Credit Course Descriptions

ACG 2021
Financial Accounting
3 Credits
Covers theory and logic that underlie accounting procedures. Course content includes an introduction to accounting concepts, procedures for reading business transactions, preparation of financial statements, accounting for merchandising concerns, corporations, bonds, and other procedures to calculate and maintain accounting information. Prerequisites: College level reading, writing and math skills are required.

ACG 2071
Managerial Accounting
3 Credits
Focuses on analyzing accounting records and using the results in making management decisions. College level reading, writing and math skills are required. Prerequisite: ACG 2021

ACG 2100
Intermediate Accounting I
3 Credits
Covers basic accounting theory and processes, with an emphasis on balance sheets, income and related earnings statements, investments, cash flow, inventory and estimating. Prerequisite alternative: equivalent training. Prerequisite: ACG 2071

ACG 2110
Intermediate Accounting II
3 Credits
Covers long term investments, tangible fixed assets, acquisitions, utilization retirement, depreciation, depletion and re-statement, intangible assets, deferred charges, insurance, special purpose funds, liabilities, accounting for bonds, pensions and leases, corporations, contributed capital at formation and retained earnings. Prerequisite: ACG 2100

ACG 2340
Cost Accounting I
3 Credits
Covers basic cost concepts of goods and labor, with an emphasis on standard cost. Prerequisite alternative: Cost Accounting is taken after two courses of Financial Accounting.

ACG 2350
Cost Accounting II
3 Credits
Covers cost planning, control, reports and analysis, with an emphasis on the relationship between planning and control. Prerequisite: ACG 2340

ACG 2450
Microcomputers in Accounting
3 Credits
Provides an overview of microcomputer accounting and its application in the business environment. The student will work through a complete accounting cycle using a full featured accounting software package in the preparation, interpretation and use of the computer information in financial decision making and problem solving. Prerequisites: ACG 2021, CGS 1000

ADV 2000
Advertising
3 Credits
Covers the psychology of advertising and the preparation of an advertising campaign from research to evaluation.

AEB 1949
Agriculture/Business Internship
3 Credits
Focuses on hands on field experiences and class work. Students will be assigned to businesses or agencies to gain practical experience in business skills in indoor and outside activities. Activities will include, but not limited to using tools, machinery and equipment, sampling, collecting and recording data. This course may be repeated six times for credit. Credit for this course does not apply toward an associate in arts degree.

AFA 1000
Introduction to Black Studies
3 Credits
Includes the nature and meaning of the Afro-American experience from its beginning to the present, with an emphasis on visual arts, music, literature, philosophic thought and social history.

AFA 1001
Introduction to Black Culture
3 Credits
Examines the black person's interactions in the American culture, with emphasis on social values, attitudes, behaviors and processes that identify black Americans as an ethnic group.

AFR 1101
The Foundation of the U.S. Air Force, Part I
1 Credit
This course serves as an introduction to the Air Force Reserve Officer Training Corps (AFROTC) and U.S. Air Force (USAF) lessons in officerhood/professionalism and an introduction to communications skills. Enrollment is limited to students who are also enrolled in the USF ROTC program.

AFR 1120
The Foundation of the U.S. Air Force, Part II
1 Credit
A study of Air Force installations, core values, leadership, team building, and diversity within the armed forces. Enrollment is limited to students who are also enrolled in the USF ROTC program.
AFR 2001
Air Force ROTC Leadership Laboratory
0 Credit
This course is required for each of the AFR courses. Instruction is conducted within the framework of an organized cadet corps with progression of experiences designed to develop each student's leadership potential. Leadership laboratory involves a study of Air Force customs and courtesies; drill and ceremonies; career opportunities in the Air Force; and the life and work of an Air Force junior officer. Students develop their leadership potential in a practical laboratory which typically includes field trips to Air Force installations. Enrollment is limited to students who are also enrolled in the USF ROTC program.

AFR 2130
The Evolution of USAF Aerospace Power, Part I
1 Credit
A study of air power from balloons and dirigibles through the jet age. Emphasis is on the employment of air power in WWI and WWII and how it affected the evolution of air power concepts and doctrine. Enrollment is limited to students who are also enrolled in the USF ROTC program.

AFR 2140
The Evolution of USAF Aerospace Power, Part II
1 Credit
An historical review of air power employment in military and non-military operations in support of national objectives. Emphasis is placed on the period from post WWII to present. Enrollment is limited to students who are also enrolled in the USF ROTC program.

AMH 1010
Early American History
3 Credits
Provides an overview of United States history including discovery, colonial foundations, movement for independence, and the early years of the republic through the Civil War and Reconstruction, with an emphasis on North American geography. Prerequisites: College level reading and writing skills are required.

AMH 1010H
Honors Early American History
3 Credits
Same as AMH 1010 with honors content. Honors Institute permission required. Prerequisites: EAP 1620, EAP 1620L, EAP 1640 and EAP 1640L.

AMH 1020
Modern American History
3 Credits
Provides a study of United States development from the period of Reconstruction to the present. Topics include politics, economics, geography, social issues and reforms as related to contemporary society. Prerequisites: College level reading and writing skills are required.

AMH 1020H
Honors Modern American History
3 Credits
Same as AMH 1020 with honors content. Honors Institute permission required. Prerequisites: College level reading and writing skills are required.

AMH 1070
Florida History
3 Credits
Provides an overview of Florida history and government from the time of the early Indians to the present with an emphasis on how developments relate to contemporary problems, government, and society.

AMH 2051
U.S. Military History
3 Credits
Examines the conflicts of the nation from its beginning to the present with an emphasis on military action, political aspects and historical significance. Prerequisites: College level reading and writing skills are required.

AMH 2090
History of Women in the United States
3 Credits
This course explores the history of women's experience in American Society. The focus will be to examine the construction of womanhood throughout United States history and the experience of gender, ethnicity, class and sexual orientation from/upon women's experiences. Students will study the contribution of various individual women and groups of women in creating the modern United States, and will analyze social, political, economic and cultural forces affecting women to both join and resist movements for social change from pre-contact to the present. Prerequisites: College level reading and writing skills are required.
AML 2020
American Literature: 1885 to Present
3 Credits
Focuses on American writers since 1865. Topics include major trends in realism, naturalism and primitivism in the 19th and 20th centuries.
Prerequisites: College level reading and writing skills are required.

AML 2020H
Honors American Literature: 1885 to Present
3 Credits
Same as AML 2020 with honors content. Honors Institute permission required.
Prerequisites: College level reading and writing skills are required.

AML 2050
Studies in American Literature
3 Credits
Relates current national concerns with contemporary literature. Course content may vary with the instructor; designed for the non literature majors.
Prerequisites: College level reading and writing skills are required.

AML 2600
Introduction to African American Literature
3 Credits
Provides an overview of African American literature and cultural expression in the United States from the pre discursive period to the present. Through reading, discussion, lectures, and films the historical forces that have influenced the voice of African-American literature will be discussed. The politics of African-American literature will also be explored.
Prerequisite: ENC 1101

APA 1111
Basic Accounting
3 Credits
Covers basic accounting procedures and concepts and business terminology; designed for students with no financial training. Credit for this course does not apply to the associate in arts degree.

APA 1321
Hospitality Accounting
3 Credits
This course introduces the use of accounting information in managing a restaurant or hotel organization. It provides a basis for understanding hospitality accounting procedures and explores how this information supports and enhances management's decision making. Credit for this course does not apply to the associate in arts degree.

ANT 2000
Introduction Anthropology
3 Credits
Examines human physical evolution and the development of culture from pre historic times through the present. Emphasizes a better understanding of our culture through a comparison of different cultures. Topics include archeology, human variations, folklore, kinship and religion.
Prerequisites: College level reading and writing skills are required.

ANT 2410
Cultural Anthropology
3 Credits
Presents the social science and humanities aspects of anthropology in contrast to physical anthropology. Human behavior, customs, and the values and goals of various cultures are examined.
Prerequisite: ANT 2000
ARC 2201  
Theory of Architecture  
3 Credits  
Focuses on the critical study of architecture with an emphasis on gaining an educated perspective of design methods. College level reading, writing and math skills are required.  
Prerequisites: ARC 1301, ARC 1701  
Corequisite: ARC 2303

ARC 2303  
Architectural Design III  
5 Credits  
Focuses on diagramming, design response and decision making. College level reading, writing and math skills are required.  
Prerequisites: ARC 1301, ARC 1302 and ARC 1701  
Corequisite: ARC 2201

ARC 2304  
Architectural Design IV  
5 Credits  
Focuses on how human action, structure, enclosure systems, geography and history influence architectural design. Completion of ARC 1301, ARC 1701, ARC 2201 and ARC 2303 strongly recommended. Completion of BCN 1250, TAR 1120 and TAR 1122C strongly recommended for AS.ADCT program. Enrollment in ARC 2501 strongly recommended.

ARC 2461  
Materials and Methods I  
3 Credits  
Provides an introduction to materials and construction processes as they influence building and environmental design. Completion of ARC 1301 and ARC 1701 strongly recommended for the AA.ARC program. Completion of BCN 1210 and BCN 2272 strongly recommended for the AS.ADCT program. Enrollment in ARC 1302 or TAR 1120 strongly recommended. College level reading and writing skills are required.

ARC 2501  
Architectural Structures I  
4 Credits  
An introduction into structural theory and analysis of planner trusses, beams and columns subjected to gravity loads. Topics include shear and moment diagrams and the determination of section properties, internal stresses, deflection and internal forces. Completion of ARC 2461 strongly recommended. Enrollment in ARC 2304 strongly recommended.

ARH 1050  
Art History I  
3 Credits  
Presents a historical review of Western art from the prehistoric period through the Renaissance with an examination of representative works in painting, sculpture, architecture and the minor arts. To insure student success, it is highly recommended that ENC 1101 be taken either prior to or in conjunction with this class.  
Prerequisites: College level reading and writing skills are required.

ARH 1051  
Art History II  
3 Credits  
Covers the major representative works of art from the Baroque through the 20th century, with an examination of painting, sculpture and architecture. To insure student success, it is highly recommended that ENC 1101 be taken either prior to or in conjunction with this class.  
Prerequisites: College level reading and writing skills are required.

ART 1202C  
Design Foundations  
3 Credits  
An introduction to basic visual art studio concepts. This course includes fundamentals of art making, the elements of two and three dimensional forms, modes of representation and visual art theory. Studio assignments are supplemented by class critique, discussion and hands on experimentation with various media. Emphasis is placed on creative expression and examination of visual elements.

ART 1203C  
Three Dimensional Design  
3 Credits  
The visual elements: unity, balance, color, etc., used in both two and three dimensional design remain the same but their application to three dimensions changes radically because of the unique effects created by light and shadow. The student will be subjected to many lectures and projects concerning these effects. The lectures are intended to cover those elements that occur in every three dimensional discipline. Projects will be assigned individually in order to satisfy all interests. Students will then be able to develop aesthetic values in all disciplines.  
Prerequisite: ART 1202C

ART 1300C  
Drawing I  
3 Credits  
Covers the basic principles of drawing tangibles such as still life, landscape and the nude figure. The course deals with black and white media such as pencil and charcoal. The class topics include composition, line, value, volume, negative space, directional forces, perspective and proportion. Drawing I is recommended before taking upper level courses: painting, computer graphics, photography, sculpture, ceramics and printmaking.
ART 2301C  
**Drawing II**  
3 Credits  
Covers advanced problems in color media and the exploration of a variety of media and formats. Topics include investigation of contemporary personal direction and the development of a portfolio.  
Prerequisite: ART 1300C

ART 2400C  
**Printmaking I**  
3 Credits  
Provides an introduction to printmaking, including the basic techniques of lithography, etching and silk screen. A special fee will be charged for this course.  
Prerequisite: ART 1202C

ART 2401C  
**Printmaking II**  
3 Credits  
Covers advanced printmaking techniques, such as multiple printing, registration and chemical reversals, with an emphasis on creativity and the development of a personal style. A special fee will be charged for this course.  
Prerequisite: ART 2400C

ART 2406C  
**Printmaking III**  
3 Credits  
Emphasizes individual style in printmaking and the development of personal exhibit. A special fee will be charged for this course.  
Prerequisite: ART 2401C

ART 2500C  
**Painting I**  
3 Credits  
Covers basic painting techniques with an emphasis on classic and contemporary applications of oil and acrylic media. Topics include the use of composition, color, texture, form and value through still life, landscape, portrait, figure and old masters reproduction.  
Prerequisite: ART 1300C

ART 2501C  
**Painting II**  
3 Credits  
Emphasizes the development of a personal and creative use of painting media through an exploration of contemporary imagery. Students will pursue personal imagery or select eight options from contemporary art movements.  
Prerequisite: ART 2500C

ART 2600C  
**Introduction to Digital Art**  
3 Credits  
This course is intended to introduce students to basic digital imaging manipulation skills within the fine art context of creative expression. Focus on digital imaging manipulation techniques learned within a raster-based environment, primarily including the fundamentals of various special effects, filters, layers and masks used to explore the creation of artistically expressive images. Students will use current computer imaging software to create original art in a variety of final output formats. Hardware and image input processes are also discussed.  
Prerequisite: ART 1202C or PGY 2801C

ART 2701C  
**Sculpture I**  
3 Credits  
Covers the problems and techniques of applied three-dimensional design, with an emphasis on the use of materials and tools. Topics include clay, plaster, stone, wood, metal and wax. A special fee will be charged for this course.  
Prerequisite: ART 1203C

ART 2702C  
**Sculpture II**  
3 Credits  
Provides continued experience with expression in three-dimensional forms. This course will require students to conduct independent investigations in the design and creation of several sculpture projects. Techniques may include metal fabrication, glass casting, stone carving, woodworking, installations, wax and metal casting. A special fee will be charged for this course.  
Prerequisite: ART 2701C or permission of instructor.

ART 2750C  
**Ceramics I**  
3 Credits  
An introductory course emphasizing the total ceramic process from moist clay to fired ware. A special fee will be charged for this course.  
Prerequisite: ART 2750C

ART 2751C  
**Ceramics II**  
3 Credits  
Emphasizes the processes of casting, wheel-thrown forms, hand building and glaze formulation. A special fee will be charged for this course.  
Prerequisite: ART 2750C

ART 2901  
**Directed Independent Study: Ceramics**  
3 Credits  
This course is designed to establish a framework for further self-learning in various areas of ceramics for the advanced student. The student will shape the course to fit their needs by planning activities and preparing a contract coordinated with an art faculty member. The contract will specifically outline a specific project, or a particular set of goals and requirements that the student wishes to achieve. The contract must be satisfactorily completed and reviewed by the assigned faculty member. May be taken four times for credit.
ART 2902
Directed Independent Study: Drawing
3 Credits
This course is designed to establish a framework for further self-learning in various areas of drawing for the advanced student. The student will shape the course to fit their needs by planning activities and preparing a contract coordinated with an art faculty member. The contract will specifically outline a specific project, or a particular set of goals and requirements that the student wishes to achieve. The contract must be satisfactorily completed and reviewed by the assigned faculty member. May be taken four times for credit.

ART 2903
Directed Independent Study: Painting
3 Credits
This course is designed to establish a framework for further self-learning in various areas of painting for the advanced student. The student will shape the course to fit their needs by planning activities and preparing a contract coordinated with an art faculty member. The contract will specifically outline a specific project, or a particular set of goals and requirements that the student wishes to achieve. The contract must be satisfactorily completed and reviewed by the assigned faculty member. May be taken four times for credit.

ART 2904
Directed Independent Study: Sculpture
3 Credits
This course is designed to establish a framework for further self-learning in various areas of sculpture for the advanced student. The student will shape the course to fit their needs by planning activities and preparing a contract coordinated with an art faculty member. The contract will specifically outline a specific project, or a particular set of goals and requirements that the student wishes to achieve. The contract must be satisfactorily completed and reviewed by the assigned faculty member. May be taken four times for credit.

ART 2905
Directed Independent Study: Art
3 Credits
Designed to establish a framework for further self-learning in various areas of visual arts for the advanced student. The student will shape the course to fit their needs by planning activities and preparing a contract coordinated with an art faculty member. The contract will specifically outline a specific project, or a particular set of goals and requirements that the student wishes to achieve. The contract must be satisfactorily completed and reviewed by the assigned faculty member. May be taken four times for credit.

ART 2930C
Selected Topics in Art
3 Credits
Selected Topics in Art is a studio course centered around topics of special interest to the class and professor. Topics or focus will be based on the needs and areas of interest, which may vary from semester to semester. Exceptions to the prerequisite will be considered by the instructor. Transfer credit is the prerogative of the receiving institution. May be taken eight times for credit.
Prerequisites: ART 1202C or ART 1300C or ART 2500C

ART 2950C
Professional Art Practices
3 Credits
This class is designed to provide students with the opportunity to learn professional art practices through hands on experience. Skill sets taught will revolve around the development of a personal artist's portfolio, intended as an aid for college placement submissions as well as for proposals for personal exhibitions. Additional skill sets will also revolve around learning the practices of gallery operations.
Prerequisite: ART 1202C

ASL 1140C
American Sign Language I
4 Credits
Provides an overview of the American Sign Language and deafness in America with an emphasis on the linguistics and vocabulary of ASL and the development of conversational sign language skills. Laboratory time is incorporated to reinforce material presented and to emphasize practice. Prerequisites: College level reading and writing skills are required.

ASL 1150C
American Sign Language II
4 Credits
Focuses on the development of intermediate conversational American Sign Language skills with an emphasis on basic expression and reception including laboratory time designed to reinforce material presented through the use of directed practice to improve receptive and expressive signing skills and intermediate level receptive and expressive ASL conversation. Prerequisites: ASL 1140C or ASL 1140 and ASL 1140L

ASL 1300C
American Sign Language Applied Linguistics
4 Credits
Focuses on the semantics, idiomatic usage and syntax of the American Sign Language. Prerequisite: ASL 2160C or ASL 2130 and ASL 2130L

ASL 1430
Fingerspelling
2 Credits
Focuses on receptive and expressive finger spelling using the American Manual Alphabet, with an emphasis on improving basic receptive proficiency as well as clarity and rhythm of expression. Prerequisite: ASL 1140

ASL 1510
Introduction to Deaf Culture
3 Credits
Provides an overview of American deaf culture with an emphasis on the impact of deafness on the individual and the family, social patterns of the deaf community and historical and changing attitudes toward people with disabilities. Prerequisites: College level reading and writing skills required.
ASL 2160C  
**American Sign Language III**  
4 Credits  
Focuses on advanced skills in American Sign Language structure and regional idiomatic use of ASL with an emphasis on non-voiced conversational signed sentences. Includes laboratory time designed to reinforce in a lab setting material presented through directed practice. Access to laboratory materials will provide opportunities for students to practice and improve receptive and expressive signing skills, reinforcing advance level spontaneous ASL conversation.  
Prerequisites: ASL 1150C or ASL 1150 and ASL 1150L

ASL 2210C  
**American Sign Language IV**  
4 Credits  
Focuses on the development of advanced conversational American Sign Language skills with an emphasis on complex grammar, metaphorical and idiomatic vocabulary and facial expressions. Includes laboratory time designed to reinforce in a lab setting material presented through the use of directed practice. Access to laboratory materials will provide opportunities for students to practice and improve receptive and expressive sign skills, reinforcing advanced level spontaneous ASL conversation.  
Prerequisites: ASL 2160C or ASL 2160 and ASL 2160L

AST 1002C  
**Astronomy**  
3 Credits  
An introductory course in astronomy which presents a survey of the current knowledge of our universe as well as the contemporary, prevailing scientific viewpoint of its nature, its origins, and the evolution and development of its constituents. Topics include our own solar system, other star systems (including planetary systems), stars in general, galaxies, quasars, the universe itself, and the prospects of intelligent life elsewhere. Where appropriate, lectures will be supplemented by hands-on student activities as well as demonstrations and audio visual presentations. A special fee will be charged for this course.  
Prerequisites: College level reading, writing and math skills required.

AST 1002H  
**Honors Astronomy**  
3 Credits  
Same as AST 1002C with honors content. Honors Institute permission required. A special fee will be charged for this course.  
Prerequisites: College level reading, writing and math skills required.

ATE 1001  
**Introduction to Veterinary Technology**  
1 Credit  
An introductory course for students accepted in the Veterinary Technology Program. Provides the legal and ethical standards or veterinary technicians, workplace professional conduct, resources for current issues, work environment safety, zoonotic disease risks and career opportunities.  
Prerequisites: College level reading, writing and math skills required.

ATE 1110  
**Animal Anatomy**  
3 Credits  
This course covers the basic gross and microscopic anatomy of domestic animals, especially the canine and feline with emphasis on locating and identifying anatomical regions and landmarks and applications. The student will be introduced to the descriptive and topographical terms needed to communicate to the professional staff.  
Prerequisites: Admission to the Veterinary Technology Program. College level reading, writing and math skills required.  
Corequisites: ATE 1110L, ATE 1211

ATE 1110L  
**Animal Anatomy Laboratory**  
1 Credit  
This course is designed to acquaint the student with the fundamental techniques involved in anatomic dissection as well as necropsy procedures. This laboratory will correlate with ATE 1110 lecture material and will help visualize concepts.  
Prerequisites: College level reading, writing and math skills required.  
Corequisites: ATE 1110, ATE 1211

ATE 1211  
**Animal Physiology**  
3 Credits  
This course is designed to acquaint the student with physiology of domestic animals. Emphasis is placed on the functions of organ systems relevant to veterinary technology. Aspects of physiology relating to the pathogenesis of certain diseases will be discussed.  
Prerequisite: Admission to the Veterinary Technology Program.  
Corequisites: ATE 1110, ATE 1110L

ATE 1311L  
**Veterinary Office Procedure Lab**  
1 Credit  
Designed to acquaint the student with office procedures, client education, mathematics and veterinary computer applications.  
Prerequisite: Admission to the Veterinary Technology Program.

ATE 1630  
**Pharmacology for Vet Techs**  
2 Credit  
Designed to explain the drug classifications pertaining to animal use, methods of calculating appropriate drug dosage, routes of administration and evaluation of drug efficacy.  
Prerequisites: ATE 1944, ATE 2639 and ATE 2639L with a minimum grade C.
ATE 1650L
Veterinary Clinical Practice Lab I
1 Credit
Acquaints the student with basic laboratory and nursing skills, including restraint, history taking, exam room techniques, administration of medication, basic parasitology, and clinical pathology procedures.
Prerequisite: Admission to the Veterinary Technology Program.

ATE 1741
Veterinary Medical Terminology
1 Credit
Introduces the student to medical terms, laymen’s terms and abbreviations utilized by veterinarians and their clients. It includes canine and feline breed identification.
Prerequisites: College level reading, writing and math skills required.

ATE 1943
Veterinary Work Experience I
1 Credit
A course consisting of supervised clinical experience in a workplace approved and monitored by the instructor. Skills emphasized in curriculum up to this point will be reinforced.
Prerequisites: ATE 1650L, ATE 1311L, ATE 1110, ATE 1110L, ATE 1211 and ATE 1741 with a minimum grade of C.

ATE 1944
Veterinary Work Experience II
1 Credit
A course consisting of supervised clinical experience in a workplace approved and monitored by the instructor. Skills emphasized in curriculum up to this point will be reinforced.
Prerequisites: ATE 1943, ATE 2652L, ATE 2638, ATE 2638L, ATE 2636, ATE 2661 and ATE 2671L with minimum grade of C.

ATE 2020
Contemporary Clinical Issues
3 Credits
Focuses on the contemporary and anticipated developments in veterinary medicine, surgery, dentistry and behavior. Students will become familiar with related medical terms, protocols and needed materials and supplies.
Prerequisites: ATE 1630, ATE 2050, ATE 2611, ATE 2631, ATE 2651L, ATE 2722, and ATE 2945 with a minimum grade of C.

ATE 2050
Small Animal Breeds and Behavior
1 Credit
This course introduces the student to normal canine and feline behavior, obedience training, and feline training. Discussion topics include normal canine and feline behavior and cause of behavior problems in dogs and cats. The student will train a dog and cat, will discuss or apply corrections for common behavioral problems, and will learn about the different canine and feline breeds.
Prerequisites: ATE 1944, ATE 2639, ATE 2639L with a minimum grade of C.

ATE 2501
Veterinary Professional/Development Ethics Seminar
1 Credit
This course introduces the student to the laws and agencies governing the care, use and movement of animals. Veterinary ethics, resume writing and employment skills, and current trends in veterinary practice will also be described.
Prerequisite: College level reading, writing, and math skills are required.

ATE 2611
Animal Medicine I
3 Credits
Designed to acquaint the student with concepts in microbiology, virology and immunology and vaccinology.
Prerequisites: ATE 1944, ATE 2639 and ATE 2639L with a minimum grade of C.

ATE 2612
Small Animal Nursing II
3 Credits
A study of the basic concepts of nutrition, obstetric, and pediatric care, as well as the important aspects regarding zoonotic diseases, public health and animal behavior. The student will also be introduced to alternative medicine, including holistic concepts, homeopathic, acupuncture, chiropractic and other emerging specialties.
Prerequisites: ATE 1630, ATE 2050, ATE 2611, ATE 2631, ATE 2651L, ATE 2722 and ATE 2945 with a minimum grade of C.

ATE 2614
Animal Medicine II
3 Credits
Designed to acquaint the student with concepts in causes and nature of disease, toxicology, and an overview of pathologies of major systems.
Prerequisites: ATE 1630, ATE 2050, ATE 2611, ATE 2631, ATE 2651L, ATE 2722, and ATE 2945 with a minimum grade of C.

ATE 2631
Small Animal Nursing I
3 Credits
The student will master the technical skills of medicating animals, anesthetizing animals and taking and processing radiographs. This course also covers general care, including grooming and bathing, feeding and watering, nail trimming, ear cleaning, expressing anal sacs, and determining vital signs.
Prerequisites: ATE 1944, ATE 2639 and ATE 2639L with a minimum grade of C.

ATE 2636
Large Animal Clinical and Nursing Skills
2 Credits
Designed to acquaint the student with the fundamentals of large animal breed identifications, restraint, reproductive and lactation physiology, nutrition and the technician's role in veterinary care.
Prerequisites: ATE 1110, ATE 1110L, ATE 1211, ATE 1311L, ATE 1650L and ATE 1741 with a minimum grade of C.
ATE 2638
Animal Clinical Pathology I
3 Credits
This course is designed to introduce the veterinary technician to hematology, the hematopoietic and serology. Emphasis is placed on normal blood smears and common changes seen during disease stages of the domestic animals. Blood chemistry, complete blood count analyzers, and collection systems are discussed.
Prerequisites: ATE 1110, ATE 1110L, ATE 1211, ATE 1311L, ATE 1650L and ATE 1741, with a minimum grade of C.
Corequisite: ATE 2638L

ATE 2638L
Animal Clinical Pathology Lab I
2 Credits
This course is designed to acquaint the student with clinical laboratory procedures covered in ATE 2638. Areas of emphasis include hematology, complete blood counts and coagulation as well as general laboratory etiquette.
Prerequisites: ATE 1110, ATE 1110L, ATE 1211, ATE 1311L, ATE 1650L and ATE 1741, with a minimum grade of C.
Corequisite: ATE 2638

ATE 2639
Animal Clinical Pathology II
3 Credits
This course covers selected topics in clinical parasitology, fecal analysis urinalysis and cytology.
Prerequisites: ATE 1943, ATE 2636, ATE 2638, ATE 2638L, ATE 2652L, ATE 2661 and ATE 2671L, with a minimum grade of C.
Corequisite: ATE 2639L

ATE 2639L
Animal Clinical Pathology Lab II
2 Credits
This course is designed to acquaint the student with clinical laboratory procedures covered in ATE 2639. Areas of emphasis include parasitology, urine and fecal analysis, cytology bacterial and fungal cultures.
Prerequisites: ATE 1943, ATE 2636, ATE 2638, ATE 2638L, ATE 2652L, ATE 2661 and ATE 2671L, with a minimum grade of C.
Corequisite: ATE 2639

ATE 2651L
Small Animal Nursing Lab
2 Credits
This course is designed to acquaint the student with exam room and restraining techniques, anesthesia and surgical protocols and diagnostic imaging procedures used in veterinary hospitals.
Prerequisites: take ATE 1944, ATE 2639 ATE 2639L with a minimum grade of C.

ATE 2652L
Veterinary Clinical Practice Lab II
1 Credit
Acquaints the student with the basic knowledge of skills used in veterinary practice for anesthesia induction and monitoring, patient preparation for surgery, surgical assistance and radiographic technique.
Prerequisites: ATE 1110, ATE 1110L, ATE 1211, ATE 1311L and ATE 1650L, and ATE 1741 with a minimum grade of C.

ATE 2661
Large Animal Diseases
1 Credit
This course is designed to acquaint the student with the fundamentals of preventive medicine and common diseases present in large animals.
Prerequisites: ATE 1110, ATE 1110L, ATE 1211, ATE 1311L, ATE 1650L and ATE 1741 with a minimum grade of C.

ATE 2671L
Medicine of Laboratory Animals
2 Credits
A study of the technical and clinical aspects of laboratory animal care, including restraint and handling, common diseases, and nutrition.
Prerequisites: ATE 1110, ATE 1110L, ATE 1211, ATE 1311L, ATE 1650L and ATE 1741 with a minimum grade of C

ATE 2710
Animal Emergency Medicine
2 Credits
This course is designed to acquaint the student with fundamentals of emergency veterinary medicine, including veterinary first aid, toxicology and specialized medical techniques and procedures.
Prerequisites: ATE 1630, ATE 2050, ATE 2722, ATE 2611, ATE 2631, ATE 2651L and ATE 2945 with a minimum grade of C.

ATE 2722
Avian and Exotic Pet Medicine
1 Credit
Describes exotic animal and avian medical care. Veterinary technicians will understand the idiosyncrasies of these species in order to become proficient and useful to the exotic and avian practitioner.
Prerequisites: ATE 1944, ATE 2639 and ATE 2639L with a minimum grade of C.

ATE 2945
Veterinary Work Experience III
1 Credit
A course consisting of supervised clinical experiences in a workplace approved and monitored by the instructor. Skills emphasized in curriculum up to this point will be reinforced.
Prerequisites: ATE 1944, ATE 2639, and ATE 2639L with a minimum grade of C.

ATE 2946
Veterinary Work Experience IV
1 Credit
A course consisting of supervised clinical experiences in a workplace approved and monitored by the instructor. Skills emphasized in curriculum up to this point will be reinforced.
Prerequisites: ATE 1630, ATE 2050, ATE 2611, ATE 2631, ATE 2651L, ATE 2722 and ATE 2945 with a minimum grade of C.
BCN 1001
Introduction to Building Construction
3 Credits
This course is designed to give the student an overview of the construction industry and its various methods, materials, participants, safety, codes, equipment, documents, agencies and laws. Both residential and commercial construction will be addressed. The role that engineers, architects and contractors play in a project design and construction are also introduced. Credit for this course does not apply to the associate in arts degree or the AS/AAS degree in Architectural Design and Construction Technology.
Prerequisites: College level reading, writing and math skills are required.

BCN 1210
Construction Materials and Processes
3 Credits
Provides a basic understanding of materials and manufacturing processes consistent with sound engineering principles; focuses on ferrous and non-ferrous metals, stainless steel, molten metal, heat treatment, powder metallurgy, inspection and quality control, machine tool elements, numerical control, turning, boring and milling machines. Topics include gears and thread cutting, methods of processing plastics, welding, soldering, braising and the process of classifying woods.

BCN 1250
Introduction Graphic Technology
3 Credits
Introduces the principles of industrial graphics. Topics include the care and use of drawing instruments, lettering, multi view projections and sketching techniques. Designed for the student without drawing experience.

BCN 2272
Blueprint Reading
3 Credits
Includes the principles of interpreting blueprints and specifications common to the building trades. Focuses on reading details for grades, foundations, floor plans, elevations, walls, doors, windows and roofs of residential, light and heavy construction.

BCN 2291C
Construction Materials Testing
3 Credits
Studies the techniques of testing construction materials to determine their physical properties, with an emphasis on soils, Portland cement, concrete and asphalt. A special fee will be charged for this course.
Prerequisite: BCN 1210

BCN 2405
Structural Design
3 Credits
Structural Design is an introduction to the physical science of applied mechanics. Emphasis is placed on sizing wood and steel members for light construction.
Prerequisites: BCN 1210, EVS 2893C, MGF 1106, PHY 1025, and PHY 1025L

BCN 2939C
Construction Capstone
3 Credits
The construction capstone course will allow the student to demonstrate the required skill sets acquired throughout the AS degree Architectural Design and Construction Technology program and will prepare the student for transition into the designing and construction industries. All aspects of design, material and building component selection, estimating and use of computer-aided design and drafting will be evaluated. This course is presented in an independent study format with assigned due dates and meeting times.

BCN 2942
Construction Internship
3 Credits
Student works a minimum of 140 hours during one term in a pre-approved industrial job; also attends a weekly seminar.

BCT 1040
Introductory Blueprint Reading
3 Credits
This introductory class is a survey of the various types of drawings and other documents commonly used in the construction industry. It includes topics such as terminology, abbreviations, symbols, notation, scales, dimensions, meanings of lines, technical and orthographic projections, types of construction, and trade information. Credit for this course does not apply to the associate in arts degree or the AS/AAS degree in Architectural Design and Construction Technology.
Prerequisites: College level reading, writing and math skills are required.

BCT 1081
Introduction to Materials and Methods
3 Credits
This course provides an in-depth study of building materials and introduces building terminology and methods of construction with emphasis placed on site work, concrete, masonry, metal, wood, plastic, thermal moisture protection, and finishes. The topics presented will focus on characteristics of the materials and products regarding their strength, heat flow, weathering qualities and how these will affect their use in construction projects. Credit for this course does not apply to the associate in arts degree or the AS/AAS degree in Architectural Design and Construction Technology.
Prerequisites: College level reading, and writing skills are required.

BCT 1120
Leveling Instruments, Site Preparation and Layout
3 Credits
Topics include the importance of accurate work in laying out buildings with the use of different leveling instruments and the many aspects of site preparation and layout of buildings and houses. Credit for this course does not apply to the ass
Associate in arts degree or the AS/AAS degree in Architectural Design and Construction Technology.
Prerequisites: College level reading, writing, and math skills are required.

**BCT 1720**  
**Construction Methods**  
3 Credits  
The construction methods course is an introduction to systems, methods, equipment, and construction practices available and commonly used to perform the major elements of a light construction project. A typical project is followed from contract to occupancy in classroom discussion and field trips. Numerous field trips to current construction sites are taken during the term. Emphasis is placed on sequence of activities and scheduling the project. Scheduling the construction project is an integral part of this course. Students will complete a bar graph and Gantt chart using the critical method of scheduling.  
Prerequisite: BCN 1210

**BCT 1760**  
**Building Codes and Safety Regulations**  
3 Credits  
Emphasis is on the Florida Building Code and to understand other applicable regulations in order to organize and manage a construction project with regulations and regulatory agencies in mind. Contract documents are created to reflect these regulations.  
Prerequisite: BCN 1210

**BCT 1773**  
**Building Construction Estimating, Scheduling and Cost Control**  
3 Credits  
This course introduces the student to techniques used to estimate the cost of structures, schedule labor and materials and to analyze actual and estimated costs of construction to facilitate efficient management and administration. Credit for this course does not apply to the associate in arts degree or the AS/AAS degree in Architectural Design and Construction Technology.  
Prerequisites: College level reading, writing and math skills are required.

**BCT 2705**  
**Construction Management**  
3 Credits  
Construction management is an introduction to basic legal skills and practices needed to manage a construction office. Emphasis is on the business organization, Florida construction licensing law, the general and special conditions of construction contracts and subcontracts, the Florida mechanics lien law, workers compensation and liability insurance coverage and state and federal tax reporting requirements.  
Prerequisite: ENC 1101

**BCT 2730**  
**Construction Supervision**  
3 Credits  
This course examines techniques of supervision and management of human and other resources necessary to complete a construction project. Construction industry organization and management structure in relation to scheduling, material procurement, and equipment management. Human resource topics include labor and human relations, safety, morale, motivation. Leadership, delegation of authority in management of skilled and unskilled labor, technical, professional and administrative personnel topics are also covered.  
Prerequisite: BCT 2705

**BCT 2743**  
**Construction Law**  
3 Credits  
This course is intended to provide a general overview of the legal issues and the applicable laws relating to the construction industry in the State of Florida. Students will be introduced to the basic legal concepts and their applications in order to succeed in the construction business. Students will build knowledge and interpretation skills through the identification and discussion of basic legal issues, and will gain a clear understanding of the function and purpose of these skills in the construction industry.  
Prerequisites: BCT 2750, BCT 1760

**BCT 2750**  
**Building Construction Contracts and Finance**  
3 Credits  
A study of building construction, contracting and finance and related contract requirements. Topics include construction loans, permanent building mortgages, construction bids and contracts, penalty and incentive provisions, progress payments and retention, escalation provisions, cost extras, performance and bid bonds, company profits, cash flow and business loans.  
Prerequisite: BCT 1760

**BCT 2761**  
**Structural Systems in Construction**  
3 Credits  
To familiarize students with structural terminology, practices, methods, code requirements and safety and health criteria in construction. Credit for this course does not apply to the associate in arts degree or the AS/AAS degree in Architectural Design and Construction Technology.  
Prerequisites: College level reading, writing and math skills are required.

**BCT 2770C**  
**Construction Estimating**  
3 Credits  
Deals with the computation of building costs for typical construction projects and the computation of labor and materials from take off to the final estimates. Completion of BCN 1210 and ARC 2461 strongly recommended. Enrollment in ARC 2304 and ARC 2501 strongly recommended.
**BOT 1000**  
**Plant Physiology and Growth**  
3 Credits  
Focuses on the processes which occur in plants. Topics include photosynthesis, respiration, mineral nutrition, transpiration and plant growth regulations.

**BRC 1301**  
**Introduction to Financial Institutions**  
3 Credits  
An introduction to the U.S. banking system, the role of banks, credit unions and thrifts as financial service providers. Banking principles, various products/services, and the laws and regulatory agencies governing the different types of financial institutions will be discussed.

**BRC 1321**  
**Principles of Credit and Collections**  
3 Credits  
This course is designed for people planning a career in credit union management and is approved by the credit union national association for certification as a credit union executive. Topics include, the nature and role of credit decision; decision making and salesmanship in consumer credit; numerical scoring systems, collections policies, practices and systems; business and government credit functions; and control of credit operations.

**BSC 1005**  
**Biological Foundations**  
3 Credits  
Designated for non-science majors. Topics include the introduction of general biological concepts, genetics, and a brief survey of living organisms.  
Prerequisites: College level reading, writing and math skills are required.  
Corequisite: BSC 1005L

**BSC 1005L**  
**Biological Foundations Lab**  
1 Credit  
Laboratory intended to accompany BSC 1005 lecture. A special fee will be charged for this course.  
Prerequisites: College level reading, writing and math skills are required.  
Corequisite: BSC 1005

**BSC 1010**  
**Biological Science I**  
3 Credits  
Intended for science majors. Introduces students to the science of biology. Topics include aspects of biochemistry, cytology, cellular metabolism, and genetics. College level reading, writing and math skills are required.  
Corequisite: BSC 1010L, CHM 1045

**BSC 1010L**  
**Biological Science I Lab**  
1 Credit  
A special fee will be charged for this course. College level reading, writing and math skills are required.  
Prerequisites: College math skills required.  
Corequisite: BSC 1010

**BSC 1011**  
**Biological Science II**  
3 Credits  
Intended for science majors. Emphasizes a phylogenetic survey of the five kingdoms of living organisms, together with an introduction to ecology and behavior.  
Prerequisites: BSC 1010, BSC 1010L  
Corequisite: BSC 1011L

**BSC 1011H**  
**Honors Biological Science II**  
3 Credits  
Same as BSC 1011 with honors content. Honors Institute permission required.  
Prerequisites: BSC 1010, BSC 1010L  
Corequisite: BSC 1011L

**BSC 1011L**  
**Biological Science II Lab**  
1 Credit  
College level reading skills required. A special fee will be charged for this course.  
Prerequisite: BSC 1010L  
Corequisite: BSC 1011

**BSC 1025C**  
**Nutrition and Drugs**  
3 Credits  
Primarily intended for non-science majors. Focuses on basic nutrients and their roles in human nutrition. Topics include the problems and possible solutions of deficiency diseases, world food shortages, obesity, commonly used drugs, drug effects on the body and drug addiction. Combined and integrated with a hands-on laboratory component. A special fee will be charged for this course.  
Prerequisites: College level reading, writing and math skills required.

**BSC 1085**  
**Human Anatomy and Physiology I**  
3 Credits  
Intended for Allied Health and science majors. Encompasses both anatomy and physiology; includes cell structure and function. Focuses on the study of human systems, particularly the integumentary, skeletal, muscular and nervous systems.  
Prerequisites: College level reading, writing and math skills required.  
Corequisite: BSC 1085L
BSC 1085L
Human Anatomy and Physiology Lab
1 Credit
A special fee will be charged for this course.
Prerequisites: College level reading and writing and math skills are required.
Corequisite: BSC 1085

BSC 1086
Human Anatomy and Physiology II
3 Credits
Focuses on cardiovascular, respiratory, digestive, endocrine, immune, lymphatic, urinary and reproductive systems.
Prerequisite: BSC 1085
Corequisite: BSC 1086L

BSC 1086L
Human Anatomy and Physiology II Lab
1 Credit
College level reading and writing skills are required. A special fee will be charged for this course.
Prerequisite: BSC 1085L
Corequisite: BSC 1086

BSC 1092
Human Biology
3 Credits
Intended for those not majoring in the biological sciences or allied health fields. Provides introductory material in human anatomy and physiology to focus on understanding the body organization and the interrelations of body organs systems.
Prerequisites: College level reading, writing and math skills required.
Corequisite: BSC 1092L

BSC 1092L
Human Biology Lab
1 Credit
Laboratory to accompany BSC 1092. A special fee will be charged for this course.
Prerequisites: College level reading, writing and math skills required.
Corequisite: BSC 1092

BSC 1420C
Introduction to Biotechnology
3 Credits
This course provides an introduction to the basic foundations of biotechnology, and the techniques used in research and industry environments. This course will integrate historical background, current concepts, and techniques in DNA and RNA technology and their role in cell and genetic disorders. Students will demonstrate knowledge of the scientific method, lab safety, and best laboratory practices. Students will demonstrate competency with various instrumentation, including pH meters, centrifuge, spectrophotometer, chromatography, and gel electrophoresis.

BSC 2420
Biotechnology I
3 Credits
This course expands on topics introduced in BSC 1420C, focusing on recombinant DNA and RNA technology, and genetic engineering. The course will present the basics of genomics and proteomics with DNA protein structure function. There will be a strong emphasis on biomedical biotechnology including the human genome, pharmacogenomics, regenerative medicine, gene therapy, cloning and stem cell applications and implications. Practical applications of biotechnology will be explored.
Prerequisites: BSC 1010, BSC 1010L, BSC 1420C, CHM 1045, CHM 1045L
Corequisite: BSC 2420L

BSC 2420L
Biotechnology I Laboratory
2 Credits
This laboratory course will provide practical hands-on experience in basic biotechnology laboratory methods and techniques.
Prerequisites: BSC 1010, BSC 1010L, BSC 1420C, CHM 1045, CHM 1045L
Corequisite: BSC 2420

BSC 2427
Biotechnology II
3 Credits
This course will provide a relatively in-depth exploration of modern biotechnology as required for the study, development, and application of genetic engineering and biomedical biotechnology. There will be emphasis on pharmacogenomics, stem cell technology, and immunobiology. The practical applications of forensics, bioremediation, and medical, animal, plant biotechnology will be examined.
Prerequisites: BSC 2420, BSC 2420L
Corequisite: BSC 2427L

BSC 2427L
Biotechnology II Laboratory
2 Credits
This laboratory course will continue the study of modern molecular and cell biology with focus on advanced methods and techniques of biotechnology, emphasizing genomics, proteomics, genetic engineering and recombinant DNA technology.
Prerequisites: BSC 2420, BSC 2420L
Corequisite: BSC 2427

BSC 2943
Biotechnology Internship
3 Credits
The objective of this course is to provide students with meaningful work experience. This is a practical application of procedures and professionalism in real world settings with biotechnology and closely related fields.
Prerequisites: BSC 2427, BSC 2427L
BUL 2241  
Business Law I  
3 Credits  
Covers the main concepts of legal institutions, the legal environment, business ethics, public and private business law, contracts, business regulations the UCC (Uniform Commercial Code) and related laws.  
Prerequisites: College level reading and writing skills required.

BUL 2242  
Business Law II  
3 Credits  
Covers commercial paper, agency, partnerships, corporations, secured transactions, bankruptcy, securities regulations, real and personal property, trusts, wills and associated legal problems.  
Prerequisite: BUL 2241

CAP 1023  
Introduction to Game Development  
3 Credits  
Survey of the various aspects of game development including: game programming and scripting, design, modeling and rendering. Students will work on projects involving design and storyboarding, computer programming and scripting, as well as multimedia presentations and artwork. Aspects of the gaming industry will be covered to include human computer interaction, mathematical and physics consideration, and the business of game production and distribution.  
Prerequisites: CGS 1000

CAP 2042  
Game Design and Development  
3 Credits  
In this hands-on course the student will practice creating 2D and 3D graphics using game and simulation software. The student will perform polygonal as well as nurb modeling to create programmable 3D objects able to be rendered for simulation software and computer games, projects include creating objects ad performing subdivision modeling to include splitting and extruding surfaces. Also, students will practice various animation techniques using software rendering as well as programming code.  
Prerequisite: CAP 1023

CAP 2043  
Advanced Game Design and Development  
3 Credits  
In this hands-on course the student will continue to create animations for computer games and simulation software. The student will perform projects that include using ray tracing rendering, animating motion along a path, programming animation, rendering scenes and apply lighting and shading. Other projects allow the student to apply movement along nurb and splines, as well as applying dynamics with particles and emitters. Rendering objects for use in computer game engines will also be covered.  
Prerequisite: CAP 2042

CAP 2816  
Database Management II  
1 Credit  
Focuses on advanced data file techniques.  
Prerequisite: CGS 1540

CAP 2840  
Personal Financial Management  
1 Credit  
Focuses on using a computer to manage personal finances, with an emphasis on determining a budget, entering checkbook information, preparing a personal net worth statement and keeping a record of monthly expenses.

CAP 2939  
Digital Media/Multimedia Technology Capstone  
3 Credits  
The capstone course is designed for the student to demonstrate his/her knowledge and skills applicable to the degree core competencies and outcomes. The course is designed as a project based experience. The student's project requirements will be designed in concern with his/her area of curriculum emphasis. Permission from instructor required.

CCJ 1010  
Introduction Criminology  
3 Credits  
Focuses on the complex factors related to crime in America, including basic issues, scope and economic impact.

CCJ 1020  
Introduction to Criminal Justice  
3 Credits  
Covers the historical and philosophical backgrounds of criminal justice agencies and examines the development of the courts, correctional agencies, and law enforcement processes. Topics include the Supreme Court, the 14th Amendment, individual rights, and requirements and opportunities in the law enforcement and correctional fields.

CCJ 1488  
Ethics in Criminal Justice  
3 Credits  
This course is a practical overview of key issues, questions, and concepts in applied ethics in the field of criminal justice. The course will include the historical development of ethical theories, morality and law, and ethical decision making in law enforcement, courts, and corrections.

CCJ 2013  
Introduction to Victimology  
3 Credits  
This course is about victims of crime. It provides an introductory level review of the many facets of criminal victimization and the efforts to assist crime victims. The course covers a wide range of topics including trends and interpretations of victimization research, laws, programs, and services, the emotional and social impact of crime, victim rights and restitution and the extent of participation by victims in the criminal justice process.