 1035 Aural Theory I (1)

Ear training through diatonic sight singing of melodies, scales and intervals, and melodic and rhythmic dictation. Involves learning of moveable *do solfege* and basic conducting patterns. *Should be taken in conjunction with MUSC 1030.* (2 hrs lec)

MUSC 1040 Written Theory II (3)

Involves further study of diatonic harmony and melody. Utilizing a computer, this course emphasizes style analysis, dominant and non-dominant seventh chords, modulation, two- and three-part form, and introduction to popular harmonic notation. Takes a student through the classical period of harmony. *Students specializing in music must be concurrently enrolled in MUSC 2455. Special fee required.* (.5 hr lec, 5 hrs open lab)

MUSC 1045 Aural Theory II (1)

Continuation of MUSC 1035 which includes *solfege*, dictation, and conducting patterns. Introduction to keyboard harmony and harmonic dictation. *Prerequisite: MUSC 1035.* (2 hrs lec)

MUSC 1057 Introduction to Jazz (3)

A survey of American Jazz Music from the turn of the century to the present. Students become acquainted with basic jazz materials, styles, and the works of selected jazz Masters. (3 hrs lec)

MUSC 1080 Baritone Horn I (2)**MUSC 1090 Bassoon I (2)****MUSC 1100 Cello I (2)****MUSC 1110 Clarinet I (2)****MUSC 1120 Double Bass I (2)****MUSC 1130 Flute I (2)****MUSC 1140 French Horn I (2)****MUSC 1150 Guitar I (2)****MUSC 1152 Bass Guitar I (2)****MUSC 1170 Oboe I (2)****MUSC 1190 Percussion I (2)****MUSC 1191 Percussion/Mallets I (2)****MUSC 1195 Latin Percussion I (2)****MUSC 1200 Piano I (2)****MUSC 1210 Saxophone I (2)****MUSC 1220 Trombone I (2)****MUSC 1230 Trumpet I (2)****MUSC 1240 Tuba I (2)****MUSC 1250 Violin I (2)****MUSC 1260 Viola I (2)****MUSC 1270 Voice I (2)**

One private lesson in a specified area each week with a minimum preparation standard. Generally requires a recital performance and juries. *Students specializing in music must be concurrently enrolled in MUSC 2455. May be repeated once for credit. Special fee required.* (.5 hr lec, 5 hrs open lab)

MUSC 1290 Class Piano I (1)

Group instruction for the beginner at the keyboard. First semester of a four-semester sequence. Covers note reading, rhythm symbols, beginning major scales, and chord progressions. Develops finger control and hand independence. (.5 hr lec, 1 hr lab)

MUSC 1292 Class Guitar I (1)

Trains the inexperienced student to play song accompaniments on the acoustic guitar. Stresses ability to read chord tablature, perform with a variety of strums, and finger-pick. Introduces bergh chords. (.5 hr lec, 1 hr lab)

MUSC 1295 Class Piano II (1)

Second semester continuation of skills acquired in MUSC 1290. Includes all major scales, prescribed

chord progressions, harmonization, transposition, sightreading, and repertoire. *Prerequisite: MUSC 1290 or successful completion of MUSC 1290 final exam requirements.* (.5 hr lec, 1 hr lab)

MUSC 1310 Public School Music: Brass I (1)

Group instruction to prepare the student in the fundamentals of teaching brass instruments in a public school setting. Emphasizes performance, methods, and materials. (2 hrs lab)

MUSC 1325 Public School Music: Percussion Instruments (1)

Group instruction to prepare the student in the fundamentals of teaching percussion instruments in a public school setting. Emphasizes performance, methods and materials. (2 hrs lab)

MUSC 1340 Public School Music: Voice I (1)

Studies fundamentals of vocal production, vocal literature, and its performance. For the student with little previous formal voice training. (2 hrs lab)

MUSC 1350 Public School Music: Woodwinds I (1)

Group instruction to prepare the student in the fundamentals of teaching woodwind instruments in a public school setting. Emphasizes performance, methods, and materials. (2 hrs lab)

MUSC 1378 College Band (1)

Open to all students with experience on brass, woodwind, and percussion instruments. Ensemble performs standard wind band repertoire. *Membership subject to director's approval. May be repeated once for credit.* (3 hrs lab)

MUSC 1379 College Band for Percussion (1)

An opportunity for percussion students to perform in a modern wind band setting. Students will be exposed to and have the opportunity to perform band literature that is historically important. *May be repeated once for credit.* (2 hrs lab)

MUSC 1388 Jazz Combo I (1)

An ensemble which performs small group jazz music. Emphasis on ensemble playing and individual expression through improvisation. *Prerequisite: Consent of instructor. May be repeated once for credit.* (2 hrs lab)

MUSC 1390 Jazz Ensemble I (1)

A 16-20 piece ensemble for brass, woodwind, and rhythm players. Open to all students interested in performing contemporary jazz band literature. *Members of the Jazz Ensemble I who are specializing in music must be enrolled in another major ensemble. Members chosen by audition. May be repeated once for credit.* (3 hrs lab)

MUSC 1400 Collegiate Chorale (1)

A non-auditioned choral performing ensemble open to all student members of the college community. The course goal involves individual vocal and musical growth in a group performance

context. *May be repeated once for credit.* (2 hrs lab)

MUSC 1403 Vocal Jazz (1)

A vocal ensemble specializing in jazz and popular music performances, using a rhythm section as accompaniment. *Members chosen by director's audition. May be repeated once for credit.* (3 hrs lab)

MUSC 1404 Master Chorale (1)

An adult choral performance ensemble. Through weekly, evening rehearsals, this group prepares and performs choral masterworks often in partnership with the Civic Orchestra. One complete concert repertoire covered each semester. *Open to all singers without audition. May be repeated once for credit.* (2 hrs lab)

MUSC 1410 Vocal Ensemble (1)

A 12-16 member vocal ensemble using an integration of related arts (drama, dance, poetry, visual arts, etc.) in the performance of music from all periods and styles. *Members chosen by audition. May be repeated once for credit.* (3 hrs lab)

MUSC 1415 Introduction to Music Technology (2)

Students address fundamental acoustics and electronics specifically focusing on the design and applications of state-of-the-art sound reinforcement systems for public address, musical, and dramatic events. Skills are developed through theory and application discussion, as well as hands-on training with professional sound equipment. (2 hrs lec, .5 arr lab)

MUSC 1430 Symphony Orchestra (1)

An organization open to community members and students with experience on strings, brass, woodwind, and percussion instruments. *Membership by director's approval. May be repeated once for credit.* (3 hrs lab)

MUSC 1435 Audio Recording (2)

Students develop basic understanding of recording principles and techniques. Students examine the principles of sound, the operation and maintenance of studio equipment, and the systems, operation, and protocol of the modern digital recording studio. With tape-based recording as a starting point, students progress through such subjects as mixers, multi-track recording, effects processors, and microphones. *Prerequisite: MUSC 1415.* (2 hrs lec)

MUSC 1450 Percussion Ensemble (1)

Percussion ensembles offered depending on instrumentation and interest of students. *Prerequisite: Consent of instructor. May be repeated once for credit.* (2 hrs lab)

MUSC 1460 Brass Ensemble (1)

Brass ensembles offered depending on instrumentation and interest of students. *Prerequisite: Consent of instructor. May be repeated once for credit.* (2 hrs lab)

MUSC 1470 Woodwind Ensemble (1)

Woodwind ensembles offered depending on instrumentation and interest of students.

Prerequisite: Consent of instructor. May be repeated once for credit.

(2 hrs lab)

MUSC 1480 String Ensemble (1)

String ensembles offered depending on instrumentation and interest of students.

Prerequisite: Consent of instructor. May be repeated once for credit.

(2 hrs lab)

MUSC 2010 American Popular Music (3)

A survey of popular styles of music in America from 1900 to the present. Studies such musical developments as blues, ragtime, jazz, swing, folk, country, rhythm and blues, and rock and roll.

Emphasis placed on gaining an historical sense of the music's development and also on interpreting social and cultural implications of the sounds and forms of American popular music. *Prerequisite: Successful completion of at least 30 credit hours.*

(3 hrs lec)

Capstone Course

MUSC 2030 Written Theory III (3)

A study of chromatic and contemporary harmonic concepts. Emphasis placed on the analysis of historical music and writing in contemporary styles. Students expected to develop and practice keyboard skills and use a computer for drill and composition. *Prerequisite: MUSC 1030, MUSC 1040.*

(3 hrs lec)

MUSC 2035 Aural Theory III (1)

Class participation in the skills of melodic, harmonic and rhythmic dictation, and sight singing in more chromatic styles. *Prerequisite: MUSC 1045.*

(2 hrs lec)

MUSC 2040 Written Theory IV (3)

A continuation of Written Theory III with additional study of counterpoint and writing in larger musical forms. *Prerequisite: MUSC 2030 and successful completion of at least 30 credit hours.*

(3 hrs lec)

Capstone Course

MUSC 2045 Aural Theory IV (1)

Includes work in error detection and diatonic keyboard harmony. *Prerequisite: MUSC 2035.*

(2 hrs lec)

MUSC 2050 Music History Survey I (3)

The history and literature of music from ancient times to 1750. Traces the development of musical style in a historical context. In addition to a general overview of the literature, students analyze representative works of each style period.

(3 hrs lec)

MUSC 2055 Music History Survey II (3)

The history and literature of music from 1750 to the present. Students trace the development of musical style in an historical context. In addition to completing a general overview of the literature, students analyze representative works of each style period.

(3 hrs lec)

MUSC 2060 Jazz Improvisation I (1)

Introduction to the skills necessary to create and perform jazz solos involving simple to complex chord progression, harmonic structures, and rhythmic frameworks. *Prerequisite: Consent of instructor.*

(2 hrs lab)

MUSC 2065 Jazz Improvisation II (1)

Continuation of MUSC 2060. *Prerequisite: Consent of instructor.*

(2 hrs lab)

MUSC 2071 Applied Music: Vocal and Instrumental (2)

Private lessons in voice or instrument for students who have completed four semesters of study in voice or in one instrument. *Prerequisite: Four semesters of previous applied study.*

(.5 hr lec, 5 hrs open lab)

MUSC 2080 Baritone Horn II (2)

Prerequisite: MUSC 1080

MUSC 2090 Bassoon II (2)

Prerequisite: MUSC 1090

MUSC 2100 Cello II (2)

Prerequisite: MUSC 1100

MUSC 2110 Clarinet II (2)

Prerequisite: MUSC 1110

MUSC 2120 Double Bass II (2)

Prerequisite: MUSC 1120

MUSC 2130 Flute II (2)

Prerequisite: MUSC 1130

MUSC 2140 French Horn II (2)

Prerequisite: MUSC 1140

MUSC 2150 Guitar II (2)

Prerequisite: MUSC 1150

MUSC 2152 Bass Guitar II (2)

Prerequisite: MUSC 1152

MUSC 2170 Oboe II (2)

Prerequisite: MUSC 1170

MUSC 2190 Percussion II (2)

Prerequisite: MUSC 1190

MUSC 2191 Percussion/Mallets II (2)

Prerequisite: MUSC 1191

MUSC 2195 Latin Percussion II (2)

Prerequisite: MUSC 1195

MUSC 2200 Piano II (2)

Prerequisite: MUSC 1200

MUSC 2210 Saxophone II (2)

Prerequisite: MUSC 1210

MUSC 2220 Trombone II (2)

Prerequisite: MUSC 1220

MUSC 2230 Trumpet II (2)

Prerequisite: MUSC 1230

MUSC 2240 Tuba II (2)

Prerequisite: MUSC 1240

MUSC 2250 Violin II (2)

Prerequisite: MUSC 1250

MUSC 2260 Viola II (2)

Prerequisite: MUSC 1260

MUSC 2270 Voice II (2)

Prerequisite: MUSC 1270

One private lesson in a specified area each week with a minimum preparation standard.

Generally requires a recital performance and juries. *Students specializing in music must be concurrently enrolled in MUSC 2455. May be repeated once for credit. Special fee required.*

(.5 hr lec, 5 hrs open lab)

MUSC 2290 Class Piano III (1)

Third semester of a four-semester sequence.

Develops further piano skills. Involves prescribed

scales, harmonizations, chord progressions, transpositions, sightreading, and repertoire.

Prerequisite: MUSC 1295 or successful completion of MUSC 1295 final exam requirements.

(.5 hr lec, 1 hr lab)

MUSC 2292 Class Guitar II (1)

A more advanced course extending knowledge of open chords, bergh chords, and song accompaniments. Includes scales, arpeggios, blues progressions, lead patterns, and note reading.

Prerequisite: MUSC 1292.

(.5 hr lec, 1 hr lab)

MUSC 2295 Class Piano IV (1)

Final semester of a four-semester sequence.

May include learning simple accompaniments.

Designed to prepare the music major for piano proficiency exam upon transfer. *Prerequisite: MUSC 2290 or successful completion of MUSC 2290 final exam requirements.*

(.5 hr lec, 1 hr lab)

MUSC 2378 College Band (1)

Open to all students with performing experience on brass, woodwind, and percussion instruments. Ensemble performs standard wind band repertoire.

Students are expected to exhibit a greater level of musical involvement in the group and serve as leaders in the ensemble. *Membership subject to director's approval. Prerequisite: MUSC 1378.*

(3 hrs lab)

MUSC 2379 College Band for Percussion (1)

An opportunity for percussion students to perform in a modern wind band setting. Students will be exposed to and have the opportunity to perform band literature that is historically important. *May be repeated once for credit.*

(2 hrs lab)

MUSC 2388 Jazz Combo II (1)

An ensemble which performs small group jazz music. Emphasis on ensemble playing and individual expression through improvisation.

Students are expected to exhibit a greater level of musical involvement in the group and serve as leaders in the ensemble. *Prerequisite: MUSC 1388 and consent of instructor. May be repeated once for credit.*

(2 hrs lab)

MUSC 2390 Jazz Ensemble II (1)

A 16-20 piece ensemble for brass, woodwind, and rhythm players. Open to all students interested in performing contemporary jazz band literature.

Students are expected to exhibit a greater level of musical involvement in the group and serve as leaders in the ensemble. *Members are chosen by audition. Prerequisite: MUSC 1390. May be repeated once for credit.*

(2 hrs lab)

MUSC 2400 Collegiate Chorale (1)

A non-auditioned choral performing ensemble open to all student members of the college community. The course goal involves vocal and musical growth in a group performance context.

Students are expected to exhibit a greater level of musical involvement in the group and serve as leaders in the ensemble. *Prerequisite: MUSC 1400. May be repeated once for credit.*

(2 hrs lab)

MUSC 2403 Vocal Jazz (1)

A vocal ensemble specializing in jazz and popular music performances, using a rhythm section as accompaniment. Student are expected to exhibit a greater level of musical involvement in the group and serve as leaders in the ensemble. *Members chosen by director's audition. Prerequisite: MUSC 1403. May be repeated once for credit.* (2 hrs lab)

MUSC 2404 Master Chorale (1)

An adult choral performance ensemble. Through weekly, evening rehearsals, this group prepares and performs choral masterworks often in partnership with the Civic Orchestra. One complete concert repertoire covered each semester. *Open to all singers without audition. Prerequisite: MUSC 1404. May be repeated once for credit.* (2 hrs lab)

MUSC 2405 Vocal Ensemble (1)

A 12-16 member vocal ensemble using an integration of related arts (drama, dance, poetry, visual arts, etc.) in the performance of music from all periods and styles. Students are expected to exhibit a greater level of musical involvement in the group and serve as leaders in the ensemble. *Members chosen by audition. Prerequisite: MUSC 1410. May be repeated once for credit.* (2 hrs lab)

MUSC 2430 Symphony Orchestra (1)

An organization open to community members and students with experience on strings, brass, woodwind and percussion instruments. *Membership by director's approval. Prerequisite: MUSC 1430. May be repeated once for credit.* (2 hrs lab)

MUSC 2435 Advanced Audio Recording (3)

Students advance their recording skills through a project-based curriculum. Students use the computer to create an integrated recording, editing, and mixing environment extending into the areas of digital mastering, signal processing, and post production. Students explore the compact disc as a presentation and archiving medium through the development of a personal CD project. *Prerequisite: MUSC 1415, MUSC 1420 and MUSC 2410.* (2 hrs lec, 2 hrs lab)

MUSC 2440 MIDI (3)

Students learn the principles and techniques of MIDI (Musical Instrument Digital Interface) and its uses in music composition, recording, and arrangement. After exploring basic theory, Digital Audio Workstations are used so students develop familiarity with elements of computer MIDI technology as they relate to sequencing, sound synthesis, non-linear recording and editing, and computer mixing. Emphasis will be placed on post production practices in scoring (notation) and the preparation of MIDI material for presentation on the World Wide Web. *Prerequisite: MUSC 1415 and MUSC 1420.* (2 hrs lec, 2 hrs lab)

MUSC 2450 Percussion Ensemble (1)

Percussion ensembles offered depending on instrumentation and interest of students. Students are expected to exhibit a greater level of musical involvement in the group and serve as leaders in the ensemble. *Prerequisite: MUSC 1450 and*

consent of instructor. May be repeated once for credit. (2 hrs lab)

MUSC 2455 Convocation (0)

An opportunity for students involved in applied music to perform for each other in a formal recital setting. Usually meets once every two weeks. *Must be taken concurrently with applied music lessons.* (1 hr lab)

MUSC 2460 Brass Ensemble (1)

Brass ensembles offered depending on instrumentation and interest of students. Students expected to exhibit a greater level of musical involvement in the group and serve as leaders in the ensemble. *Prerequisite: MUSC 1460 and consent of instructor. May be repeated once for credit.* (2 hrs lab)

MUSC 2470 Woodwind Ensemble (1)

Woodwind ensembles offered depending on instrumentation and interest of students. Students are expected to exhibit a greater level of musical involvement in the group and serve as leaders in the ensemble. *Prerequisite: MUSC 1470 and consent of instructor. May be repeated once for credit.* (2 hrs lab)

MUSC 2471 String Ensemble (1)

String ensembles offered depending on instrumentation and interest of students. Students are expected to exhibit a greater level of musical involvement in the group and serve as leaders in the ensemble. *Prerequisite: MUSC 1480 and consent of instructor. May be repeated once for credit.* (2 hrs lab)

MUSC 2500 Electronic Portfolio (3)

Designed for students pursuing the AAS in Music Technology/Multimedia. Students develop and present, in a multimedia format, a collection of their musical, print, and other work which exhibits their abilities, progress, effort, and program achievements. *Prerequisite: MUSC 1415, MUSC 1420, MUSC 2410, and successful completion of at least 30 credit hours.* (2 hrs lec, 2 hrs lab) **Capstone Course**

NURSING (NRST)**NRST 1200 Medical Terminology (1)**

Introduces the student to medical vocabulary and terminology. Stresses the use of prefixes, suffixes, word roots, and combined forms to give the student a working knowledge of medical terms. (1 hr lec)

NRST 1600 Math for Health Sciences (3)

Provides students with information to solve drug dosage problems. Emphasizes skills and knowledge to prepare and administer drugs safely to persons across the life-span. Introduces metric, apothecary, and household systems of measure, and computation of drug dosages for medications administered by various routes. *Not transferable. Prerequisite: Placement at math level 2 within one year prior to enrollment.* (3 hrs lec)

NRST 1610 Nursing I (8)

Utilizes an integrated approach to introduce students to the nursing process and its use as a fundamental tool in planning and providing nursing care to patients/clients across the life-span. Students provided with the theory, principles, and skills necessary to provide nursing care to meet basic patient/client needs in the clinical setting. *Prerequisite: Admission to Nursing Program. Concurrent enrollment in NRST 1600.* (6 hrs lec, 3 hrs lab, 4.5 hrs clinical x 10 wks)

NRST 1620 Nursing II (9)

Utilizes an integrated approach to teach students to apply the nursing process to plan and provide nursing care to meet the needs of patients/clients across the life-span who experience common, well-defined health problems in acute and long-term care health settings. The role of the nurse in meeting the needs of the family experiencing childbirth included. *Prerequisite: Completion of the first semester of the Nursing Program, completion of NRST 1600 or college level math.* (5 hrs lec, 3 hrs lab, 9 hrs clinical)

NRST 1640 Basic Intravenous Therapy (2)

Presents the beginning skills and knowledge needed to administer intravenous therapy. Course includes lecture, demonstrations, and clinical experience on an arranged basis. *Prerequisite: Licensure in Wyoming as a Licensed Practical Nurse. Must carry personal Malpractice Liability Insurance.* (16 hrs lec, 16 hrs clinical/semester)

NRST 1660 Basic Emergency Care (3)

Provides training in fundamentals of emergency care. Follows the Department of Transportation and advanced first aid outlines for the First Responder. An excellent course for students desiring to enter an Emergency Medical Technician Program. (3 hrs lec)

NRST 1980 Practical Nursing Role Exploration (5)

Utilizes an integrated approach to teach students to apply the nursing process to meet the needs of groups of patients/clients across the life-span who have common well-defined health problems in structured settings. Students provided with the concepts necessary to exit as a Practical Nurse. *Prerequisite: First and second semesters of the Nursing Program.* (2 hrs lec, 21 hrs clinical x 8 wks)

NRST 2500 LPN Transition (1)

Designed to assist the Licensed Practical Nurse who will enter the second year of the nursing program by advanced placement. *Prerequisite: Completion of admission criteria for Advanced Placement.* (4 hrs lec x 4 wks)

NRST 2630 Nursing III (10)

Utilizes an integrated approach to teach students to utilize the nursing process to plan and provide nursing care to meet the needs of patients/clients across the life-span who experience increasingly complex health problems in acute and long-term care health settings. In-depth study of physical assessment and intravenous therapy provided. Role of Associate Degree Nurse in health teaching emphasized. *Prerequisite: First two semesters of*

the Nursing Program or Advanced Placement.
(4 hrs lec, 3 hrs lab, 15 hrs clinical)

NRST 2640 Nursing IV (10)

Utilizes an integrated approach to teach students to utilize the nursing process to manage the nursing care to meet the needs of groups of patients/clients across the life-span who experience common, complex health problems in acute and long-term care health settings. Emphasis placed on assisting students in making the transition from the role of student to that of graduate Associate Degree Nurse. *Prerequisite: Successful completion of at least 30 credit hours and completion of first three semesters of the Nursing Program.*
(4 hrs lec, 3 hrs lab, 15 hrs clinical)

Capstone Course

NRST 2810 Basic Coronary Care (2)

Provides instruction in basic electrocardiographic interpretation. Focuses on the recognition of basic cardiac rhythm disturbances, treatment, and nursing management. *Prerequisite: ZOO 2010 and ZOO 2020.*
(2 hrs lec)

OUTDOOR EDUCATION – ACTIVITY (OEAC)

OEAC 1100 Outdoor Living Skills: Desert (1)

Acquaints the student with safe and conversationally sound backpacking skills. Special emphasis on techniques adapted to the desert environment. *Five days continuous.*
(1 hr lec, 1 hr lab)

OEAC 1150 Outdoor Living Skills: Mountain (1)

Acquaints the student with safe and conversationally sound backpacking skills. Special emphasis on techniques adapted to the mountain environment. *Five days continuous.*
(1 hr lec, 1 hr lab)

OUTDOOR EDUCATION – PROFESSIONAL (OEPR)

OEPR 1200 Winter Outdoor Survival (1)

Designed to prepare outdoorsmen and travelers for crisis situations that occur during winter. With preparedness as a primary goal, examines hazards of winter environment. *Involves several evening lectures and two weekend excursions.*
(1 hr lec)

OEPR 1250 River Studies (2)

An interdisciplinary course combining instruction from areas of outdoor education and natural science. Through direct experience, students learn to guide a white water raft and gain an understanding of the riparian environment. *One credit may be used to fulfill the Wellness Requirement. Five days continuous.*
(2 hrs lec)

OEPR 2100 Outdoor Education Practicum (2-4)

Students gain practical experience in one or more of the following: teaching outdoor pursuits, conducting adventure activities, leading expeditions, and managing adventure education resources. Students present course content in actual teaching settings and/or perform related educational functions. Includes lesson and program planning, evaluation,

and outdoor leadership development. *Prerequisite: OEPR 2450 and successful completion of at least 30 credit hours.*

(1 hr lec, 2-6 hrs lab)

Capstone Course

OEPR 2450 Introduction to Adventure Education (2)

Students acquire training in the philosophy, skills, applications, and programming of Adventure Education. These concepts can be applied in various educational settings such as the public schools, institutions for special populations, corporate institutions, and organized camps. *One credit may be used to fulfill Wellness Education Requirements.*
(2 hrs lec, .5 hr lab)

PHYSICAL EDUCATION – ACTIVITY (PEAC)

PEAC 1015 Beginning SCUBA (1)

An introduction to the underwater world. Involves classroom and pool instruction. *Special equipment usage fee required.*
(1 hr lec, 1 hr lab)

PEAC 1030 Dance Aerobics (.5)

An exercise form designed to condition the cardiovascular and skeletal systems. Combines patterned routines and stretching to lively music.
(.5 hr lec, .5 hr lab)

PEAC 1050 Beginning Tennis (.5)

Introduces techniques of grip, stance, footwork, service, strokes, volleys, lobs, and smashing. Emphasis on stroke combinations and return of service.
(.5 hr lec, .5 hr lab)

PEAC 1248 Beginning Soccer (.5)

Introduces skills of kicking, trapping, intercepting or blocking, passing, tackling, dribbling, shooting, and goalkeeping. Some emphasis on team strategy and officiating.
(.5 hr lec, .5 hr lab)

PEAC 1249 Beginning Squash (.5)

Introduces stroke mechanics, shot selection, defensive and offensive strategy, equipment, rules of play, and court safety. Some emphasis on tournament play.
(.5 hr lec, .5 hr lab)

PEAC 1252 Beginning Badminton (.5)

Introduces techniques of grip, wrist action, footwork and position, strokes, service, and shots. Emphasis on strategy for singles and doubles play.
(.5 hr lec, .5 hr lab)

PEAC 1253 Beginning Bowling (.5)

Introduces elements of stance, pushaway and delivery, back swing and follow through, ball types, spare shooting, and spot bowling. Some emphasis on scorekeeping.
(.5 hr lec, .5 hr lab)

PEAC 1255 Beginning Golf (.5)

Introduces elements of club selection, grip, stance, swing, shot types, difficult lies, golf rules, and etiquette. Emphasis is placed on the swing.
(.5 hr lec, .5 hr lab)

PEAC 1257 Beginning Racquetball (.5)

Introduces stroke mechanics, shot selection, defensive and offensive strategy, equipment, rules of play, and court safety. Some emphasis on tournament play.
(.5 hr lec, .5 hr lab)

PEAC 1258 Beginning Skiing (.5)

Introduces basic skills of downhill running, turning, traversing, climbing (side step and herringbone), equipment selection, and safety. Flexible format allows instruction for wide range of skill and ability. *Special fee required for lift tickets, transportation, insurance, and lodging.*
(.5 hr lec, .5 hr lab)

PEAC 1259 Beginning Cross Country Skiing (.5)

Introduces fundamental strides, turning techniques, uphill and downhill skiing, equipment selection, and preparation and organization for light touring. Some emphasis on skating technique. *Special fee required for transportation, insurance, and equipment.*
(.5 hr lec, .5 hr lab)

PEAC 1260 Beginning Volleyball (.5)

Introduces elements of passing, setting, offensive and defensive net play, serving, and game strategy. Some emphasis on hitting skills.
(.5 hr lec, .5 hr lab)

PEAC 1263 Beginning Basketball (.5)

Introduces fundamentals of ball handling, passing, shooting, offensive and defensive strategy, rebounding, and rules of play. Emphasis is on teamwork.
(.5 hr lec, .5 hr lab)

PEAC 1264 Beginning Softball (.5)

Introduces skills of throwing, catching, pitching, fielding, batting, base running, infield play, and offensive and defensive strategy. Some emphasis on rules of play and score keeping.
(.5 hr lec, .5 hr lab)

PEAC 1265 Floor Hockey (.5)

Introduces skills of passing, shooting, goalkeeping, advancing the puck, and strategies for offensive and defensive play. Some emphasis on officiating.
(.5 hr lec, .5 hr lab)

PEAC 1273 Weight Training and Conditioning (.5)

Introduces elements of grip, proper form and breathing, specific muscle group training, and circuit and strength training. Lifting technique emphasized.
(.5 hr lec, .5 hr lab)

PEAC 1278 Taekwondo I (.5)

A discipline in Korean martial arts emphasizing physical, mental, and character development of the individual. Course guides beginners through stretching exercises, basic stances and techniques, and introduces the history and philosophy of Tae Kwon Do.
(.5 hr lec, .5 hr lab)

PEAC 1279 Taekwondo II (.5)

Continuation of PEAC 1278. Students learn more advanced Taekwondo techniques and methods to increase self-discipline and concentration. *Prerequisite: PEAC 1278.*
(.5 hr lec, .5 hr lab)

PEAC 1281 Beginning Casting and Angling (.5)

Introduces students to fly-fishing in one of the most outstanding settings for angling in the world. Combines lecture sessions with field trips to expose students to many facets of fly-fishing. Course explores this fascinating sport as an engrossing lifetime study.
(.5 hr lec, .5 hr lab)

PEAC 1285 Kayaking (.5)

Introduces fundamentals of paddling, rolling, outfitting, transporting, and safety for the slalom kayak. Rescue techniques are emphasized.
Prerequisite: Intermediate swimming ability.
(.5 hr lec, .5 hr lab)

PEAC 1286 Spelunking (.5)

Introduces basic lighting and safety equipment, horizontal and vertical technique, and trip organization. Cave conservation emphasized.
(.5 hr lec, .5 hr lab)

PEAC 1287 Rock Climbing (.5)

Introduces climbing technique, equipment, history, and ethics. Emphasis on safety and rescue techniques.
(.5 hr lec, .5 hr lab)

PEAC 1288 Bicycle Touring (.5)

Introduces skills of riding, bicycle repair, equipment selection and use, camping, and group trip organization. Emphasis on safe riding technique.
(.5 hr lec, .5 hr lab)

PEAC 1289 Individual Fitness (.5)

Introduces concepts of strength, flexibility, and endurance, and their interrelationships with and contributions to physical fitness. Emphasis placed on fitness testing and variety of exercise modes available.
(.5 hr lec, .5 hr lab)

PEAC 1300 Social Dance (1)

Introduces western dances most commonly used in our society. Some emphasis on social skills, history, and terminology. *One credit may be used to fulfill Wellness Education Requirements.*
(2 hrs lab)

PEAC 1330 Dance Ensemble (1)

A dance ensemble encompassing a diversity of dance styles. Repertoire includes a variety of ballet, modern, country, and specializing in pom-pom, jazz, and funk. Members perform at various athletic and civic events and present stage productions. *One credit may be used to fulfill Wellness Education Requirements. One credit may be used to fulfill Visual and Performing Arts Requirements.*
(2 hrs lab, additional time required for performance)

PEAC 1430 Modern Dance I (1)

A basic introduction to modern dance technique, including an introduction to dance history and health for dancers. Acquaints students with the basics of choreography, improvisation, and performance skills. *One credit may be used to fulfill Wellness Education Requirements.*
(2 hrs lab)

PEAC 1480 Jazz Dance I (1)

Introduces the basic principles and techniques

of jazz dance. Develops fundamental movement skills and includes the history and development of jazz dance. *One credit may be used to fulfill Wellness Education Requirements.*
(2 hrs lab)

PHYSICAL EDUCATION – VARSITY ATHLETICS (PEAT)**PEAT 1000 Varsity Sports: (.5)**

Represents active participation on an athletic varsity team, attendance at practice, and some independent study. One specific sport will be emphasized in each section of this class (i.e., basketball, volleyball, wrestling or rodeo).
(.5 hr lec, .5 hr lab)

PEAT 1005 Varsity Sports: (.5)

See PEAT 1000 for course description. Sophomore level.
(.5 hr lec, .5 hr lab)

PEAT 1010 Cheerleading (1)

Develops and maintains school spirit and enthusiasm for collegiate athletic events. Focuses on a strong relationship with spectators. Addresses appropriate standards in the areas of management, education, instruction, and safety. *Prerequisite: Successful audition.*
(1 hr lec, 1 hr lab)

PHYSICAL EDUCATION – PROFESSIONAL (PEPR)**PEPR 1005 Introduction to Physical Education (2)**

Provides prospective teachers with a general concept of the meaning and interpretation of physical education plus presents a description of what is involved in preparation for teaching in this field. Presents information pertaining to employment in physical education fields.
(2 hrs lec)

PEPR 1025 Movement Core II (2)

Students learn the skills and knowledge necessary to teach basic movement skills in physical education including fundamental locomotor, stability, and jumping skills with an emphasis on analysis of movement and utilization of the skills in sport development.
(2 hrs lec)

PEPR 1052 Prevention of Athletic Injury/Illness (2)

Designed to meet the Wyoming State Coaches Certification Requirement. Prepares coaches in the prevention, recognition, and care of athletic injuries.
(2 hrs lec)

PEPR 1061 Majors Basketball (2)

Introduces fundamentals, plays, techniques. Covers theories of various offensive and defensive techniques.
(2 hrs lec)

PEPR 1062 Majors Volleyball (2)

Designed for physical education students. Course focuses on advanced skill development with some emphasis on teaching and coaching methodology.

Prerequisite: PEAC 1260 or intermediate level skills.

(2 hrs lec)

PEPR 2000 Movement Core III (2)

Students develop the skills and knowledge necessary to teach basic movement skills in physical education. Level two focuses primarily on manipulative skills for hands and feet including throwing, catching, dribbling, volleying, trapping, kicking, and striking.
(2 hrs lec)

PEPR 2012 Physical Education for Elementary School (3)

Trains prospective elementary teachers to develop every child's need for strength, skills, health, and knowledge. Involves training with grade school children in the community.
(3 hrs lec)

PEPR 2069 History and Philosophy of Sport (3)

Students develop a historical, philosophical, and global perspective of sport through the study of contributions from the Greeks, Romans, and other world cultures including the United States from the colonial period to the present. Class members also analyze the major contributions of important sports philosophers.
(3 hrs lec)

PEPR 2091 Rules and Techniques of Athletic Officiating I: (2)

Studies officiating techniques, rules, and the role of the official. Involves practical officiating experience.
(2 hrs lec)

PEPR 2100 Theory of Coaching: (2)

Designed to meet the Wyoming State Coaches Certification Requirement. Prepares coaches in the fundamentals of coaching any sport.
(2 hrs lec)

PEPR 2110 Scientific Foundations of Athletic Coaching (2)

Studies coaching philosophy and objectives. Includes study of sports psychology, pedagogy, physiology, and management. Assists participants to develop coaching style and teaches successful coaching techniques.
(2 hrs lec)

PEPR 2200 Physical Education, Health and Coaching Practicum (2-4)

Students gain practical experience in physical education, health, and coaching through placements in settings such as coaching situations, after-school programs, recreational sports programs, geriatric programs, movement or dance academies, and health facilities. Students receive skill-development guidance from on- and off-campus professionals. They also receive an assessment of their professional skills.

Prerequisite: Successful completion of at least 30 credit hours.

(1 hr lec, 2 hrs lab per credit hour)

Capstone Course

PHILOSOPHY (PHIL)

PHIL 1000 Introduction to Philosophy (3)

Surveys methods and concerns expressed in the study and use of epistemology, ethics, metaphysics, and aesthetics. Provides philosophical answers to questions of how and what people can know about themselves and the world around them, and how they can solve problems, think creatively, and find meaning for their lives. (3 hrs lec)

PHIL 1100 Critical Thinking (3)

Introduces the student to rhetorical and scientific methods of critical thinking, definition, argument formulation, and logical analysis. Applications of logic and reasoning drawn from a wide variety of sources. (3 hrs lec)

PHIL 2200 Social and Political Philosophy (3)

An examination of the answers philosophers give to questions about human nature, the rationales which can be developed for different kinds of government and societies, and the ways in which moral decisions are made. Concludes with a survey of ethical issues confronting contemporary individuals and groups in America. (3 hrs lec)

PHIL 2311 Philosophy of Religion (3)

A comparison of the answers which the major religions of the world provide to metaphysical questions about the origin, destiny, and purpose of the earth and its inhabitants. Also examines the history, practices, and ethics of these religions. (3 hrs lec)

PHOTOGRAPHIC COMMUNICATIONS (PHTO)

PHTO 1500 35 mm Camera (1)

Introduces the beginning photographer to the operation of automatic and manual 35 mm cameras, as well as providing instruction in basic photographic techniques such as lighting, selection of film, and principles of composition. (1 hr lec)

PHTO 1550 Outdoor Photography Seminar (2)

Emphasis on field photography. Lighting, composition, and technical aspects of outdoor and nature photography studied in intensive weekend format. Critique of student work and marketing information included. *May be repeated once for credit. Prerequisite: Consent of instructor.* (.5 hr lec, 1.5 hrs lab)

PHTO 1600 Survey of Photography (3)

An overview of photography from its early practitioners to contemporary photographers and the history of photographic processes. Utilizes a hands-on approach to learning and traditional academic methods. Studies the history of specific photographic eras, leading to participation in demonstrations of the creation of photographs using same or similar processes from that specific historical period. (3 hrs lec)

PHTO 1610 Introduction to Photography (4)

Designed as an introductory photography course

offering practice and experience in mechanical and creative functions of the medium with emphasis on technical skills and procedures. Introduces basic mechanical principles of the camera and darkroom, enforcing good habits as students learn film and print development techniques. Successful completion contributes to a strong foundation for further study in advanced photography courses. (2 hrs lec, 4 hrs lab)

PHTO 1630 View Camera and Basic Lighting (4)

Introduces the 4 x 5 View Camera and skills to control proper perspective of the image and basic lighting. Explores the use of tools with studio assignments and proper exposure and developing techniques. Stresses creativity and expressive use of photographic instruments. Investigates current and historical trends in the imaging industry and issues of ethics in photography. *Prerequisite: PHTO 1610.* (2 hrs lec, 4 hrs lab)

PHTO 2350 Media Photography (3)

Reviews the history of media photography and emphasizes intensive practical photographic experience utilizing a variety of news photographer techniques. Topics include advanced camera techniques, the photo-essay, page layout, newspaper and magazine photojournalism styles, and current trends in digital media photography. *Prerequisite: PHTO 1610.* (1 hr lec, 4 hrs lab)

PHTO 2450 Media Photography II (3)

Students acquire an in-depth, intensive, practical photographic experience and skills used by a range of publishing media such as newspapers, magazines, books, and the Web. As a primary emphasis of the class, students produce photographic stories as well as design story layouts. Students learn advanced camera techniques, including flash and use of color. Projects will provide practical and ethical approaches to spot news, sports, and current trends in digital media such as the World Wide Web and CD-ROM formats. *Prerequisite: PHTO 2350.* (1 hr lec, 4 hrs lab)

PHTO 2510 Studio Illustration I (3)

Develops knowledge and skills in producing creative images in the field of studio illustration. Places major emphasis on photographic styles and table top product work. Covers studio and color lab management as part of the interaction and insight a photographer must have to function in this environment. Discusses these topics with a priority on business practices. *Prerequisite: PHTO 1630.* (1 hr lec, 4 hrs lab)

PHTO 2520 Studio Illustration II (3)

Students learn to approach, identify, and solve creative photographic problems for consumer advertising. Emphasis given to advanced techniques in lighting for food, still life, catalogs, and editorial illustrations. *Prerequisite: PHTO 2510.* (1 hr lec, 4 hrs lab)

PHTO 2610 Commercial Portrait I (3)

Introduces basic portrait techniques, both in the studio and in outdoor environmental settings. Students explore basic portraiture with emphasis in utilizing classical studio lighting techniques, subject communication skills, and posing and

clothing choices for consumer portraiture.

Prerequisite: PHTO 1630.

(1 hr lec, 4 hrs lab)

PHTO 2620 Commercial Portrait II (3)

A continuation of Commercial Portrait I. Examines advanced posing and lighting techniques through studio and on-location portraiture. Students apply portrait techniques to special problems.

Prerequisite: PHTO 2610.

(1 hr lec, 4 hrs lab)

PHTO 2650 Digital Imaging I (3)

Course explores digital photography and creative computer enhancement of photographs through the use of the Macintosh computer and Adobe Photoshop software. Covers a variety of input devices including the digital camera and reflective and transmission scanners. Stresses digital darkroom techniques along with computerized retouching and enhancement of traditionally generated photographic prints. *Prerequisite: PHTO 1610 and GRAR 1800.* (3 hrs lec)

PHTO 2660 Web Page Design (3)

Students learn technical skills and procedures for Web page development and design with emphasis on advanced Photoshop and Go Live techniques. Students gain experience in developing images, sound, video, design, and graphics for a Web site on the Internet. *Prerequisite: PHTO 2650.* (3 hrs lec)

PHTO 2710 Professional Portfolio I (4)

An introduction to the photographic portfolio for the photography student. A survey of portfolios introduces the student in developing a personal portfolio needed for seeking employment. Photographic problems and assignments relative to student's experience. Photographic careers explored and discussed. *Prerequisite: PHTO 1630 and concurrent enrollment in PHTO 2510 and 2610. Only for students seeking an AAS in photographic communications.* (2 hrs lec, 4 hrs lab)

PHTO 2720 Professional Portfolio II (4)

A continuation of Professional Portfolio I. Student learns independent production in a selected area of photographic interest. This selected interest represents the student's specialty in seeking employment. *Prerequisite: PHTO 2710 and successful completion of at least 30 credit hours. Only for students seeking an AAS in photography.* (2 hrs lec, 4 hrs lab) **Capstone Course**

PHTO 2740 Digital Color Photography (3)

Students acquire knowledge and skills related to traditional color photography and digital photographic techniques. Projects will be photographed in color utilizing both color negative and positive film. The majority of assignments are photographed using traditional cameras and film, while most of the prints are made using computer and professional-level digital printers. Several assignments cover the tools and techniques used to create images for multimedia and the Web. Students learn historic processes plus color theory and technique. Creativity and an expressive use of color photography are stressed as well as proficiency in camera and digital color processes. *Prerequisite: PHTO 2510 or PHTO 2610.* (1 hr lec, 4 hrs lab)

PHTO 2760 Introduction to Digital Multimedia (3)

Introduces the creation and application of multimedia. Course offers an overview of multimedia tools, terminology, and techniques for the development of interactive multimedia projects. Utilizes extensive hands-on experience using hardware and software to mold an idea into a well-thought-out interactive experience. *Prerequisite: GRAR 1800 and PHTO 2650.* (3 hrs lec)

PHYSICS (PHYS)**PHYS 1050 Concepts of Physics (4)**

An introduction to the concepts of physics from a logical non-mathematical viewpoint. *Credit cannot be earned in this course if credit has been earned in PHYS 1110 or PHYS 1310. Prerequisite: Placement at math level 2.* (3 hrs lec, 2 hrs lab)

PHYS 1090 Fundamentals of the Physical Universe (4)

Applies fundamental principles of chemistry and physics to real life situations. Designed primarily for elementary education students. *Prerequisite: Placement at math level 3.* (3 hrs lec, 2 hrs lab)

PHYS 1110 General Physics I (4)

Introduces fundamental laws of mechanics, thermodynamics, and wave motion. Some attention to processes of scientific discovery. *For science and non-science students seeking a background in physics. Credit cannot be earned in this course if credit has been earned in PHYS 1310. Prerequisite: Placement at math level 3.* (3 hrs lec, 3 hrs lab)

PHYS 1120 General Physics II (4)

Topics include electricity, magnetism, optics, light, relativity, and nuclear physics. A continuation of PHYS 1110. *Prerequisite: PHYS 1110.* (3 hrs lec, 3 hrs lab)

PHYS 1310 College Physics I (4)

For concentrations in physical sciences, math, or engineering. Introduces laws of mechanics and thermodynamics applied to physical problems with emphasis on theoretical development. Incorporates examples and topics from contemporary physics where appropriate. *Prerequisite: MATH 2200.* (3 hrs lec, 3 hrs lab)

PHYS 1320 College Physics II (4)

Studies wave and oscillatory motion, simple harmonic motion, optics, electricity, and magnetism. *Prerequisite: MATH 2200.* (3 hrs lec, 3 hrs lab)

PHYS 2149 Nuclear Century (3)

Students acquire an understanding and appreciation for the development of nuclear energy and the social, psychological, political, and environmental issues associated with it. This course is team taught by a historian with a chemist or a physicist. *This course is the same as HIST 2149 and CHEM 2149. This course is approved for honors credit.* (3 hrs lec)

POLITICAL SCIENCE (POLS)**POLS 1000 American and Wyoming Government (3)**

An introductory course for political science programs, meets statutory requirements for instruction in principles and provisions of the constitutions of the U.S. and Wyoming. (3 hrs lec)

POLS 2000 Current Issues in American Government (3)

Reviews current policies and policy makers in American government. Makes a special effort to relate current political issues and government's attempt to deal with them. *Prerequisite: POLS 1000 or HIST 1210.* (3 hrs lec)

POLS 2010 Comparative Government (3)

Surveys representative governing systems with selected foreign governments providing basis for course. *Prerequisite: POLS 1000 or HIST 1210.* (3 hrs lec)

POLS 2120 Introduction to Criminal Justice (3)

An exploration of the police, courts, and correctional agencies that oversee American justice. Examines process and philosophies that underlie the establishment of the modern criminal justice system. *This course is the same as CRMJ 2120.* (3 hrs lec)

POLS 2310 Introduction to International Relations (3)

Surveys contemporary relations between the nations of the world. Introduces basic principles and conventional tools for conducting relations between nations. (3 hrs lec)

POLS 2410 Introduction to Public Administration (3)

Basic concepts and theories of administration emphasizing the actual working of the executive branch of governments. Provides an initial understanding of power relations within the bureaucracy and career opportunities in government administration. *Prerequisite: POLS 1000 or HIST 1210.* (3 hrs lec)

POLS 2460 Introduction to Political Theory (3)

A survey of the history of western political thought including the study of concepts and approaches to political theory. *Prerequisite: Successful completion of at least 30 credit hours.* (3 hours lec) *Capstone Course*

PSYCHOLOGY (PSYC)**PSYC 1000 General Psychology (4)**

Introduces the principles of human behavior as related to biological, physiological, mental, learning, personality, and social factors in human development. (4 hrs lec)

PSYC 1200 Human Development (3)

A study of human development from conception to death. Student examines changes in the human organism throughout the life-span. Covers physical

growth, changes in learning and cognitive processes, emotional and social development, and key decision points in human existence. *Prerequisite: PSYC 1000.* (3 hrs lec)

PSYC 1250 Human Potential Seminar (1)

Focuses on personal clarification of values, goals, strengths, and potential of each participant through a structured group process. (1 hr lec)

PSYC 2000 Research Psychological Methods (4)

A lecture and laboratory course introducing students to methods of investigating behavioral science questions. Students learn research strategies including observation, survey, program evaluation, and experimentation. Emphasizes experimental methods. A writing intensive course. *Prerequisite: PSYC 1000.* (3 hrs lec, 2 hrs lab)

PSYC 2200 Human Sexuality (3)

An interdisciplinary study of human sexuality from biological, sociological, and psychological perspectives. Examines research in sexuality; the sexual response cycle; variations of sexual identity; and the social, legal and religious, implications of sexuality. Involves students in questions of values and ethics. *Prerequisite: PSYC 1000, successful completion of at least 30 credit hours, and consent of instructor.* (3 hrs lec)

PSYC 2300 Child Psychology (3)

The physical, mental, and personality development of children from conception to adolescence with emphasis on the major roles played by maturation and learning, contrasting theories of child development, and the conduct and use of research on children. *Prerequisite: PSYC 1000.* (3 hrs lec)

PSYC 2330 Psychology of Adjustment (3)

Principles of mental hygiene in personal, social, emotional, and vocational adjustment which are based on an understanding of normal and abnormal personality and personality change methods. *Prerequisite: PSYC 1000.* (3 hrs lec)

PSYC 2380 Social Psychology (3)

A study of the ways in which a person's perceptions, thoughts, feelings, desires, behaviors, and values are influenced by other people. Also examines how an individual can affect the functioning of the groups to which he or she belongs. *Prerequisite: PSYC 1000 or SOC 1000.* (3 hrs lec)

RANGE MANAGEMENT (RGMG)**RGMG 1000 Introduction to Range Management (1)**

Orientation to range management as a field of study and as a profession including assistance in preparing the student's academic program. (1 hr lec)

RGMG 2000 Principles of Range Management (3)

This course covers the basic principles of range

management as they affect livestock production, wildlife management, grazing systems and patterns, grazing regions, and vegetation types. Range vegetation with livestock uses and range nutrition in related areas are all examined. *Several field trips included. Prerequisite: RGMG 1000.* (2 hrs lec, 2 hrs lab)

SOCIOLOGY (SOC)

SOC 1000 Sociological Principles (3)

Seeks to understand the social and cultural dimensions of life and those factors which influence human behavior. Seeks to broaden the student's exposure to a wide variety of cultures, subcultures, and modes of behavior. (3 hrs lec)

SOC 1005 Risky Behaviors (3)

Designed to increase a student's awareness of the social influence of drugs, alcohol, STDs, and sexual assault from a multi-disciplinary perspective (health, physiological, and sociological). Presents in logical form accurate, current information from the biological, health, and sociological sciences essential for making sound decisions regarding lifestyle choices. *Course fulfills one credit of non-activity based wellness education or three credits of social science.* (3 hrs lec)

SOC 1100 Social Problems (3)

The application of basic sociological concepts and methods to the analysis of social problems such as crime, suicide, mental illness, prejudice, alcoholism, drug addiction, and population problems. *Prerequisite: SOC 1000.* (3 hrs lec)

SOC 1200 Introduction to Social Work (3)

Seeks to familiarize students with the basic principles, methods, and skills of social work. Considers career opportunities in social work and related professions. (3 hrs lec)

SOC 2325 Marriage and Family (3)

A consideration of scientific research and expert insight with regard to dating, marriage, and family life. Includes such topics as dating, love, marital adjustment, finance management, marital conflict, sex, pregnancy, childbirth, and childbearing. (3 hrs lec)

SOC 2410 Juvenile Delinquency (3)

Examines delinquency from a variety of perspectives and provides insight to a number of underlying causes for this social phenomenon. Explores philosophical differences between juvenile justice and adult justice and the emergence of the unique court system to process the juvenile offender. (3 hrs lec)

SOIL SCIENCE (SOIL)

SOIL 2100 Fundamentals of Soil Science (4)

Students develop introductory understanding of soil properties as components of natural and managed ecosystems. They apply knowledge of biological, chemical, morphological, and physical properties of soil to land management issues in

wildland and agriculture ecosystems. (3 hrs lec, 2 hrs lab)

SOCIAL SCIENCE (SOSC)

SOSC 2395 Seminar in Social Science Research (3)

Students learn about the traditions and research techniques of various social science disciplines. Students acquire familiarity with library, Web-based, and other data-collection methods, as well as rules of evidence and logical argumentation. Each student completes a research paper and presents the results in a multimedia format. *Prerequisite: Successful completion of at least 30 credit hours.* (3 hrs lec) *Capstone Course*

SPANISH (SPAN)

SPAN 1010 First Year Spanish I (4)

Introduces the essentials of Spanish necessary for oral and written use of the language. Gives practice in speaking, reading, understanding, and writing as well as introducing Spanish culture. Requires weekly use of the language lab. (4 hrs lec)

SPAN 1020 First Year Spanish II (4)

Continuation of SPAN 1010. More cultural topics covered. Requires weekly use of language lab. *Prerequisite: SPAN 1010 or one year high school Spanish.* (4 hrs lec)

SPAN 1050 Conversational Spanish I (1-2)

Primarily for those who want to develop and enhance their ability to speak Spanish. Provides a setting where useful vocabulary is incorporated into learned and spontaneous conversations and where cultural differences can be discussed as they pertain to everyday situations. Intended for students who have minimal proficiency or no previous Spanish language experience. *Not intended for transfer.* (1-2 hrs lec)

SPAN 1060 Conversational Spanish II (1-2)

Primarily for those who want to continue to develop and enhance their ability to speak Spanish. Provides a setting where useful vocabulary is incorporated into learned and spontaneous conversations and where cultural differences can be discussed as they pertain to everyday situations. *Not intended for transfer. Prerequisite: SPAN 1050.* (1-2 hrs lec)

SPAN 2030 Second Year Spanish I (4)

Reviews Spanish grammar and gives additional practice in conversation and composition. Includes an introduction to Hispanic literature by reading simple novels, short stories, or dramas. Requires weekly use of language lab. *Prerequisite: Two years of high school Spanish or completion of SPAN 1020.* (4 hrs lec)

SPAN 2040 Second Year Spanish II (3)

Continuation of SPAN 2030. More concentration on conversation, composition, literature, and culture. Requires weekly use of language lab.

Prerequisite: SPAN 2030 or three years high school Spanish. (3 hrs lec)

SPAN 2210 Intermediate Composition and Conversation I (3)

Emphasis on the study of oral and written skills in Spanish. Prepares students for upper division courses in advanced composition and conversation. *Prerequisite: Three years of high school Spanish, SPAN 1020 with a grade of "B" or higher, SPAN 2030, or SPAN 2040. Concurrent registration in SPAN 2030 or SPAN 2040 is possible.* (3 hrs lec)

SPAN 2220 Intermediate Composition and Conversation II (3)

Continuation of SPAN 2210. More concentration on the study of oral and written Spanish. Prepares students for upper division courses in advanced composition and conversation. *Prerequisite: Three years of high school Spanish, SPAN 1020 with a grade of "B" or higher, SPAN 2030, or SPAN 2040. Concurrent registration in SPAN 2030 or SPAN 2040 is possible.* (3 hrs lec)

SPAN 2420 Introduction to the Literature and Culture of Spain (3)

Designed to prepare the student for upper division Spanish literature and civilization courses. Includes readings and lectures in Spanish on the literature and civilization of Spain. *Prerequisite: Three years of high school Spanish, SPAN 1020 with a grade of "B" or higher, SPAN 2030, or SPAN 2040. Concurrent registration in SPAN 2030 or SPAN 2040 is possible.* (3 hrs lec)

SPAN 2430 Introduction to the Literature and Culture of Latin America (3)

Designed to prepare the student for upper division Latin American literature and civilization courses. Includes readings and lectures in Spanish on the literature and civilization of Latin America. *Prerequisite: Three years of high school Spanish, SPAN 1020 with a grade of "B" or higher, SPAN 2030, or SPAN 2040. Concurrent registration in SPAN 2030 or SPAN 2040 is possible.* (3 hrs lec)

SPAN 2460 Field Studies: (1-3)

An introduction to the culture, geography, history, and language of a Spanish-speaking country. Course involves preparation prior to travel and includes a tour of one to three weeks. Intensive language and culture study in the foreign country may be a component of the course. *Prerequisite: Consent of instructor.* (1-3 hrs lec)

STATISTICS – BUSINESS (STAT)

STAT 2010 Statistical Concepts for Business (4)

Covers descriptive measures, probability concepts, discrete and continuous distributions, sampling methods, parameter estimation, hypothesis testing, multiple group designs, contingency tables, regression and correlation, sample size determination, and methods for quality control. Emphasis on decision making applications.

Prerequisite: A grade of "C-" or better in MATH 1400, MATH 1050, or MATH 1450 or placement at math level 4 within one year prior to enrollment. (3 hrs lec, 2 hrs lab)

STATISTICS – MATHEMATICS (STAT)

STAT 2005 Fundamentals of Statistics (3)

Covers descriptive measures, probability, discrete and continuous distributions, ideas and applications of statistical inference, hypothesis testing, and an introduction to regression and correlation. Emphasis on decision-making applications. *Prerequisite: A grade of "C-" or better in MATH 1400, MATH 1050, or MATH 1450 or placement at math level 4 within one year prior to enrollment.* (3 hrs lec)

THEATRE (THEA)

THEA 2120 Oral Interpretation (3)

Provides an opportunity for students to appreciate literature by interpreting it orally for an audience. Gives instruction in the principles of interpreting prose, poetry, and dramatic literature. (3 hrs lec)

WELDING TECHNOLOGY (WELD)

WELD 1555 Welding Technology Safety and Problem Solving (2)

This course covers personnel protection, fire prevention, welding on closed containers, ventilation, proper use of equipment, treatment of minor injuries. *May be repeated once for credit.* *For students specializing in Welding.* (2 hrs lec)

WELD 1600 General Arc Welding (2-3)

This course is an introduction to oxyacetylene, electric arc and cutting torch. Different welding units and basic welds in main positions, economy in use of equipment, special emphasis on safety are covered. Flexible credit contingent on enrolled lab hours. *Open to any student.* (1.5 hrs lec, 1-3 hrs lab)

WELD 1650 Print Reading (3)

This course is a study of blueprint reading and basic drafting practices used in the welding and manufacturing industry. It provides training in reading and drawing blueprints and welding symbols through the development of comprehensive plans. *For students specializing in Welding.* (3 hrs lec)

WELD 1700 General Welding (2-3)

Course is an in-depth study and practice in arc welding, all positions, with a variety of metals. Introduces MIG and TIG machines. Oxyacetylene instruction includes brazing, aluminum, and cast iron. Flexible credit contingent on enrolled lab hours. *Prerequisite: WELD 1600.* *Open to any students.* (1.5 hrs lec, 1-3 hrs lab)

WELD 1705 Welding Processes (4)

Basic acetylene and arc welding skills are examined. Care and use of welding equipment and hand tools are explored. *For students specializing in Welding.* (2 hrs lec, 4 hrs lab)

WELD 1765 Advanced Welding Processes (4)

MIG and TIG skills; pipe welding skills; higher skills of welding copper, aluminum and stainless steel are covered in this course. *Prerequisite: WELD 1705.* *For students specializing in Welding.* (2 hrs lec, 4 hrs lab)

WELD 1800 Materials Evaluation (1-6)

This course provides an introduction to the field of destructive and nondestructive testing of metals. It examines testing methods in evaluation of various welding processes. *For students specializing in Welding.* (3 hrs lec)

WELD 1860 Welding Fabrication (4)

Students acquire knowledge of welding fabrication by emphasizing construction of welded projects, utilization of blueprints and specifications, and repair and maintenance of industrial equipment. *For students specializing in Welding.* (1 hr lec, 6 hrs lab)

WELD 1870 Advanced Metal Fabrication Techniques (4)

Consists of developing plans and producing a finished project. Various welding position and assembly techniques are utilized. *For students specializing in Welding.* (1 hr lec, 6 hrs lab)

WELD 1920 Basic Pipe Welding (3)

Arc welding of pipe in various positions and techniques are covered. Safety electrode selection and certification codes are also included. *Prerequisite: WELD 1700.* *Open to any students.* (1 hr lec, 4 hrs lab)

WELD 2670 Welding Inspection Technology (3)

Students learn about magnetic particle, dye penetrant, eddy current, radiographic and ultrasonic inspection of ferrous and nonferrous metals. *For students specializing in Welding.* (3 hrs lec)

WELD 2680 Welding Metallurgy (3)

Students gain an introduction to the field, emphasizing physical aspects. This course is centered around steel and ferrous alloys in the properties of metals with a view to their use and application. *For students specializing in Welding.* (3 hrs lec)

WELD 2700 Welding Certification (Plate) (4)

Students gain an understanding of the theory and practice on plate metal with emphasis on certification. Includes work on various thicknesses and positions. Methods include arc, TIG, and MIG. *Prerequisite: Consent of instructor.* *For students specializing in Welding.* (1 hr lec, 6 hrs lab)

WELD 2710 Welding Certification (Pipe) (4)

Students study and practice on pipe certification tests. Includes work on API 1104 and other industry tests. Covers arc, TIG, MIG, and oxyacetylene techniques. *Prerequisite: Consent of*

instructor. *For students specializing in Welding.* (1 hr lec, 6 hrs lab)

WELD 2750 Metals Production (4)

Open to welding students who have successfully completed at least 30 credit hours. Students will work on project production, weld test study, and technical reporting. *Prerequisite: WELD 1860.* *For students specializing in Welding.* (1 hr lec, 6 hrs lab)

WELD 2800 Plastic Welding (4)

Students acquire knowledge, skills, and experience to use proper procedures in thermoplastic welding. (2 hrs lec, 4 hrs lab)

WELD 2970 Internship: Welding (1-6)

Designed for serious students interested in experiences on- and off-campus leading to transfer programs in vocational education, business engineering, or other options connected to Welding Technology. Also available to students who wish to broaden their occupational experiences to include experience in shop management, maintenance and repair, or other aspects of the welding environment. S/U grading only. *Prerequisite: WELD 1705.* (2 hrs lab per credit hour)

WELD 2995 Welding Workshop (1-3)

Open to advanced students for project production, weld test study, and technical reports. *Prerequisite: Successful completion of at least 30 credit hours.* *WELD 2750.* *For students specializing in Welding.* (2 hrs lec, and 2 hrs lab per credit hour)

Capstone Course

ZOOLOGY (ZOO)

ZOO 2010 Human Anatomy and Physiology I (4)

The first course in a two-semester sequence. Includes cell chemistry, cellular structure and function, histology, the integumentary, skeletal, muscular, and peripheral nervous systems. Emphasis focused on the functional anatomy of the human body. Laboratory activities complement the lecture material with an appropriate balance between anatomy and physiology. *One semester of Human Anatomy and Physiology will not meet the lab science requirement.* (3 hrs lec, 2 hrs lab)

ZOO 2020 Human Anatomy and Physiology II (4)

This course is a continuation of ZOO 2010. Topics of emphasis include the central nervous, cardiovascular, lymphatic, respiratory, and digestive systems, metabolism, urinary and reproductive systems, and genetics and early development. *Prerequisite: ZOO 2010.* (3 hrs lec, 2 hrs lab)

ZOO 2060 Human Pathophysiology (3)

Studies basic concepts of common and chronic disease processes in humans. Examines physiological, morphological, and biochemical aspects of disease. Explores the relationships among the disease, its symptoms, and its treatment. *Prerequisite: ZOO 2010 and ZOO 2020 or concurrent enrollment in ZOO 2020.* (3 hrs lec)

ZOO 2400 Vertebrate Natural History (4)

A study of fishes, amphibians, reptiles, birds, and mammals. Emphasizes North American forms and includes identification, classification, special characteristics, and natural history. *Prerequisite: BIOL 1010.*

(3 hrs lec, 3 hrs lab)

ZOO 2450 Wildlife Management (3)

Includes an introduction to the history of wildlife management and the ecological needs of wildlife species. Studies management strategies for wildlife in various ecological settings. Acquaints students with goals, methods, and problems of wildlife management.

(3 hrs lec)