

SCHOOL OF ARTS AND SCIENCES COURSE DESCRIPTIONS:

Arts and Sciences courses are open for enrollment to all students who have been admitted to any program of study at Our Lady of the Lake College. Professional program courses are restricted to students who have been admitted to the specific degree or certificate program or who have special permission from the Dean, Arts and Sciences.

ACADEMIC SEMINAR (ACSM) 100

This course is designed to assist the student in achieving educational goals. A variety of skills relating to classroom and individual study at the college level are presented. These skills include: note taking, test taking, time management and stress reduction. Skills in the utilization of library facilities, the College's Center for Information and Learning and computers are also introduced. Students enrolling in ACSM 100 are required to attend *New Student Orientation*, which is held during the first week of classes in the fall and spring semesters and the first week of class during the Summer semester. Any student who does NOT satisfactorily complete ACSM 100 (with a grade of "C" or better) must repeat the course during the next semester of enrollment. The student will be allowed to take other course work only after securing the permission of the Dean, Arts & Sciences. *CREDIT HOURS: 1*

Prerequisites: For all new students, ACSM 100 should be the first credit course for matriculation into the College.

Transfer students with a 2.0 GPA with 45 credit hours, or a 3.0 GPA with 30 credit hours are exempt from ACSM 100.

ACADEMIC SEMINAR (ACSM) 101 - *Introduction to Baccalaureate Education*

This course provides students in baccalaureate programs program-specific information, insights, and tools that maximize their academic success and achieve career goals. ACSM 101 should be taken concurrently with ACSM 100 or as soon as students begin the baccalaureate program in Arts and Sciences. *Credit Hours: 3. Prerequisites or Co-requisites: ACSM 100*

ANTHROPOLOGY (ANTH) 100 - *Introduction to Anthropology*

This is a course in socio-cultural anthropology. It will discuss and describe such concepts as: 1) important explanatory and interpretive paradigms (cultural materialism, sociobiology, symbolic anthropology, cognitive anthropology,) postmodernism); 2) subsistence, technology and economics (subsistence types, culture and technology variation, exchange systems); 3) social organization (class and castes, marital residence, descent and kinship, enculturation, rites of passage); 4) religion and ideology (mythology, prehistoric religions, a survey of world religions, witchcraft and magic); 5) fieldwork (data collection, data analyses, culture shock). *Credit Hours: 3. Prerequisites: None*

ANTHROPOLOGY (ANTH) 310 - *Religions of the World*

The primary objective of this course will be to study, compare, and contrast the "great" world religions. These will include: Christianity; Islam; Hinduism; Buddhism; Sikhism; Confucianism; Taoism; and Judaism. Lesser know religions will also be studied: Baha'ism; Jainism; Shintoism; Zoroastrianism.

Note: This course cross registers with RELS 310. Credit Hours: 3. Prerequisite: None

ANTHROPOLOGY (ANTH) 320 - *Ethnomedicine*

This course will focus on the concepts of medicine and healing in a cross-cultural context. Topics covered will include medical pluralism (indigenous healing practices and ideologies vs.: formal or western medical practices), cultural specific illness, and ethnobotany. The future of traditional medicine in an increasingly westernized world will also be discussed.

Credit Hours: 3. Prerequisite: None

ANTHROPOLOGY (ANTH) 340 - *Anthropology of Religion*

This course will explore and analyze religion (understood as both a social institution and a cultural ideology) from a distinctively anthropological point of view. Particular emphasis will be placed on both the purely theoretical and ethnographic issues that are intrinsic to a cross-cultural examination of religion. This course cross registers with RELS 340.

Credit Hours: 3. Prerequisites: ENGL 101 and RELS 100 or RELS 200.

ART (ART) 100 - *Art Appreciation*

This introductory course is a study of how art reflects and shapes human experiences. Students are provided with concepts, terms and a historical context with which to develop, analyze and articulate their personal responses to a variety of visual media, painting, sculpture, architecture and photography. Class meets three hours per week during regular semesters (Fall, Spring) and six hours per week during the summer session. Course sessions are interactive. They incorporate lecture, discussion and reflective writing. Works of art are experienced through exhibits, slides, films and field trips. One research paper is required. *Credit Hours: 3. Prerequisite: None*

ART (ART) 320 - *Literature and the Visual Arts*

This course examines the relationships of the literary and visual arts. Comparative study focuses upon various practices, critical theories, and social, historical, and philosophical concepts that cross-artistic boundaries and influence specific works of literature and/or visual arts. Class sessions include lecture, discussion, film, and slide presentations as well as group activities. Critical thinking is encouraged as students apply concepts to analysis of fiction, poetry, paintings and sculpture from Western and Non-Western cultures. One analytical research paper and several short class presentations are required. This course is team taught by English and art faculty. Credit may be earned for either ENGL 320 or ART 320, but not for both. *Credit Hours: 3. Prerequisites: ART 100; ENGL 200 recommended.*

BIOLOGY (BIOL) 100 - *Introduction to Medical Terminology*

This course will introduce pre-clinical students in the various allied health sciences to both basic medical and clinical terminology. Vocabulary relevant to basic human anatomy and physiology, medicine and health, disease and clinical analyses will be emphasized. Jargon applicable to clinical specialties such as nursing, surgical technology, radiologic technology, physical therapy, medical technology and emergency health science will be emphasized. Instruction will utilize a team approach; some instruction methods will involve the use of specific computer programs. *Credit Hours: 1. Prerequisite: None*

BIOLOGY (BIOL) 105 - *Introduction to Biology*

This one semester course presents, describes, discusses, and theorizes about the fundamentals of biology. The topics include: basic biochemistry; cell structure and function; tissue structure and function; genetics and nucleic acids; meiosis; protein synthesis; enzymes; biological membranes; osmosis; active transport; facilitated transport; etc. This course is required for all students lacking previous coursework in biology. Course must be successfully completed before students may enroll in BIOL 210 (A&P-I) or BIOL 111 General Biology-I). Credits hours: 3. (This course is required for new students who have not had high school or college biology coursework within the last five years). Prerequisite courses: None.

BIOLOGY (BIOL) 111 - *General Biology I*

This course is an introduction to biologic principles. Students will student basic and important concepts in biology. These include: biochemistry, cell biology, metabolism, photosynthesis, cell division (mitosis). Other topics will include meiosis, genetics, molecular biology, developmental biology, evolution and ecology. *Credit Hours: 3. Prerequisite: None*

BIOLOGY (BIOL) 112 - *General Biology II*

This course relates the broad biological principles covered in BIOL 101 to specific groups of animals. Emphasis is placed on the structure (morphology) and physiology of diverse organisms. *Credit Hours: 3. Prerequisites: BIOL 111, BIOL 113*

BIOLOGY (BIOL) 113 - *Laboratory for BIOL 111*

Students will study and visualize basic principles using a variety of techniques including light (bright field) microscopy, preparation of Awet slides, charts, models, dissections and computer programs. Laboratory exercises will include: introduction to the compound microscope, preparation of biological slides (whole Awet mounts), cytology, cell biology, cell physiology and electron microscopy of cells, organelles and tissues using electron micrographs and computer programs, mitosis, meiosis and early embryology. Students will be required to produce and maintain laboratory reports, produce drawings and illustrations and maintain laboratory notebook. *Credit Hours: 1 (lab meets three hours per week). Prerequisite: BIOL 111 (previous or concurrent).*

BIOLOGY (BIOL) 114 - *Laboratory for BIOL 112*

Students will study a diverse sampling of animals using taxonomic, microscopic and dissection techniques. Emphasis is placed on the divergent structure and physiology of these organisms. Organisms to be studied include those of the following phyla: Sarcomastigophora, Porifera, Cnidaria, Platyhelminthes, Nematoda, Annelida, Mollusca, Arthropoda, Echinodermata and Chordata. Appropriate computer programs will be used to assist learning. Students will also be introduced to the anatomy (osteology) of the human skeleton. Students will be required to generate and maintain laboratory notebooks comprised of laboratory reports, figures and illustrations. *Credit Hours: 1 (lab meets three hours per week). Prerequisites: BIOL 111, BIOL 113(Previous or concurrent).*

BIOLOGY (BIOL) 210 - *Human Anatomy and Physiology I*

This foundation course in the life sciences introduces students to important concepts and biological principles necessary to understanding the structure and function of the human body. These concepts include: basic biology, basic chemistry, basic biochemistry, fundamental cellular biology (cytology and cytostructure) and cellular physiology. Other topics include: basic tissue structure and function, mitosis and meiosis. All fundamental information will be directly related to the concept of systemic homeostasis. Following this introduction, a survey of systemic anatomy and physiology will be initiated. This includes: 1) the structure and function of the integument; 2) the structure and function of teeth, bones and joints; 3) and the structure and function of muscles (skeletal, cardiac and smooth). *Credit Hours: 3. Prerequisites or Co-requisites: CHEM 100, CHEM 101 or equivalent. BIOL 212 Laboratory strongly recommended.*

BIOLOGY (BIOL) 211 - *Human Anatomy and Physiology II*

This is the continuation of BIOLOGY 210 - Human Anatomy and Physiology-I. The course integrates the structure and function of the various components of the following organ systems: 1) the structure and function of the nervous system; 2) the structure and function of the endocrine system; 3) digestive system or gastrointestinal-tract including the accessory glands (salivary glands, liver, gall bladder and exocrine pancreas); 4) the cardiovascular and lymphatic systems including the heart, blood vessels and blood; 5) the respiratory system; 6) the urinary system; 7) the male reproductive system; 8) and the female reproductive system. Human developmental biology will be discussed in association with human reproduction and embryogenesis. *Credit Hours: 3. Prerequisites: BIOL 210; CHEM 100, CHEM 101. BIOL 213 Laboratory strongly recommended.*

BIOLOGY (BIOL) 212 - *Laboratory for BIOL 210*

Students enrolled in this course will examine the anatomy and morphology of human cells, tissues, organs and systems. Students will study the following: 1) the fine structure of human cells; 2) the light microscopic anatomy and electron microscopic structure of human tissues; 3) the microscopic structure of the integumentary system; 4) the gross anatomy and microscopic morphology of the human skeleton and osseous tissue; 5) the gross anatomy, histology and electron microscopic fine structure of the human skeletal muscular system and muscle tissue; 6) the histology of the nervous system, especially neurons and synapses. Students will utilize a wide variety of methodologies to complete the above units, including: videos, models, human bones, human skulls, microscopic slides of human cells and tissues; electron micrographs of human cells and tissues, and multiple CD-ROM computer programs. The laboratory is a self-paced, computerized laboratory. *Credit Hours:* 1. *Prerequisites:* BIOL 210 (previous or concurrent enrollment).

BIOLOGY 213 (BIOL) - *Laboratory for BIOL 211*

Students enrolled in this course will examine the anatomy and morphology of human cells, tissues, organs and systems. Students will study the following: 1) the gross and microscopic anatomy of the human brain and spinal cord; 2) the gross anatomy of the peripheral nervous system; 3) the light microscopic and fine structure of human endocrine glands; 4) the gross and light microscopic anatomy of the human digestive system; 5) the gross, light and electron microscopic anatomy of the human heart; 6) the structure and distribution of blood vessels, including capillaries; 7) the light microscopic structure of human blood cells; 8) the structure of the lymphoid system and its cells; 9) the gross anatomy, light microscopic and electron microscopic morphology of the human respiratory system; 9) the gross anatomy, histology and electron microscopic fine structure of the human urinary system; 10) the gross anatomy and histology of the male and female reproductive systems. Students will utilize a wide variety of methodologies to complete the above units, including: videos, models, microscopic slides of human organs, electron micrographs of human organs and multiple CD-ROM computer programs. The laboratory is a self-paced, computerized laboratory. *Credit Hours:* 1. *Prerequisites:* BIOL 210, BIOL 211 (Previous or concurrent enrollment.).

BIOLOGY (BIOL) 218 – Comparative Anatomy

Comparative vertebrate anatomy is a study of the morphological, structural, and functional evolution of selective vertebrate organ systems. The course will be subdivided into two major parts. Part I will discuss the principles of the phylogenetic (evolutionary) relationships between vertebrates. In Part 2, specific structural organ-systemic organization will be interpreted in terms of their developmental biology (embryology), phylogeny, and functional/structural adaptations. Lecture units will include: 1) Origins; 2) Phylogeny; 3) Integumentary system; 4) Skeletal system; 5) Muscular system; 6) Nervous system; 7) Digestive system; 8) Respiratory system; 9) Cardiovascular system; 10) Excretory system; and 11) Reproductive system. In the laboratory students will study the structure of: 1) the Prochordates; 2) the Lamprey/Hagfish; 3) the Shark; 4) amphibians; 5) and the mammals (cat and/or fetal pig). Organ-system comparisons will be emphasized between these different vertebrate populations. *Credit Hours:* 3
Prerequisites: BIOL 111, BIOL 112, BIOL 113, and BIOL 114. Or, BIOL 210, BIOL 211, BIOL 212, AND BIOL 213.

BIOLOGY (BIOL) 235 - *Fundamentals of Human Nutrition*

This course deals with the chemistry of the basic nutrients, i.e., carbohydrates, proteins, fats, vitamins, minerals and water, and their role in the conservation of health. Metabolic pathways utilized for the assimilation of these nutrients are studied. Maintenance of good nutrition habits are discussed. Relationships between poor nutrition and diseases (cancer, heart disease, diabetes, etc.) are described. Information is presented to reinforce the idea that diet/nutrition is the most important health factor that individuals can control. Learning what comprises a healthy diet, and the selection of such a diet is essential to good health. So-called “new” nutrients and nutritional research developments are discussed. Natural medicines and alternative medicines are also described. *Credit Hours:* 3
Prerequisites: CHEM 100, CHEM 101 or equivalent and BIOL 210.

BIOLOGY (BIOL) 280 - *Fundamentals of Microbiology*

Fundamentals of Microbiology is an introductory course in which the basic concepts of microbiology are presented. The course covers the impact of microorganisms in a historical context, microbial functional anatomy, metabolic activities, growth, control of growth, and genetic mechanisms among bacteria. Also covered are the multiplication strategies and biological roles of viruses and selected procaryotic and eucaryotic microorganisms.

The role of microorganisms in the environment and public health will be discussed. The course also includes an overview of infectious disease principles. *Credit Hours: 3. Prerequisites:* CHEM 100, CHEM 101 or equivalent) and BIOL 111 or BIOL 210. *Co-requisites:* BIOL 281 (Microbiology Laboratory) strongly recommended.

BIOLOGY (BIOL) 281 - *Microbiology Laboratory*

This general laboratory course focuses on the basic principles and procedures used to manipulate and study microorganisms. The course will begin with basic microscopic skills: preparations and staining of specimens, proper use and handling of compound light microscopes, interpretation of visual images. Following the microscopy unit students will learn basic aseptic technique, isolation, cultivation, enumeration and pure culturing skills. After students have developed these basic skills they will expand on these methods to experimentally determine whether bacteria produce various enzymes and hemolysins and to cultivate bacterial viruses. Students will determine the sensitivity of selected bacteria to various methods of microbial control: ultraviolet radiation, heavy metals, antibiotics and disinfectants. A genetics unit will demonstrate the concepts of induced mutations and transformation using antibiotic resistance as a marker. An immunology unit will demonstrate serological methods. *Credit Hours: 1. Prerequisites:* BIOL 210 or BIOL 111, BIOL 280 (Previous or concurrent.).

BIOLOGY (BIOL) 300 - *General Botany*

A study of the biology of the fungi, the fungus-like protists, the algae (cyanobacteria and protists), the bryophytes, the cryptogams and the phanerogams. Among the phanerogams an emphasis will be placed on the gymnosperms. Topics dealing with the general biology and categorization of the angiosperms will also be presented.

Credit Hours: 3. Prerequisites: BIOL 111, BIOL 112, BIOL 113, and BIOL 114.

BIOLOGY (BIOL) 301 - *The History of Biology and Medicine*

This course will study the history of biology and medicine through the following eras: 1) prehistory, 2) ancient China, 3) ancient India, 4) ancient Egypt, 5) ancient Mesopotamia, 6) ancient Greece, 7) Alexandria, 8) ancient Rome, 9) the middle ages, 10) the Renaissance, 11) the New World, 12) the period of Enlightenment and Victorian times, 13) and finally modern biological and medical themes. Selected and significant historical topics in the development of such fields as biochemistry, microbiology, botany, zoology medicine, physiology, anatomy, genetics, embryology, ecology, dentistry, medicine, pharmacology, and surgery will be discussed. Concepts of futuristic biology and medicine will also be developed. The impact of both the biological and medical sciences on society and technology will be described throughout the course.

Credit Hours: 3. Prerequisites: BIOL 111, 112, 113, 114; or BIOL 210, 211, 212, 213.

BIOLOGY (BIOL) 310 - *Fundamentals of Immunology*

Fundamentals of immunology is an introductory course in which both basic and advanced concepts of immunology are presented. The basic concepts presented include, but are not limited to: function of the innate defense mechanisms, antigens, development of the immune system, lymphocytes, immunoglobulins, lymphokines and inflammation. Advanced concepts that will be presented are: B- and T-lymphocyte ontogeny, generation of antibody diversity and genetics of the major histocompatibility complex, cytokine networks and immunogenetics. Following the successful completion of the course, the student should have a firm understanding of the organization, function and operation of the immune system in the defense against viruses, bacteria, fungi, parasites, tumors and transplanted courses.

Credit Hours: 3. *Prerequisites:* BIOL 111, 112, 113, 114. BIOL 280 and 281 or BIOL 290. CHEM 101, CHEM 102, recommended. Or, completion of 30 Credit Hours, or a minimum GPA of 3.00 or permission, Dean, Arts & Sciences.

BIOLOGY (BIOL) 312 - *General Genetics*

This course is a study of fundamental hereditary mechanisms and relationships. Emphasis is placed on nucleic acids and the molecular and cytological roles by which genes are distributed and expressed. The course will cover six major units: I. The continuity of life - cell division, and genetics. II. Heredity, genes and DNA. III. Expression of genetic information. IV. Recombinant DNA. V. Detection of nucleic acids and proteins. VI. Gene function in eukaryotic cells. *Credit Hours:* 3. *Prerequisites:* BIOL 111, 112, 113, and 114; or BIOL 210, 211, 212, 213). 8 credit hours of chemistry (CHEM 101, 102, 103, 104).

BIOLOGY (BIOL) 315 - *Introduction to Kinesiology*

This course is designed to provide the student with a general overview of the principles involved in human motion. Emphasis will be placed on basic principles of kinesiology including: 1) a review of the major body systems that are involved in generating movement; 2) an overview of basic biomechanics; 3) an in-depth look at the anatomy (including origin and insertion of muscular attachments) of the major structures and joints of the human body such as: a) shoulder, b) elbow, c) wrist, d) hand, e) temporomandibular joint (TMJ), f) neck and trunk; g) pelvic girdle, h) hip, i) knee, j) ankle joint and foot. The course will also involve an in depth look at the actions that occur at these joints. *Credit Hours:* 3 *Prerequisites:* 8 hours of biology (BIOL 210, 211, 212, and 213 preferred). CHEM 100 or CHEM 101.

BIOLOGY (BIOL) 320 - *Medical/Surgical Observation*

This course is directed at undergraduate, pre-health care students in an effort to introduce them to clinical medicine, its related fields and required training and preparation. Clinical medicine will be integrated with basic biomedical science and research. Each student will complete eight required surgical observation procedures and autopsies at local hospitals. Multiple elective observations are also required. During this course students actually work side-by-side with physicians and surgeons in the operating room. This course has a limited enrollment. *Due to limited space, this course cannot be audited. Credit Hours:* 3 (Course can be taken two times for a total of 6 Credit Hours). *Prerequisites:* 8 credit hours of biology (BIOL 210, 211, 212, 213, and 214).

BIOLOGY (BIOL) 330 - *General Histology*

This course will thoroughly investigate and analyze the structure of the cells and tissues that comprise the human body. The two major subdivisions of this course are: *The structure of cells (cell biology):* This part of the course will study the fine structure (ultrastructure) of cells. Various techniques and procedures for the study of cellular fine structure will be discussed. These include: transmission electron microscopy, scanning electron microscopy, electron microscopic enzyme histochemistry, immunoelectronmicroscopy, X-ray spectroscopic analysis. *II. The second part of the course will examine the structure (light microscopy and electron microscopy) of the four basic tissue types (epithelial tissue, the connective tissue, muscle tissue and nerve tissue).* Techniques for studying tissues will also be discussed. Structural-functional relationships will be discussed throughout. Relevant histopathology will also be incorporated into the course. Students will be required to complete multiple laboratory assignments using assigned computer programs, electron micrographs and a complete histology microfiche set. *Credit Hours:* 3. *Prerequisites:* 8 credit hours of biology (BIOL 111, 112, 113, and 114; or BIOL 210, 211, 212, and 213); 8 credit hours of chemistry (CHEM 101, 102, 103, and 104).

BIOLOGY (BIOL) 331 - *Microscopic Anatomy*

This course will thoroughly investigate and analyze the light and electron microscopic structure of the cells and tissues that comprise the organs of the human body. All lectures will discuss the light microscopic histology, the ultrastructure and the molecular structure of human cells and tissues. Functional and structural specializations will be described and discussed in detail. Changes in cell structure related to disease process, i.e., cellular pathology of histopathology, will also be described. Organs and systems to be covered include the following: the cardiovascular system: the heart, arteries, veins and capillaries; the brain and spinal cord: myelinated and non-myelinated nerves; the endocrine

system: the adenohypophysis, the neurohypophysis, the pineal gland, the thyroid and parathyroid glands, the islets of Langerhans; the adrenal medulla and the adrenal cortex; the digestive system: stomach, small intestine, large intestine; salivary glands, liver, gall bladder; the respiratory system: bronchi, bronchioles, alveoli, respiratory membrane; the urinary system: kidneys, glomeruli and nephrons; and the male and female reproductive systems: ovaries, testes, various ducts, etc. Like BIOL 330, this course also has a laboratory component.

Credit Hours: 3. *Prerequisite:* 8 credit hours of biology (BIOL 111, 112, 113, 114; or BIOL 210, 211, 212, 213); BIOL 330. 8 credit hours of chemistry (CHEM 101, 102, 103, 104). This course is offered during the spring semester.

BIOLOGY (BIOL) 346 - *Cellular, Molecular and Developmental Biology*

This course will present information related to cytology, cellular physiology, molecular biology developmental biology.. The primary concepts to be presented will include the following. I. An overview of cells and cell research. II. Cell-to-cell signaling and communication during development. III. The flow of genetic information. IV. Cell structure and function. V. Cell regulation. Specific topics to be covered are: 1) the organization of cellular genomes; 2) replication, maintenance and rearrangements of genomic DNA; 3) RNA; 4) protein synthesis; 5) the nucleus; 6) the ER, Golgi complex and lysosomes and their role in protein sorting and transport; 7) mitochondria, peroxisomes, glyoxysomes and chloroplasts in bioenergetics and metabolism; 8) the cytoskeleton and its role in cell movement and form; 9) the plasmalemma and the cell surface; 10) cell signaling; 11) the cell cycle; 12) and cancer. Research in cell biology and contemporary techniques for studying cells will be emphasized throughout the course. This course will involve multiple laboratory exercises.

Credit Hours: 3. *Prerequisites:* 8 credit hours of biology (BIOL 111, 112, 113, 114; or BIOL 210, 211, 212, 213). 16 credit hours of chemistry (CHEM 101, 102, 103, 104, and CHEM 201, 202, 203, 204). Permission of the Dean, School of Arts and Sciences required.

BIOLOGY (BIOL 349) - General Parasitology

In this course, students will understand learn about the major parasites of humans and domesticated animals (cattle, sheep, dogs, horses, etc.). This experience will include: 1) epidemiology, 2) evolution, morphology, and natural history. The amazingly complex, yet successful life cycles of these animals will be related in detail. This course has a laboratory component. *Credit Hours:* 3. *Prerequisites:* Students must be enrolled in the either the Human Medicine B.S. degree program or the Biology B.S. degree program. 8 Credit Hours CHEM (101, 102, 103, 104). BIOL 111, BIOL 112, BIOL 113, BIOL 114 or BIOL 210, BIOL 211, BIOL 212, BIOL 213.

BIOLOGY (BIOL) 350 - *Principles of Ecology*

This course describes the fundamental ecological principles governing the structure and function of populations, communities, and ecosystems. Ecology is a holistic (broad-based and integrative) approach to understanding living things as they relate to both their physical environment and to each other. It is the interactions of living things that provide the data for ecological studies. *Credit Hours:* 3. *Prerequisites Courses:* BIOL 111, 112, 113, 114. CHEM 101, 102, 103, 104.

BIOLOGY (BIOL) 353 – Invertebrate Biology

This is a survey course for the study of “higher” invertebrates. These include animals from the following phyla: Annelida, Mollusca, Lophophorata, Arthropoda, and related phyla. Lecture information will concentrate on information about invertebrate animals in order to illustrate: 1) evolutionary relationships; 2) structural relationships, 3) and specific adaptations that allow certain invertebrates to survive in specific environments. *Credit Hours:* 3. *Prerequisites:* 12 credit hours of biology.

BIOLOGY (BIOL) 355 - *Advanced Nutrition*

This course examines contemporary ideas with regard to the role of nutrition in human health and disease. Reasons for the growth and popularity of nutritional therapies as a practical alternative to contemporary medical and pharmacological practices are presented. Recent developments in nutrition research as related to effective alternative medicine are described. The role of poor nutrition in the

etiology of many health related problems is presented. Alternatively, the role of nutrition and nutrients in health maintenance and disease prevention are discussed. Diseases with strong nutritional links will be described. These include: cancer and carcinogenesis, heart disease, vascular disease, diabetes, chronic inflammatory disease (arthritis), neurological disorders, bone disease (osteoporosis), genetic disease and birth defects. The “sugar-busters” concept will be described and discussed in detail. Much emphasis will be placed on such so-called “new” nutrients as: the super-antioxidants and anti-cancer nutrients (proanthocyanidin, alpha-lipoic acid, glutathione, bioflavonoids, bilberry extract, ginkgo biloba extract, green tea extract, Tumeric, lycopene, Echinacea), natural anti-arthritics (glucosamine, chondroitin sulfate, methylsulfonylmethane or MSM), important amino acids for maintaining normal brain function (S-adenosyl methionine or SAM, L-cysteine, L-glutamic acid) natural anti-hypertensives, (*Gastrodia elata*, *Uncaria rhynchophylla*, *Prunella vulgaris*, *Chrystanemum indicum*, *Apocynum venetum*, *Eucommia ulmoides*, *Cassia obtusifolia*, *Rauwolfia yunnanensis*), natural blood glucose lowering agents (*Gymnema sylvestri*, vanadium, chromium, alpha-lipoic acid) and natural blood lipid lowering agents (chitosan, chitosol). *Credit Hours:* 3. *Prerequisites:* BIOL 111, BIOL 112, BIOL 113, BIOL 114. Or BIOL 210, BIOL 211, BIOL 212, BIOL 213. BIOL 235, CHEM 101, CHEM 102, CHEM 103, CHEM 104. CHEM 201, 202, 203, 204 strongly recommended. Or, permission, Dean, Arts and Sciences.

BIOLOGY (BIOL) 360 – *Embryology and Developmental Biology*

This course is a vertebrate embryology course. It is a study of human embryology. Emphasis is on the fundamental developmental processes shared by vertebrates. Topics include: 1) meiosis and gametogenesis; 2) fertilization; 3) early development of the embryo from the zygote state through the differentiation and development of the neural tube and the neural crests (period of the embryo); 4) the events and phases of embryogenesis from fertilization to nine months (10 lunar months) of development; period of the ovum; period of the embryo; period of the fetus. The next phase of the course will detail the development of selective human organ systems including the nervous system, the sensory organs, and the cardiovascular, digestive, respiratory, and urogenital systems. Throughout the course the common mechanisms involved in cytodifferentiation, histodifferentiation, organodifferentiation, and systemic differentiation will be discussed. Events related to gene activation/inactivation and biochemical differentiation, especially as related to cell-to-cell communication, will be discussed. Developmental (congenital) defects will be described. Especially those related to the neural crests and neural tube (neural crest and neural tube defects). The causes and successful clinical treatments (s) of pregnant mothers against these serious birth defect will be discussed. *Credits Hours:* 3. *Prerequisites:* 12 credits hours of biology including genetics (BIOL 312); and 8 credit hours of chemistry.

BIOLOGY (BIOL) 361 - *Laboratory for Embryology and Developmental Biology*

This course is a vertebrate embryology laboratory course. The light microscopy of the following will be studied, demonstrated, and discussed; 1) structure of the male and female reproductive tissues; 2) light microscopy spermatogenesis and oogenesis; 3) light microscopy and comparison of mitosis and meiosis; 4) fertilization; 5) light microscopy of cleavage, blastulation, gastrulation, and neurulation; 6) light microscopy of early embryogenesis of the frog to 4 mm; 7) chick fetal development: 18 hours, 24 hours, 33 hours, and 48 hours; 8) fetal pig development to 10 mm. Appropriate internet web sites and CD-ROM programs will also be utilized. *Credit Hours:* 1. *Pre-requisites and/or corequisites:* 12 credit hours of biology including genetics (BIOL 312); and 8 credit hours of chemistry. Course must be taken concomitant with BIOL 360.

BIOLOGY (BIOL) 380 - *Pathogenic Microbiology*

Pathogenic microbiology will emphasize the pivotal balance between microbial mechanisms of virulence and host defenses. The course will begin with an overview of the disease process and the types of pathogens. Next, a unit on innate and acquired host defenses will be presented. Mechanisms used by pathogens to overcome or inactivate host defenses will be emphasized throughout the course. The remaining portion of the course will be comprised of units covering selected bacterial, viral, protozoan, fungal and pathogens. The course will conclude with a study on the evolution and emergence of infectious diseases. Students will research and complete a project. *Credit Hours:* 3. *Prerequisites:* BIOL 111, BIOL 112, BIOL 113, BIOL 114; or BIOL 210, 211, 212, 213. BIOL 280 and BIOL 281. CHEM 101,

102, 103, 104. Completion of CHEM 201, 202, 203, and 204 strongly recommended. Or, permission, Dean, Arts and Sciences.

BIOLOGY (BIOL) 401 - *Pathophysiology*

This course is a study of structural and physiological alterations associated with multiple disease processes and cell death. Topics for discussion will include: 1) inflammation; 2) water and electrolyte imbalance; 3) hemodynamic disorders; 4) trauma; 5) shock; 6) neoplasia (carcinogenesis); 7) cell death and necrosis; 8) and apoptosis.

Credit Hours: 3. *Prerequisites:* BIOL 111, 112, 113, 114; or BIOL 210, 211, 212, 213. BIOL 330; BIOL 346; CHEM 101, 102, 103, 104; CHEM 201, 202, 203, 204. CHEM 335 strongly recommended.

BIOLOGY (BIOL) 410 - *Fundamentals of Immunology and Immunology*

Laboratory

BIOL 310 plus a 1 credit hour immunology laboratory (a total of 4 Credit Hours). Laboratory topics will cover various aspects of innate immunity, organs, tissues and cells of the immune system and serology as it applies to clinical medicine. The laboratory meets three hours per week. *Credit Hours:* 4. *Prerequisites:* BIOL 111, BIOL 112, BIOL 113, BIOL 114. Or BIOL 210, BIOL 211, BIOL 212, BIOL 213. BIOL 280 and BIOL 281. CHEM 101, CHEM 102, 103, 104. CHEM 201, 202, 203, 204. Or, permission Dean, Arts and Sciences.

BIOLOGY (BIOL) 450 - *Endocrinology*

This course will present the various types of hormones (polypeptide, protein, steroid, fatty acid, cytokines, etc.) and their mechanism(s) of action on specific target cells. The individual endocrine glands will then be surveyed with regard to their structure and function. The role of hormones as in cell-to-cell communication and the regulation of systemic metabolism and homeostasis will be studied in detail. Information regarding the specific endocrine glands and their specific secretory (hormonal) products, their function, biochemistry and physiology will be presented. Both the traditional and the so-called "new" endocrine glands (skin, kidneys, heart, etc.) will be evaluated. Clinical relationships between endocrine hyposecretion and hypersecretion, as related to a broad spectrum of endocrine and homeostatic disorders, will be presented in detail. Multiple laboratory assignments will be required. *Credit Hours:* 3. *Prerequisites:* BIOL 111, BIOL 112, BIOL 113, BIOL 114. Or BIOL 210, BIOL 211, BIOL 212, BIOL 213. CHEM 101, CHEM 102, 103, 104. CHEM 201, 202, 203, 204 strongly recommended. Or permission, Dean, Arts and Sciences.

BIOLOGY (BIOL) 455 - *Oncology and Tumor Cell Biology*

This course will endeavor to instruct students on the development and causes of cancer. Students will study the basic cell biology, biochemistry and molecular biology of cancer cells and tumors. Current ideas with regard to cancer prevention and treatment will also be discussed. The latter will include the role of nutrition in the treatment and prevention of carcinogenesis and tumorigenesis. Assigned biomedical journal readings will be utilized throughout the course as supportive information for all lectures and text assignments. Some INTERNET sites will also be utilized. Some laboratory assignments will also be required.

Credit Hours: 3. *Prerequisites:* BIOL 111, BIOL 112, BIOL 113, BIOL 114. Or BIOL 210, BIOL 211, BIOL 212, BIOL 213. BIOL 235, BIOL 280 and BIOL 281. CHEM 101, 102, 103, 104. Completion of CHEM 201, 202, 203, 204 strongly recommended. Or, permission, Dean, Arts and Sciences.

BIOLOGY (BIOL) 460 - *Human Cardiovascular Anatomy and Physiology*

Biology 460 will thoroughly investigate and discuss the normal structure, function and biochemistry/pharmacology, as well as the pathophysiology of the heart, blood vessels, capillaries, blood and lymphoid system. The following topics will be emphasized: 1) the special properties of cardiac muscle; 2) the events of the cardiac cycle; 3) the regulation of the heart rate and cardiac rhythm; 5) the ECG/EKG; 6) the physiology of elastic and muscular arteries; 7) the regulation of blood pressure; 8) capillary transport; 9) the structure and function of the blood cells; 10) red blood cells and gas transport; 11) the function of the white blood cells, including the B and T-lymphocytes; 12) extrinsic and intrinsic

blood clotting; 13) and the fetal circulation. The pharmacodynamics of the cardiovascular system will also be discussed. Clinically, topics such as cardiac arrhythmias, hypertension, hypercholesterolemia, LDLs, HDLs and atherosclerosis, and heart transplants will be evaluated. Computer laboratory assignments will be used to visually enhance didactic concepts. This course has a laboratory component. *Credit Hours:* 3. *Prerequisites:* BIOL 111, BIOL 112, BIOL 113, BIOL 114. Or BIOL 210, BIOL 211, BIOL 212, BIOL 213. BIOL 330; BIOL 346. CHEM 101,102, 103, 104. Completion of CHEM 201, 202, 203, 204 strongly recommended. Or, permission, Dean, Arts and Sciences.

BIOLOGY (BIOL) 465 - *Human Neuroanatomy and Neurophysiology*

BIOL 465 will present and discuss the normal structure and function of neurons, the functional units of the nervous system. This will include details on resting membrane potentials, action potentials and other aspects of bioelectricity. The structure and neurochemistry of synapses will also be described including information relevant to "new" neurotransmitters. The structure and function of the brain and spinal cord will also be discussed in detail including specific nerve nuclei and tracts (ascending and descending). Some topics for conversation and discussion will include: 1) the structure and function of nerve cells and synapses; 2) bioelectricity, action potentials and nerve impulses; 3) the CSF and the physiology of intracranial pressure; 4) the structure and function of the cerebrum, cerebellum and brain stem, including specific nerve nuclei; 5) the cranial nerves; 6) the spinal cord, ascending and descending pathways; 7) the biochemistry of neurotransmitters and neuropeptides; 8) growth and repair in the nervous system. When ever possible fundamental information and related clinical correlations will be presented and discussed. This course does have a laboratory component.

Credit Hours: 3. *Prerequisites:* BIOL 111, BIOL 112, BIOL 113, BIOL 114. Or, BIOL 210, BIOL 211, BIOL 212, BIOL 213. BIOL 330; BIOL 346. CHEM 101, 102, 103, 104. Completion of CHEM 201, 202, 203, 204 strongly recommended. Or, permission, Dean, Arts and Sciences.

BIOLOGY (BIOL) 470 - *The Structure and Function of the Urinary System*

This is an advanced anatomy and physiology course designed primarily for pre-med (human medicine) majors. The course will describe primarily the role of the kidneys in the regulation of: osmotic balance, electrolyte balance and pH balance as required for the maintenance of in cellular and total body homeostasis. The physiology of nephrons, the functional units of the kidney, in glomerular filtration, tubular reabsorption and tubular secretion will be detailed. The countercurrent mechanisms involved in these activities will be described. In addition, contemporary ideas with regard to the role of the kidneys in other biological and physiological activities will be discussed. These include: 1) the role of the kidney in blood pressure regulation; 2) the role of the kidney in Ca⁺⁺ homeostasis; 3) the role of the kidney in erythropoiesis, 4) and others. The course will close with a discussion of renal pathophysiology. The course does have a laboratory component. This will involve studies on: 1) the gross anatomy of the kidneys; 2) the histology of the kidneys; and 3) the electron microscopy of a nephron

Credit Hours: 3. *Prerequisites:* BIOL 111, BIOL 112, BIOL 113, BIOL 114. Or, BIOL 210, BIOL 211, BIOL 212, BIOL 213. BIOL 330 and 346. CHEM 101, 102, 103, 104. Completion of CHEM 201, 202, 203, 204 strongly recommended. Or, permission of the Dean, School or Arts and Sciences.

BIOLOGY (BIOL) 472 - *The Structure and Function of the Respiratory System.*

This is an advanced anatomy and physiology course designed primarily for pre-med (human medicine) majors. The course will describe primarily the anatomy and physiology of respiration of the respiratory system. The course will emphasize: 1) the mechanics of respiration (inspiration and expiration); 2) the physiology of pulmonary gas exchange (external respiration) and blood - tissue gas exchange (internal respiration); 3) the transport of the respiratory gasses through the cardiovascular system. The role of the respiratory system in acid base balance will be described. Neural mechanisms regulating respiration will also be discussed. The pathophysiology of the respiratory system, involving chronic obstructive pulmonary disorders (COPDs), will be studied.

Credit Hours: 3. *Prerequisites:* BIOL 111, 112, 113, 114; or BIOL 210, 211, 212, 213. CHEM 101, 102, 103, 104. Completion of CHEM 210, 202, 203, 204 strongly recommended. Or, permission of the Dean, School of Arts and Sciences.

BIOLOGY (BIOL) 475 - *Paleo-Evolution*

This course will focus on: 1) the basic principles and mechanisms of biological evolution; 2) human evolution as conceptualized within the context of paleoanthropology. Important topics are: 1) the historical development of evolutionary theory; 2) population genetics; 3) phenotypic variation; 4) speciation; 5) and macroevolution. These theoretical notions, and others, will be discussed in the context of a thorough analysis of human evolution with a special emphasis on paleoanthropology.

Credit Hours: 3. *Prerequisites:* BIOL 111, BIOL 112, BIOL 113, BIOL 114, BIOL 300 and 312. CHEM 101, 102, 103, 104.

BIOL 381 plus a 1 credit hour pathogenic microbiology laboratory (4 Credit Hours total). The laboratory meets three hours per week.

Credit Hours: 4. *Prerequisites:* BIOL 101, BIOL 102, BIOL 103, BIOL 104 or BIOL 210, and BIOL 211. BIOL 280 and BIOL 281 or BIOL 290. CHEM 101 and CHEM 102. CHEM 201 AND CHEM 202 strongly recommended. Or, permission, Dean, Arts and Sciences.

BIOLOGY (BIOL) 480 - *Pathogenic Microbiology and Pathogenic Microbiology Laboratory*

BIOLOGY (BIOL) 482 - *Introduction to Virology*

Introduction to virology is intended to familiarize students with the biology of the most important group of human pathogens. The course is concept oriented, which will focus primarily on the molecular events of viral multiplication and the interactions between the virus and the host at the cellular and organismic level. Specific aspects of viral multiplication, which will be addressed, are elements of host cell tropism, entry and penetration, biosynthetic strategies and maturation of virions. Virus-host interactions will include a discussion of host cell defenses, the interferons and other naturally occurring or synthetic antivirals, as well as the principle effectors of the immune system responsible for viral clearance and the prevention of reinfection. The principles of persistent viral infections are discussed. *Credit Hours:* 3.

Prerequisites: BIOL 111, BIOL 112, BIOL 113, BIOL 114 or BIOL 210 and BIOL 211. BIOL 280 and 281 OR BIOL 290. CHEM 101, CHEM 102. CHEM 201 and CHEM 202 strongly recommended. Or, permission Dean, Arts and Sciences.

BIOLOGY (BIOL) 486 - *General Pharmacology*

Course describes and discusses pharmacology and medicine. Topics for discussion will be: 1) principles of pharmacology; 2) pharmacokinetics; 3) pharmacodynamics; 4) autonomic pharmacology; 5) cardiovascular pharmacology; 6) autacoids; 7) chemotherapy; 8) endocrine pharmacology; 9) CNS pharmacology; 10) hemo/immunopharmacology. Clinical case scenarios will be presented.

Credit Hours: 3. *Prerequisites:* BIOL 111, 112, 113, 114; BIOL 210, 211, 212, 213. BIOL 346. CHEM 101, 102, 103, 104. CHEM 201, 201, 203, 204. CHEM 335 strongly recommended.

BIOLOGY (BIOL) 496 - *Human Medicine/Biology Seminar*

This course is a series of one-hour seminars presented by both students and faculty. All presentations and reviews will involve the presentation and discussion of significant new research and clinical information related to human medicine. Students will select topics from either the medical literature or the Internet. Students will then prepare an annotated and illustrated report for presentation and discussion at class meetings. Audio-visual techniques must be utilized during all student lectures. Each student will make multiple presentations during the semester. Grades will be based on the thoroughness and understanding of the subject matter as demonstrated by both the written reports and the class presentations by each individual student. In class participation will also be evaluated. The format for this course is not unlike that of a journal club. During the first weeks of the course, involved faculty will present demonstrative seminars to students.

Credit Hours: 3. *Prerequisites:* Students must be enrolled in the Human Medicine or Biology Degree Programs. Course should be completed during the senior year. Permission of the Dean, School of Arts and Sciences required.

BIOLOGY (BIOL) 499 - *Research Problems in Biology/Medicine*

Faculty guided research for biology and human medicine majors. Course may be taken for 1 – 6 credit hours. *Credit Hours:* 1 - 6 CR HRS. (Course may be taken more than one time) Registration for this course requires faculty approval. *Prerequisites:* Completion of 30 credit hours of biology and 16 credit hours of chemistry.

CHEMISTRY (CHEM) 100 - *Introduction to Chemistry*

This is a fundamentals of chemistry course. This course is subdivided into inorganic chemistry, organic chemistry and biochemistry.

Credit Hours: 3. *Prerequisite:* None.

CHEMISTRY (CHEM) 101 - *Fundamentals of Chemistry I*

Fundamentals of Chemistry I introduces the student to the basic principles of the science of chemistry. The course begins with a discussion of the importance of units of measurement, and the interconversions between units and the reliability of data. These themes are reiterated throughout the course. Major areas of emphasis in chemistry 101 are: 1) the organization of matter; 2) the stoichiometry of chemical change; 3) gas behavior; 4) energy transformations that accompany chemical change; 5) and electron configurations and periodicity.

Credit Hours: 3. *Prerequisite:* MATH 112.

Co-requisites: MATH 112; CHEM 103 (Lab), strongly recommended.

CHEMISTRY (CHEM) 102 - *Fundamentals of Chemistry II*

CHEM 102 builds on and expands the basic chemical principles learned in CHEM 101. This course begins with a discussion of the theories of chemical bonding and molecular shapes. This is followed by a brief overview of the bonding properties of carbon and the structural aspects of organic compounds. Most of the course is devoted to chemical reactions, with emphasis on quantitative and conceptual features of reaction dynamics. Units include chemical kinetics, equilibrium, transition state theory and chemical thermodynamics. Application of these concepts will include units covering equilibria of acid-base systems and ionic systems (buffers, solubility, and complexions). The purpose of CHEM 102 is to provide students with a strong foundation in understanding chemical reactions as dynamic processes. These processes have wide applications in most natural phenomena.

Credit Hours: 3. *Prerequisites:* MATH 112; CHEM 101, CHEM 103. *Co-requisite* CHEM 104 (Previous or concurrent).

CHEMISTRY (CHEM) 103 - *Laboratory for CHEM 101*

Laboratory for Fundamentals of Chemistry I is a hands-on laboratory course designed to interface with, and complement, the topic covered in Chemistry 101. Students learn the basics of measurements, scientific method, chemical analysis, and recording data.

Credit Hours: 1 (Lab meets three hours per week.)

Corequisite: CHEM 101.

CHEMISTRY (CHEM) 104 - *Laboratory for CHEM 102*

Laboratory for Fundamentals of Chemistry II is a hand-on laboratory designed to provide experimental inquiry into the topics covered in Chemistry 102. Students expand their knowledge of chemical analysis and learn some basic techniques of synthesis. Topics covered include: 1) chemical kinetics; 2) equilibria; 3) and thermodynamics.

Credit Hours: 1 (Lab meets three hours per week.). *Prerequisites:* CHEM 101, CHEM 103. *Corequisite:* CHEM 102.

CHEMISTRY (CHEM) 201 - *General Organic Chemistry I*

A study of the compounds of carbon and includes the study of aliphatic and aromatic compounds. Course will include discussions on the biological aspects of organic chemistry.

Credit Hours: 3. *Prerequisites:* CHEM 101, CHEM 102, CHEM 103, CHEM 104. *Corequisite:* CHEM 203.

CHEMISTRY (CHEM) 202 - *General Organic Chemistry II*

This course is a continuation of CHEM 201. Course will discuss carbon compounds containing carbonyl, carboxylic acid, amine, and pheno-functional groups. Relationships with biological chemistry will be described.

Credit Hours: 3. *Prerequisites:* CHEM 201, CHEM 203. *Corequisite* CHEM 204.

CHEMISTRY (CHEM) 203 - *Laboratory for Chemistry 201*

This course will introduce chemistry students to basic laboratory operations and procedures. Techniques of organic chemistry will be described, including an introduction to spectroscopy. Computer analyses will be utilized.

Credit Hours: 1 (Lab meets three hours per week). *Prerequisites:* CHEM 101..

CHEMISTRY (CHEM) 204 - *Laboratory for Chemistry 202*

This course is a continuation of CHEM 203. This course will acquaint chemistry students with important laboratory operations. The course will stress reactions and synthesis. Computer analyses will be utilized.

Credit Hours: 1 (Lab meets three hours per week). *Prerequisites:* CHEM 201, CHEM 203. *Corequisite* CHEM 202.

CHEMISTRY (CHEM) 255 - *Analytical Chemistry*

This course deals with equilibria, titrations, electrochemistry, chromatography and a variety of spectroscopic techniques. The latter include nuclear magnetic resonance (NMR), UV/vis and mass spectrometry (MS). The steps in chemical analyses, unit conversions, determination of chemical concentrations and the preparation of solutions are described in relation to analytical chemistry. The course encompasses methods for calibrating analytical equipment and a description of the statistical methods that can be used to evaluate experimental error.

Credit Hours: 2. *Prerequisites:* CHEM 101, CHEM 102, CHEM 103, CHEM 104. *Corequisites:* CHEM 256.

CHEMISTRY (CHEM) 256 - *Laboratory for CHEM 255*

This course is an analytical chemistry laboratory that deals with experiments involving titrations, electrochemistry, chromatography and a variety of spectroscopic techniques. Chemical measurements involve unit conversions, solution preparations and the use of basic analytical chemistry equipment. Statistical analysis and error determinations are applied to the various analytical experiments performed during the course.

Credit Hours: 1 (Lab meets three hours per week).

Prerequisites: CHEM 101, CHEM 102, CHEM 103, CHEM 104.

Corequisites: CHEM 255 (Previous or co-requisite).

CHEMISTRY (CHEM) 335 - *Biochemistry*

This course will be comprised of approximately 15 - 20 units. Students will study: 1) the basic biochemical molecules, their structure and functions. These will include: proteins, enzymes, lipids, carbohydrates (including glycogen metabolism and gluconeogenesis) and nucleic acids (including replication, transcription and protein synthesis). 2) Studies on intermediary metabolism will include: glycolysis, the pentose phosphate pathway, the citric acid cycle (Krebs or TCA cycle), oxidative phosphorylation, lipid metabolism, amino acid metabolism. 3) Students will also study signal transduction pathways and mechanisms involved in the action of hormones and neurotransmitters.

Credit Hours: 3. *Prerequisites:* CHEM 101, CHEM 102, CHEM 103, CHEM 104. CHEM 201, CHEM 202, CHEM 203, CHEM 204. BIOL 346 strongly recommended.

CHEMISTRY CHEM 400/FOSC 400- *Toxicology*

This course is a combination lecture and laboratory course. The course content includes a comprehensive overview of toxins involved in forensic studies.

Credit Hours: 4. *Prerequisites:* FOSC 100, 200, 202, 300, 310.

COMPUTER SCIENCE (CSCI) 100 - *Introduction to Computers*

Today, computer literacy is absolutely essential to many fields, especially in the health sciences. This course is predicated on this fact and introduces students to the basics of computer science, with an emphasis on developing proficiency performing essential computer tasks (e.g. e-mail, surfing the INTERNET, word processing, spreadsheets, and making presentations). Utilizing the latest computer equipment and Windows 98 and NT based programs. Students receive direct hands-on instruction, with the majority of class time spent in the computer lab.

Credit Hours: 3. *Prerequisite:* None

COMPUTER SCIENCE (CSCI) 110 - *Computer Applications*

This course is an advanced version of CSCI 100 - Introduction to Computers. Topics include complex, hands-on practice with word processing (Word -tables of contents, indexes, mail merging, etc.), spreadsheets and charts (Excel - filtering results, goal seeking formulas, complex math formulas, etc.), databases (Access - customizing forms and reports, compound queries, etc.) and presentations (9customized backgrounds, automation, multimedia, hidden slides, etc.). In addition, students will learn basic Hyper Text Markup Language (HTML) for designing web pages. Upon completion of this course, students should be able to use the computer creatively to solve more intricate problems than are presented in CSCI 100.

ECONOMICS - (ECON) 210 - *Introduction to Economics*

This course focuses on the nature of the economics, concepts and problems. The economic system and the role of government in the system are explored as well as the accounting, analytical and policy aspects of the national income and product. Attention is also given to the money and banking systems.

Credit Hours: 3. *Prerequisites:* Math 112.

ENGLISH (ENGL) 010 - *Introduction to English Composition*

This is a developmental writing course designed as preparation for ENGLISH COMPOSITION 101 (ENGL 101). The course focuses on grammar as a communicative tool as well as sentence and paragraph structure. ENGL 010 provides an intensive review of grammar/mechanics, introduction to writing as a process, and opportunities to strengthen reading skills. Placement in ENGL 010 determined by ACT/SAT test scores.

Credit Hours: 3 - NOT for degree credit. *Prerequisite:* None

ENGLISH (ENGL) 101 - *English I*

This course is an introductory, college level writing course. The course focuses on writing as a process, effective writing style and the features of specific writing tasks. Students are encouraged to examine and appropriately revise their own reading and writing habits. Likewise, students are exposed to theories, strategies and tools that can successfully assist them in the completion of real life rhetorical tasks. Placement in ENGL 101 determined by ACT/SAT test scores. *Credit Hours: 3. Prerequisite: None*

ENGLISH (ENGL) 102 - *English II*

English Composition II builds upon the basic reading, writing, and critical thinking skills presented in ENGL 101. Emphasis is placed on critical thinking, analytical reading and strategies for presenting ideas supported by sound reasoning, convincing evidence and language appropriate to the task and audience. The course provides practical experience in written and oral communication, computers and composition, conflict resolution, critical analysis and library research. Class sessions are interactive and involve lecture, discussion, group projects, viewing of films and writing tasks. *Credit Hours: 3. Prerequisite: ENGL 101.*

ENGLISH (ENGL) 200 - *Introduction to Literature*

This course is designed to introduce students to basic features of the three major literary forms: fiction, poetry, and drama. The class meets for three hours per week during regular semesters and six hours per week during the summer semester. Course sessions are interactive. In addition to lecture, sessions include discussion, writing tasks, group activities, and presentations. Two critical analysis papers are required.

Credit Hours: 3. Prerequisite: ENGL 101 and 102.

ENGLISH (ENGL) 211 - *Academic Discourse*

This advanced composition course prepares students to meet the rhetorical (reading/writing) demands of courses within three major academic areas: humanities, social sciences, and natural sciences. The literary conventions, standards, tools, and practices of all three discourse “communities” are surveyed, and students focus their semester projects within their major academic discipline or area of interest. The class meets for three (3) hours per week for the first eight (8) weeks. During the remainder of the semester, students work independently on their projects and meet as a class for one (1) hour per week.

Credit Hours: 3. Prerequisites: ENGL 102 or permission of the instructor.

ENGLISH (ENGL) 220 - *British Literature I*

This course provides a survey of major British literary events and works occurring from the Middle Ages through the 18th century. Course sessions are interactive. In addition to lecture, sessions include discussion, writing tasks, group activities, and presentations. One analytical paper and one class presentation are required.

Credit Hours: 3. Prerequisites: ENGL 101 and 102.

ENGLISH (ENGL) 221 - *British Literature II*

This course continues the survey of major British literary history begun in ENGL 220. Study begins with the 19th century and ends with the present day. Course sessions are interactive. In addition to lecture, sessions include discussion, writing tasks, group activities, and presentations. One analytical paper and one class presentation are required.

Credit Hours: 3. Prerequisite: ENGL 101 and 102.

ENGLISH (ENGL) 230 - *American Literature I*

This course provides a survey of major American literary events and works occurring from the Colonial Period through approximately mid-19th century with the works of Walt Whitman and Emily Dickinson. Course sessions are interactive. In addition to lecture, sessions include discussion, writing tasks, group activities, and presentations. One analytical paper and one class presentation are required.

Credit Hours: 3. Prerequisites: ENGL 101 and 102.

ENGLISH (ENGL) 231 - *American Literature II*

This course continues the survey of major American literary history begun in ENGL 230. Study begins with the second half of the 19th century and ends with the present day. Course sessions are interactive. In addition to lecture, sessions include discussion, writing tasks, group activities, and presentations. One analytical paper and one class presentation are required.

Credit Hours: 3. Prerequisite: ENGL 101 and 102.

ENGLISH (ENGL) 300 - *Studies in Fiction*

This course exams the forms, theories and history of the two major forms of fiction: the novel and the short story. Course sessions are interactive. In addition to lecture, session include discussion, writing tasks, group activities and presentations.

Credit Hours: 3. Prerequisite: ENGL 101 and 102.

ENGLISH (ENGL) 301 - *Studies in Poetry*

This course examines the forms, theories, and history of poetic literature. Course sessions are interactive. In addition to lecture, sessions include discussion, writing tasks, group activities, and presentations. One analytical paper and one class presentation are required. *Credit Hours: 3. Prerequisite: ENGL 101 and 102.*

ENGLISH (ENGL) 302 - *Studies in Dramatic Literature*

This course examines the forms, theories, and history of dramatic literature. Course sessions are interactive. In addition to lecture, sessions include discussion, writing tasks, group activities, and film. One analytical paper and attendance at one or more live plays are required. *Credit Hours: 3. Prerequisite: ENGL 101 and 102.*

ENGLISH (ENGL) 310 - *Creative Writing*

This course offers study an opportunity to practice writing literary forms they may have read independently or in other courses, namely poetry and short fiction. The emphasis is on composition and critique of poems and short stories. Reading assignments focus on both classic and contemporary examples of the genres studied.

Credit Hours: 3. Prerequisite: ENGL 101.

ENGLISH (ENGL) 311 - *Technical Writing*

This course develops skills needed to compose objective, informative proposals, reports, and presentations for specialized audiences in science, business, government, and industry. Class sessions involve lecture, discussions, group activities and writing tasks

Credit Hours: 3. Prerequisites: ENGL 102 or equivalent.

ENGLISH (ENGL) 320/ART 320 - *Literature and the Visual Arts*

This course examines the relationship of the literary and visual arts. Comparative study focuses upon various practices, critical theories, and social, historical, and philosophical concepts that cross artistic boundaries and influence specific works of literature and/or visual arts. Class sessions include lecture, discussion, film, and slide presentations, and group activities. Critical thinking is encouraged as students apply concepts to analysis of fiction, poetry, paintings and sculpture from Western and Non-Western cultures. One analytical research paper and several short class presentations are required. The course is team-taught by faculty from the English and the art disciplines.

Credit Hours: 3 (credit may be earned for either ENGL 320 or ART 320 but not for both). Prerequisites: ENGL 101 and 102. ART 100, ENGL 200 recommended.

ENGLISH (ENGL) 330/ MUSIC (MUSI 330) - *Literature and Music*

This course examines the relationship of the literary and musical arts. Comparative study focuses upon various practices, critical theories, and social, historical, and philosophical concepts that cross artistic boundaries and influence specific works of literature and/or music. Class sessions include lecture, discussion, film and audio presentations, and group activities. Critical thinking is encouraged as students

apply concepts to analysis of fiction, poetry, and musical compositions from Western and Non-Western cultures. One analytical research paper and several short class presentations are required. The course is team-taught by faculty from the English and the music disciplines.

Credit Hours 3 (credit may be earned for either English 330 or Music 330 but not for both). *Prerequisites:* ENGL 101 and 102. MUSI 100, ENGL 200 recommended.

ENGLISH (ENGL) 400 - *Introduction to Critical Theory*

This course presents an historical survey of critical thought about the nature and function of reading, writing and written language. Beginning with the Greek philosophers and ending with postmodernist theorists, students study and apply concepts to specific works of fiction, poetry, drama, history, and biography. Class sessions include lecture, discussion, and group activities. One analytical research paper focusing on a book length work of the student's choice from a pre-approved list is required.

Credit Hours: 3. *Prerequisites:* ENGL 200 or permission of the instructor.

ENGLISH (ENGL) 420 - *Special Topics in British Literature*

This course focuses upon a specific author, theme, period, or genre in British literary history. Class sessions may include lecture, discussion, and film. One analytical research paper is required. This course may be taken for credit more than once when topics differ.

Credit Hours: 3. *Prerequisites:* ENGL 200 or permission of the instructor. ENGL 211 and ENGL 400 encouraged.

ENGLISH (ENGL) 430 - *Special Topics in American Literature*

This course focuses upon a specific author, theme, period, or genre in American literary history. Class sessions may include lecture, discussion, film, and presentations. One analytical research paper is required. This course may be taken for credit more than once when topics differ.

Credit Hours: 3. *Prerequisites:* ENGL 200 or permission of the instructor. ENGL 211 and ENGL 400 encouraged.

ENGLISH (ENGL) 440 - *Special Topics in World Literature*

This course focuses upon a specific author, theme, period, or genre in the literary heritage of a specific culture other than British or American. Works in translation are assigned. Class sessions may include lecture, discussion, film, and presentations. One analytical research paper is required. This course may be taken for credit more than once when topics differ.

Credit Hours: 3. *Prerequisites:* ENGL 200 or permission of the instructor. ENGL 211 and ENGL 400 encouraged.

ENGLISH (ENGL) 450 - *Senior English Project*

This independent study course allows senior English majors opportunity to pursue personal interests while practicing skills necessary for scholarly research and critical analysis of a literary work, genre, author, or period. Students who complete this course should be ready to begin graduate studies in an English program. Under close faculty supervision, the student designs and completes a project that must include development of an annotated bibliography and an analytical research paper suitable as a student presentation at a professional conference or for publication in a journal accepting undergraduate writing on a literary subject.

Credit Hours: 3. *Prerequisites:* ENGL 200, ENGL 211, ENGL 400 and 24 additional hours of English course work and permission of the instructor.

FORENSIC SCIENCE (FOSC) 100 – *Forensic Science Survey*

This course is an overview of forensic science. The criminal justice system and law enforcement are discussed briefly and related to physical evidence collection and expert witness testimony. Criminalistics, crime analysis, toxicology and forensic molecular biology are discussed in some detail.

Credit Hours: 2. *Prerequisites:* BIOL 111, 113; CHEM 101, 103.

FORENSIC SCIENCE (FOSC) 200 - *Forensic Science Professional Practice*

This course is an overview of the forensic scientist as a professional. The scope of the job, accreditation and board certification are discussed. The ethical role of the forensic scientist as an expert witness involved with the identification, collection and presentation of physical evidence is discussed at length.

Credit Hours: 2. Prerequisites: None

FORENSIC SCIENCE (FOSC) 202 – *Crime Scene Search and Recovery*

This course explores the protocol to be used at the crime scene. The course content includes processing methods, documentation, collection and preservation of physical evidence. *Credit Hours: 3.*

Prerequisites: FOSC 100 and 200.

FORENSIC SCIENCE (FOSC) 300 – *Forensic Evidence, Law and Criminal Procedures*

The law of criminal procedures and rules of evidence are discussed in detail in this course. Mock trials are held to expose students to practice as expert witnesses.

Credit Hours: 3. Prerequisites: FOSC 100, 200, 202.

FORENSIC SCIENCE (FOSC) 310 – *Criminalistics and Crime Analysis*

This course is a combination lecture and laboratory course. The techniques used to detect, identify, analyze and compare evidence are described and practiced. Fingerprint collection, hair and fiber analysis, chemical and physical evidence and biological clues are presented.

Credit Hours: 4. Prerequisites: FOSC 100, 200, 202.

FORENSIC SCIENCE (FOSC) 400/CHEM 400– *Toxicology*

This course is a combination lecture and laboratory course. The course content includes a comprehensive overview of toxins involved in forensic studies.

Credit Hours: 4. Prerequisites: FOSC 100, 200, 202, 300, 310.

FORENSIC SCIENCE (FOSC) 410 – *Forensic Molecular Biology*

Various DNA analyses are presented in this course and related to forensic science. In the laboratory, the students will practice DNA procedures.

Credit Hours: 4. Prerequisites: FOSC 100, 200, 202, 300, 310.

FORENSIC SCIENCE (FOSC) 415 – *Forensic Science Practicum*

The course constitutes practical experience in a real crime lab setting. *Prerequisites: FOSC 100, 200, 202, 300, 310, 410.*

HISTORY (HIST) 101 - *World History I*

This course introduces basic historical concepts and seeks to impart information regarding the sweep of human history. Major movements and personalities in world history are highlighted. Further, the course focuses upon the factors, which have impacted the development of the major cultures of our world, and establishes a foundation for developing an understanding of the forces, which continue to shape the modern world.

Credit Hours: 3. Prerequisites: None

HISTORY (HIST) 102 - *World History II*

This course is a continuation of HIST 101. This course will discuss and described the forces that have shaped and developed our world from the year 1650 to the present day.

Credit Hours: 3. Prerequisites: HIST 101.

HISTORY (HIST) 103 - *American History I*

This course is a survey course of United States history. This course will discuss and described the significant events of American History from the discovery to 1876.

Credit Hours: 3. Prerequisites: None

HISTORY (HIST) 104 - *American History II*

This course is a continuation of HIST 103. The significant events of American History from 1876 to the present day will be described and discussed.

Credit Hours: 3. Prerequisites: HIST 103.

HISTORY (HIST) 200 - *Louisiana History*

The course will introduce students to basic Louisiana history.

Credit Hours: 3. Prerequisites: NONE

HISTORY (HIST) 202 - *African-American History*

The course will provide students with an overview of African-American history from the early seventeenth century to the present.

Credit Hours: 3. Prerequisites: NONE

LINGUISTICS (LING) 275 - *Introduction to Language*

In this introductory language course, students explore language structure (including phonetics, phonology, morphology, syntax, semantics and pragmatics) and related topics such as writing systems, animal communication, and the history and cultural significance of language. Class sessions will include lectures, discussions and videos. Reading assignments and writing tasks are required.

Credit Hours: 3. Prerequisites: ENGL 101.

LINGUISTICS (LING) 276 - *History of the English Language*

This course examines the development of the English language from Old English times to the modern English period.

Credit Hours: 3. Prerequisites: ENGL 101.

MATHEMATICS (MATH) 011 - *Introduction to Algebra*

The purpose of this course is to provide the student with the computational skills needed to study College Algebra. Problem solving is emphasized throughout the course. This is a one-semester course covering standard topics such as Linear Equations and Inequalities, Polynomials and Factoring, Rational Expressions, Radicals and Complex Numbers, and Quadratic Functions and Inequalities. Placement in MATH 011 determined by ACT/SAT test score. *Credit Hours: 3 - NOT for degree credit. Prerequisites: None*

MATHEMATICS (MATH) 105 - *Applied Finite Mathematics*

This course illustrates contemporary uses of mathematics for students who desire an exposure to mathematics as part of a liberal education. Topics include: Principles of Reasoning, Basic Statistics, Exponential growth and decay, Measurement/Unit Analysis, Mathematical Modeling, and Financial Management.

Credit Hours: 3. *Prerequisites:* Completion of Math 011. Placement determined by ACT/SAT test score.

MATHEMATICS (MATH) 112 - *College Algebra*

The purpose of college algebra is to provide the student with computational skills needed to solve a variety of problems. The student will see a wide range of techniques and strategies applied to problem solving. Problem solving is emphasized throughout the course. This is a one semester course covering such standard topics as functions and graphs, polynomial functions, graphs and zeros, rational functions and conic sections, exponential and logarithmic functions, and systems of equations and inequalities.

Placement in MATH 112 determined by ACT/SAT test score.

Credit Hours: 3. *Prerequisites:* None

MATHEMATICS (MATH) 120 - *Plane Trigonometry*

This course will be presented through the use of cooperative and interactive learning. Critical thinking and open-ended questions and explorations will be used when appropriate. Problem solving will be emphasized throughout the course. This is a one semester course covering such standard topics as: trigonometric functions and identities, inverse trigonometric functions, graphs, solving triangles and equations, complex numbers and polar coordinates. Students will study the definitions of the trigonometric functions. Relationships between trigonometric functions will be studied as identities are established. The identities are particularly needed by students going on to a course in calculus. Graphs will give a geometric representation for both trigonometric and inverse trigonometric functions.

Credit Hours: 3. *Prerequisites:* MATH 112.

MATHEMATICS (MATH) 250 - *Calculus*

This course will provide an introduction to differential and integral calculus for students majoring in life sciences (Biology, Medicine) and behavioral sciences. The topics will include: limits, the first and second derivative, the first and second derivative tests for relative extrema, the definite and indefinite integral, and the Fundamental Theorem of Calculus. Calculus will be used to solve real world problems, including those associated with the interpretation of medical and biological data. A graphing calculator is required for this course (TI - 83 is recommended).

Credit Hours: 3. *Prerequisites:* MATH 112.

MATHEMATICS (MATH) 252 - *General Statistics*

This course introduces the students to both descriptive and inferential statistics. Emphasis is placed on applications of making decisions in the presence of uncertainty. In order to provide hands on experiences to the students, a number of activities will be made available. Central to this package are the classroom lectures and discussions and tutoring sessions with the instructor. The classroom activities will include computer demonstrations. This is a one semester course providing an introduction to standard topics such as the organization of data, measures of central tendency and dispersion, probability, probability distributions for discrete and continuous random values, the normal distribution, statistical inference, the standard normal distribution, Chi-square distribution, inference concerning two population parameters, regression and correlation, analysis of variance, and nonparametric statistics.

Credit Hours: 3. *Prerequisites:* MATH 112.

MATHEMATICS (MATH) 253 - *General Statistics Laboratory*

Computer laboratory for Mathematics 252. Students work and complete problem assignments, etc., for MATH 252, General Statistics. Tutorials will be presented.

Credit Hours: 1 (Class meets 3 hrs per week). *PREREQUISITES:* MATH 212.

COREQUISITES: MATH 252.

MUSIC (MUSI) 100 - *Music Appreciation*

This course provides the student with the tools for understanding the interaction of music and civilization from a historical perspective. To better relate to the vast body of literature basic concepts of music are taught and the student is given the terminology needed to make cogent commentary on the music of different eras. The discussion includes references to the visual arts and aspects of history as they relate to the development of music through the ages. The theoretical study is supplemented by the use of audio and audiovisual technology. Course sessions are interactive, incorporating lectures, discussions, and listening sessions. Attendance at two (or more) live concerts is required during the semester.

Credit Hours: 3. *Prerequisites:* None

MUSIC (MUSI/ENGL) 330 - *Literature and Music*

This course examines the relationship of the literary and music arts. Comparative study focuses upon various practices, critical theories, and social, historical, and philosophical concepts that cross artistic boundaries and influence specific works of literature and/or music. Class sessions will include lectures, discussions, films and audio presentations. Group activities will also be utilized. Critical thinking is encouraged as students apply concepts to analysis of fiction, poetry, and musical compositions from Western and Non-Western cultures. One analytical research paper and several short class presentations are required. The course is team taught by both English and music faculty. Credit may be earned for either ENGL 300 or MUSI 330 but not for both.

Credit Hours: 3. *Prerequisites:* MUSI 100. ENGL 200 recommended.

PHILOSOPHY (PHIL) 200 - *Philosophy and Critical Thinking*

Critical thinking is a course designed to enable the student to take charge of his/her life. This course will encourage the development of critical thinking skills and abilities, fair-mindedness, intellectual humility, and intellectual integrity among other virtues. The approach will be practical yet based on philosophical tenets that have been proven through the ages as essential components for the development of core values and virtues in the thinking human being.

Credit Hours: 3. *Prerequisites:* None

PHILOSOPHY (PHIL) 270 - *Current Moral Problems*

The course will attempt to provide a Philosophical underpinning to current moral problems. Accordingly, we will deal with values, with the good and bad, with right and wrong, insofar as they apply to urgent issues in the contemporary world milieu. The issues that we will grapple with are: world poverty, the environment, euthanasia, abortion, sex, personal relationships, equality and discrimination, criminal rights, business ethics, crime and punishment, Adirty politics, and war and peace. How are we to live our lives as moral human beings in dealing with these issues? The latter will be the fundamental challenge of this course.

Credit Hours: 3. *Prerequisites:* None

PHILOSOPHY (PHIL) 272 - *Ethical Issues in Health Care*

This course is about applied ethics in various professional health care fields. Ethics is that branch of Philosophy that seeks to determine how human actions may be judged right or wrong. It is concerned with how a human life ought to live. The goal of this course is to study the obligations of Health Care Professionals to themselves, towards their patients, and towards society as a whole. This will be accomplished by studying the foundational principles of Health Care Ethics and dealing with ethical problems inherent in Health Care.

Credit Hours: 3. *Prerequisites:* None

PHYSICAL SCIENCE (PHSC) 100 - *Physical Science*

This course investigates the physical science of measurement, vectors, kinematics, Newton's law of motion, wave motion, temperature, electric fields and currents and optics. Fundamentals of classical physical science are discussed. Considerable emphasis is placed on radiation and radiobiology.

Credit Hours: 3. *Prerequisites:* MATH 112.

PHYSICS (PHYS) 121 - *General Physics I*

Students will study and investigate the fundamentals of mechanics, heat and sound.

Credit Hours: 3. *Prerequisites:* Mathematics 112. *Corequisite:* Physics 123.

PHYSICS (PHYS) 122 - *General Physics II*

Students will study and investigate the fundamentals of electricity, magnetism and light.

Credit Hours: 3. *Prerequisites:* PHYS 121, PHYS 123.

Corequisite: PHYS 124.

PHYSICS (PHYS) 123 - *Laboratory for PHYS 121*

Selected laboratory investigations related to mechanics, heat and sound will be performed by students. Lab experiments are designed to support lecture.

Credit Hours: 1 (Lab meets three hours per week.).

Prerequisites: MATH 112. *Corequisite:* PHYS 121.

PHYSICS (PHYS) 124 - *Laboratory for PHYS 122*

Selected laboratory investigations related to electricity, magnetism and light will be performed by students. Lab experiments are designed to support lecture.

Credit Hours: 1 (Lab meets three hours per week.). *Prerequisites:* PHYS 121, PHYS 123. *Corequisite:* PHYS 122.

PSYCHOLOGY (PSYC) 100 - *Introductory Psychology*

This course involves a survey of the major fields of psychology including the biopsychological, learning theory, cognitive, humanistic, and psychoanalytic perspectives. Topics to be discussed will include the biological basis of behavior, states of consciousness, learning theory, memory, intelligence, personality, and stress.

Credit Hours: 3. *Prerequisites:* None

PSYCHOLOGY (PSYC) 230 - *Psychology Across the Life Span*

Study of the development of behavior and psychological processes throughout the prenatal period, infancy, childhood, adolescence, maturity and old age with emphasis on the normal person. Classroom activities will include lecture, group discussions, demonstrations, individual projects, video presentations, library assignments and research projects.

Credit Hours: 3. *Prerequisites:* PSYC 100.

PSYCHOLOGY (PSYC) 240 - *Theories of Personality*

This course introduces a variety of theoretical approaches to the understanding of personality. It will include psychodynamic, behavioral, social learning, trait, humanistic, cognitive and biological perspectives. Consideration is both biological and environmental determinants of personality.

Credit Hours: 3. *Prerequisites:* PSYC 100.

PSYCHOLOGY (PSYC) 250 – *Social Psychology*

In this course, students will study how people interact with each other and how they think about and respond to social situations. Included are such topics as social cognition (person perception, self perception, attitudes), social influence (conformity, persuasion, cultural sources of attitudes), and social relations (aggression, altruism, prejudice).

Credit Hours: 3. *Prerequisites:* PSYC 100

PSYCHOLOGY (PSYC) 325 - *Child Psychology*

This course will discuss the physical, psychological, social, intellectual, and moral development of an individual from birth to adolescence. It will explore the relationship between research and childrearing practices. There will also be discussion of the commonalities and diversities in today's multicultural society and its effect on children.

Credit Hours: 3. *Prerequisites:* PSYC 100 and PSYC 230.

PSYCHOLOGY (PSYC) 335 - *Abnormal Psychology*

This course is designed to increase the student's understanding about the dynamics of abnormal disorders or psychological origin. An overview of the historical perspectives of abnormal; psychology will be presented. Students will be provided with an opportunity to explore and discuss etiologies, symptomatologies, and treatments of psychological disorders.

Credit Hours: 3. *Prerequisites:* PSYC 100, PSYC 230.

PSYCHOLOGY (PSYC) 350 - *Psychology of Adolescence*

Study of the period from puberty to adulthood with an exploration of physical, cognitive, and psychosocial development. Focus will be on theories, empirical findings, and concerns of adolescence. Topics will include: 1) parent-peer relationships; 2) education; 3) identity formation; 4) sexuality; drugs; and mental health issues.

Credit Hours: 3. *Prerequisites:* PSYC 100; PSYC 230.

PSYCHOLOGY (PSYC) 360 - *The Psychology of Aging*

This course will describe the psychological theories, issues and research findings on late adulthood. The focus will be on successful aging.

Credit Hours: 3. *Prerequisites:* PSYC 100, PSYC 230.

PSYCHOLOGY (PSYC) 400 – *Research Methods in the Behavioral Sciences*

In this course, students will gain comprehensive knowledge of and experience practicing the research methodologies and statistical procedures used in behavioral research. Students will learn how to appropriately apply the use of descriptive and inferential statistics to conduct methodologically sound research. Students will learn, in depth, how to professionally conduct archival, self-report, observational, survey, and experimental research; test for reliability and validity; and use advanced procedures in descriptive and inferential statistics.

Credit Hours: 3. *Prerequisites:* 6 Credit Hours of Psychology and MATH 252.

PSYCHOLOGY (PSYC) 420 - *Neuropsychopharmacology*

The content of this course is derived from: 1) neuroanatomy; 2) neurophysiology; 3) pathophysiology; 4) biochemistry; 5) pharmacology; and the 6) behavioral sciences. Emphasis is placed on the neurobiological processes underlying psychopathology and the pharmacological interventions indicated for treatment and management of mental illness.

Credit Hours: 3. Prerequisites: 12 Credit Hours of PSYC; 12 Credit Hours of ARTS, HUMN, and, PHIL. Also, 12 Credit Hours of BIOL.

RELIGIOUS STUDIES (RELS) 100 - *Introduction to Theology*

This survey course introduces students to the basic divisions in the discipline of Theology and Religious Studies. Accordingly, it will present methods for the study of sacred scripture, the historical development of Judeo-Christian Theology, Systematic Theology, Religion and the Social Sciences, Religion and the Personality sciences, Spirituality, and the role of Liturgical Ritual, the Arts and Worship in the human expressions of Religion.

Credit Hours: 3. Prerequisites: None

RELIGIOUS STUDIES (RELS) 200 - *An Introduction to Religious Studies*

The purpose of this course is to acquaint students with certain issues in religious studies. Three such issues have been specifically identified for this course: 1) the philosophical foundations for a critical analysis of religion; 2) the foundations of Christianity; 3) and a cross-cultural examination of the major world religions. By selecting these three issues, it is intended that students will become sensitive to the philosophical nature and presuppositions of many religious claims, to the origin of Christianity and Christian beliefs about Jesus, and to the unique, as well as common perspectives of the major world religions.

Credit Hours: 3. Prerequisites: None

RELIGIOUS STUDIES (RELS) 201 - *History of Christianity*

This course is an introduction to the field of Historical Theology. Accordingly we will study the whole sweep of the origin, development, major historical events and controversies surrounding the phenomenon of Christianity not only as the most influential element that shaped Western Civilization as we know it, but also allow ourselves to fashion personal perspectives on life, justice and truth for living Christian lives more attuned to truths tested and honed through the ages.

Credit Hours: 3. Prerequisites: None

RELIGIOUS STUDIES (RELS) 280 - *Introduction to the Old Testament*

This is an overview study of the literary, historical, geographical and religious dimensions of the Old Testament. The approach used is intended to give a general, but complete overview of the whole Old Testament and the Intertestamental period. Students are guided to an understanding of God's hand in the lives and history of his people, which will lead to self-examination of biblical faith and learning in relation to daily life and individual purpose. *Credit hours: 3. Prerequisites: None*

RELIGIOUS STUDIES (RELS) 290 - *Introduction to the New Testament*

This course provides an overview of study of the literary, historical geographical and religious dimension of the New Testament.

Credit Hours: 3. Prerequisites: None

RELIGIOUS STUDIES (RELS) 300 - *The Parables of Jesus*

A detailed study of the cultural, societal, economic, political, and religious background against which Jesus proclaimed the Gospel through parables. The purpose of this course is to immerse students in a hearing of Jesus' parables from the perspective of 1st Century Palestine against which backdrop Jesus proclaimed the Good News of the imminent coming of the Kingdom of God. This course represents a challenge to the Christian believer to radically clarify his/her Christian belief system in the light of Jesus' original, and only authenticated *ippsissimi verbum* (His words itself).

Credit Hours: 3. PREREQUISITES: None

RELIGIOUS STUDIES (RELS) 310 - *Religions of the World*

The primary objective of this course will be to study, compare, and contrast the "great" world religions. These will include: Christianity; Islam; Hinduism; Buddhism; Sikhism; Confucianism; Taoism; and Judaism. Lesser know religions will also be studied: Bahai'ism; Jainism; Shintoism; Zoroastrianism.

Note: This course cross registers with ANTH 310

Credit Hours: 3. Prerequisites: None

RELIGIOUS STUDIES (RELS) 330: *Religion and Film*

This course will focus primarily on the portrayal of religion in film with a special emphasis on the cinematic representation and depiction of beliefs, doctrines, adherents, and symbology. The religious film as social and/or theological commentary will also be discussed.

Credit Hours: 3. Prerequisites: None

RELIGIOUS STUDIES (RELS) 340 – *Anthropology of Religion*

This course will explore and analyze religion (understood as both a social institution and a cultural ideology) from a distinctively anthropological point of view. Particular emphasis will be placed on both the purely theoretical and ethnographic issues that are intrinsic to a cross-cultural examination of religion.

This course cross registers with ANTH 340

Credit Hours: 3. Prerequisites: None

RELIGIOUS STUDIES (RELS) 341 – *Introduction to Christology*

This course is an introduction to the study of Jesus the Christ. This course will deal with fundamental questions about Jesus in contemporary Catholic Christian Theological reflection. Accordingly, it will study the person of Jesus as revealed in the scholarly field of study known as the new quest for the historical Jesus, the proclamations on the Kingdom of God, the son of man and the Son of God saying, and Jesus' option for the disenfranchised. The course will also study the reasons the religious leaders of the people wanted him dead, and the significance of his crucifixion, death and resurrection. Finally the course will deal with the implications between belief in Jesus as the Son of God, and justice, compassion, concern for the environment, and the meaning and personal significance of having faith in Jesus as Savior and Redeemer of the world.

Credit Hours: 3. Prerequisites: RELS 100; ENGL101

RELIGIOUS STUDIES (RELS) 400 - *Spirituality, Prayer and Healing*

A theoretical and experiential study of the relationship between spirituality, methods of prayer, and their practical application in physiological and psychological healing of people who are suffering in any way. *Credit Hours: 3. Prerequisites: RELS 100 and ENGL 101*

RELIGIOUS STUDIES (RELS) 455 - *Christian Sacraments*

This course is an experiential approach to the study of Christian sacraments. As Jesus entered fully into human experience, so this course will present the sacraments as touchstones for Divine encounters in daily living. Each of the seven sacraments their origin, Medieval synthesis, evolution, and current practices will be studied.

Credit Hours: 3. Prerequisites: PHIL 200

SOCIOLOGY (SOC) 100 - *Introductory Sociology*

This course is designed to provide an introductory review of sociology and the “sociological perspective,” which can be thought of as one of many perspectives people might take in exploring and understanding human-beings. The primary goal of the course is to stimulate thinking and to apply the “sociological perspective” to relevant issues and concerns facing us as individuals as well as future health care practitioners.

Credit Hours: 3. Prerequisites: None

SOCIOLOGY (SOC) 200 - *Marriage and the Family*

This course will explore sociological perspectives on marriage and the family with emphasis on issues facing contemporary American families. Topics include: family forms, marriage, communication, domestic violence, division of labor in the family, work and family relations, child rearing, divorce and re-marriage.

Credit Hours: 3. Prerequisites: SOCI 100.

SOCIOLOGY (SOCI) 301 - *Sociology of Deviance and Crime*

Deviance and crime are important topics in contemporary sociology. This course will examine deviance, deviant behavior, and social control with an emphasis on problems facing contemporary American society. The first part of the course explores how we define deviance and the theories used to explain it. Part two will focus on types of deviance including crime, mental illness, and juvenile delinquency. Part three examines the approaches to social control (incarceration, decarceration, rehabilitation) and the problems associated with it.

Credit Hours: 3. *Prerequisites:* SOCI 100.

SOCIOLOGY (SOCI) 374 - *Dying and Death*

This course explores the social, psychological, and cultural aspects of dying and death in our society. Emphasis is placed on our role as professionals and health care providers, with the intent to educate and develop personal insight and skills necessary to assist patients, families and colleagues with the various aspects of dying and death. The course utilizes both didactic and experiential teaching methods to establish a better understanding and ability to cope with this life process, both as individuals and as professionals.

Credit Hours: 3. *Prerequisites:* SOCI 100.

SOCIOLOGY (SOCI) 380 - *Medical Sociology*

Course is designed to understand the relationship between sociology and medicine. Methods will be described and discussed in which sociological concepts and perspectives can be used to increase our knowledge of health and illness. The social structure of the health care system will be elaborated. The relationships between sociological, cultural factors, and health, disease, etc. will be discussed.

Credit Hours: 3. *Prerequisites:* SOCI 100.

SOCIOLOGY (SOCI) 400 - *Sociology of Health and Medicine*

This course examines sociological perspectives on health and illness as well as social problems in the context of contemporary health care in the United States. Topics include: the definition of health and illness, social responses to illness, social stratification and health, and the perceived crisis in American health care and biomedical technology.

Credit Hours: 3. *Prerequisites:* SOCI 100.

SOCIOLOGY (SOCI) 401 - *Sociology of Race, Class, and Gender*

The main objective of this course is to investigate the institutional arrangements and cultural patterns that underlie gender, race, and class-based inequalities in American Society. In the process, we will repeatedly return to the central question: In what ways are race, class, and gender interrelated such that they appear in the experiences and "life chances" of individuals in different social locations at different points in time?

Credit Hours: 3. *Prerequisites:* SOCI 100.

SPANISH (SPAN) 101 - *Elementary Spanish I*

This entry-level course introduces students to the basic lexicon and structures of Spanish. Emphasis is on communicative language. This course is for students with no previous study of Spanish. *Credit Hours:* 3. *Prerequisites:* None

SPANISH (SPAN) 102 - *Elementary Spanish II*

This course is a continuation of SPAN 101. Emphasis is on communicative language use. *Credit Hours:* 3. *Prerequisites:* SPAN 101.

SPANISH (SPAN) - 201 - *Intermediate Spanish I*

This course builds upon skills introduced in elementary Spanish. Emphasis is on reading and writing. *Credit Hours:* 3. *Prerequisites:* SPAN 101, SPAN 102.

SPANISH (SPAN) 202 - *Intermediate Spanish II*

This course is a continuation of SPAN 202. Emphasis is on reading and writing.
Credit Hours: 3. Prerequisites: SPAN 101, SPAN 102, SPAN 201.

SPEECH (SPCH) 100 - *Fundamentals of Speech*

This course studies the factors that govern good speech content and delivery. The course introduces students to speech behavior in human interaction. Students will learn to deliver and prepare a quality speech.

Credit Hours: 3. Prerequisites: None