Astronomy (AST)

AST 220. INTRODUCTION TO ASTRONOMY
4 cr. hrs., Lec. 3, Lab. 2
This course covers the history of astronomy and the development of astronomical thought leading to the birth of modern astronomy and its most recent development. Emphasis is placed on the coverage of astronomical instruments and measuring technologies, the solar system, the Milky Way galaxy, important extra galactic objects and cosmology. Laboratory is required.

Biology (BIO)

BIO 103. PRINCIPLES OF BIOLOGY I
4 cr. hrs., Lec. 3, Lab. 2
This is an introductory course for science and non-science majors. It covers physical, chemical, and biological principles common to all organisms. These principles are explained through a study of cell structure and function, cellular reproduction, basic biochemistry, cell energetics, the process of photosynthesis, and Mendelian and molecular genetics. Also included are the scientific method, basic principles of evolution, an overview of the diversity of life with emphasis on viruses, prokaryotes, and protists. A 120-minute laboratory is required. Prerequisite: Regular admission status.

BIO 104. PRINCIPLES OF BIOLOGY II
4 cr. hrs., Lec. 3, Lab. 3
This course is an introduction to the basic ecological and evolutionary relationships of plants and animals and a survey of plant and animal diversity including classification, morphology, physiology, and reproduction. A 180-minute laboratory is required. Prerequisite: BIO 103.

BIO 120. MEDICAL TERMINOLOGY 3 cr. hrs.
This course is a survey of words, terms, and descriptions commonly used in medical arts. Emphasis is placed on spelling, pronunciation, and meanings of prefixes, suffixes, and roots. Laboratory is not required. Prerequisite: Regular admission status.

BIO 201. HUMAN ANATOMY AND PHYSIOLOGY I
4 cr. hrs., Lec. 3, Lab. 2
Human Anatomy and Physiology I covers the structure and function of the human body. Included is an orientation of the human body, basic principles of chemistry, a study of cells and tissues, metabolism, joints, the integumentary, skeletal, muscular, and nervous systems, and the senses. Dissection, histological studies, and physiology are featured in the laboratory experience. A 120-minute lab is required.
Prerequisite: BIO 103

BIO 202. HUMAN ANATOMY AND PHYSIOLOGY II
4 cr. hrs., Lec. 3, Lab. 2
Human Anatomy and Physiology II covers the structure and function of the human body. Included is a study of basic nutrition, basic principles of water, electrolyte, and acid-base balance, and the endocrine, respiratory, digestive, excretory, cardiovascular, lymphatic, and reproductive systems. Dissection, histological studies, and physiology are featured in the laboratory experience. A 120-minute lab is required. Prerequisite:
BIO 103 and BIO 201.

BIO 220. GENERAL MICROBIOLOGY
4 cr. hrs., Lec. 2, Lab. 4
This course includes historical perspectives, cell structure and function, microbial genetics, infectious diseases, immunology, distribution, physiology, culture, identification, classification, and disease control of microorganisms. The laboratory experience includes micro-techniques, distribution, culture identification, and control. Two 120-minute laboratories per week are required. Prerequisite: BIO 103

BIO 230. HUMAN PATHOPHYSIOLOGY
4 cr. hrs., Lec. 3, Lab. 2
Human Pathophysiology covers the nature, etiology, prognosis, prevention, and therapeutics of human disease. A 120-minute laboratory is required. Prerequisite: BIO 103, BIO 201, BIO 202, and BIO 220.

Chemistry (CHM)

CHM 104. INTRODUCTION TO INORGANIC CHEMISTRY
4 cr. hrs., Lec. 3, Lab. 3
This is a survey of general chemistry for students who do not intend to major in science or engineering and may not be substituted for CHM 111. Lecture will emphasize the facts, principles, and theories of general chemistry including math operations, matter and energy, atomic structure, symbols and formulas, nomenclature, the periodic table, bonding concepts, equations, reactions, stoichiometry, gas laws, phases of matter, solutions, pH, and equilibrium reactions. Laboratory is required. Prerequisite: MTH 098 or equivalent math placement score.

CHM 105. INTRODUCTION TO ORGANIC CHEMISTRY
4 cr. hrs., Lec. 3, Lab. 3
This is a survey course of organic chemistry and biochemistry for students who do not intend to major in science or engineering. Topics will include basic nomenclature, classification of organic compounds, typical organic reactions, reactions involved in life processes, function of biomolecules, and the handling and disposal of organic compounds. Laboratory is required. Prerequisite: CHM 104 or CHM 111.

CHM 111. COLLEGE CHEMISTRY I
4 cr. hrs., Lec. 3, Lab. 3
This is the first course in a two-semester sequence designed for the science or engineering major who is expected to have strong background in mathematics. Topics in this course include measurement, nomenclature, stoichiometry, atomic structure, equations and reactions, basic concepts of thermochemistry, chemical and physical properties, bonding, molecular structure, gas laws, kinetic-molecular theory, condensed matter, solutions, colloids, and some descriptive chemistry topics. Laboratory is required. Prerequisite: MTH 112 or equivalent math placement score.

CHM 112. COLLEGE CHEMISTRY II
4 cr. hrs., Lec. 3, Lab. 3
This is the second course in a two-semester sequence designed primarily for the science and engineering student who is expected to have a strong background in mathematics. Topics in this course include chemical kinetics, chemical equilibrium, acids and bases, ionic equilibrium of weak electrolytes, solubility product principle, chemical thermodynamics, electrochemistry, oxidation-reduction, nuclear chemistry, and introduction to organic chemistry and biochemistry, atmospheric chemistry, and selected topics in descriptive chemistry including the metals, nonmetals, semi-metals, coordination compounds, transition compounds, and post-transition compounds. Laboratory is required. Prerequisite: CHM 111.

CHM 221. ORGANIC CHEMISTRY I
4 cr. hrs., Lec. 3, Lab. 3
This course is the first course in a two-semester sequence. Topics in this course include nomenclature, structure, physical and chemical properties, synthesis, and typical reactions for aliphatic, alicyclic, and aromatic compounds, with special emphasis on reaction mechanisms, spectroscopy, and stereochemistry. Laboratory is required and will include the synthesis and con□irmation of representative organic compounds with emphasis on basic techniques. Prerequisite: CHM 112.

CHM 222. ORGANIC CHEMISTRY II
4 cr. hrs., Lec. 3, Lab. 3

This is the second course in a two-semester sequence. Topics in this course include nomenclature, structure, physical and chemical properties, synthesis, and typical reactions for aliphatic, alicyclic, aromatic, and biological compounds, polymers and their derivatives, with special emphasis on reaction mechanisms, spectroscopy, and stereochemistry. Laboratory is required and will include the synthesis and confirmation of representative organic compounds with emphasis on basic techniques. Prerequisite: CHM 221.

CHM 250 DIRECTED STUDIES IN CHEMISTRY 3 cr. hrs.
This course is designed for independent study in specific areas of chemistry, chosen in consultation with a faculty member, and carried out under faculty supervision. This course may be repeated three times for credit. Prerequisite: Permission of the instructor.

Geography (GEO)

GEO 100. WORLD REGIONAL GEOGRAPHY 3 cr. hrs.
This course surveys various countries and major regions of the world with respect to location and landscape, world importance, political status, population, type of economy, and its external and internal organization problems and potentials.

GEO 101. PRINCIPLES OF PHYSICAL GEOGRAPHY I
4 cr. hrs., Lec. 3, Lab. 2
Physical Geography I is the first in a two part sequence including topics such as weather and climate relative to the earth and relationships between the earth and sun. Laboratory is required.

GEO 102. PRINCIPLES OF PHYSICAL GEOGRAPHY II
4 cr. hrs., Lec. 3, Lab. 2
Physical Geography II is the second in a two part sequence including topics such as landforms, landscapes, soil, and vegetation of the earth. Laboratory is required. Prerequisite: GEO 101.

Health Education (HED)

HED 224. PERSONAL AND COMMUNITY HEALTH
3 cr. hrs.
This course covers health problems for the individual and for the community. Areas of study include mental health, family life, physical health, chronic and degenerative diseases, control of communicable diseases, and the understanding of depressants and stimulants. Healthful living habits will be emphasized.

HED 231. FIRST AID 3 cr. hrs.
This course provides instruction to the immediate, temporary care which should be given to the victims of accidents and sudden illness. It also includes standard and advanced requirements of the American Red Cross and/or the American Heart Association.

Home Economics (HEC)

HEC 140. PRINCIPLES OF NUTRITION 3 cr. hrs.
This course introduces students to the principles of nutrition and the role and functions of nutrients to man's food. Basic information concerning food selection and nutrition as a factor in health, ecology, and economy is included. Implications of nutrition for children may be stressed. Prerequisite: None.

Physical Education (PED)

PED 100. FUNDAMENTALS OF FITNESS 3 cr. hrs.

This lecture course includes the basic principles of physical education and physical fitness. It explores psychological and physiological effects of exercise and physical Fitness, including effects on the human skeleton, muscle development, respiration, and coordination. It is viewed as an introduction to such laboratory courses as slimnastics, weight training, and conditioning. The course may also include fitness evaluation, development of individual fitness programs, and participation in fitness activities.

PED 103. WEIGHT TRAINING (BEGINNING)
1 cr. hr., Activity: 2
This course introduces the basics of weight training. Emphasis is placed on developing muscular strength, muscular endurance, and muscle tone. Upon completion, students should be able to establish and implement a personal weight training program.

PED 105. PERSONAL FITNESS
1 cr. hr., Activity: 2
This course is designed to provide the student with information allowing him/her to participate in a personally developed fitness program. Topics include cardiovascular, strength, muscular endurance, flexibility and body composition.

PED 126. RECREATIONAL GAMES
1 cr. hr., Activity: 2
This course is designed to give an overview of a variety of recreational games and activities. Emphasis is placed on the skills and rules necessary to participate in a variety of lifetime recreational games. Upon completion, students should be able to demonstrate an awareness of the importance of participating in lifetime recreational activities.

PED 133. TENNIS (BEGINNING)
1 cr. hr., Activity: 2
This course emphasized the fundamentals of tennis. Topics include basic strokes, rules, etiquette, and court play. Upon completion, students should be able to play recreational tennis.

PED 160. SOCIAL DANCE
1 cr. hr., Activity: 2
This course introduces the fundamentals of popular social dances. Emphasis is placed on basic social dance techniques, dances, and a brief history of social dance. Upon completion, students should be able to demonstrate specific dance skills and perform some dances.

PED 200. FOUNDATIONS OF PHYSICAL EDUCATION
3 cr. hrs.
In this course, the history, philosophy, and objectives of health, physical education, and recreation are studied with emphasis on the physiological, sociological, and psychological values of physical education. It is required of all physical education majors.

PED 251. VARSITY BASKETBALL 1 cr. hr., Activity: 2
This course covers advanced fundamentals of basketball. Emphasis is placed on skill development, knowledge of the rules, and basic game strategy. Upon completion, students should be able to participate in competitive basketball. Prerequisite: Permission of Instructor.

PED 252. VARSITY BASEBALL 1 cr. hr., Activity: 2
This course covers advanced baseball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, students should be able to play baseball at a competitive level. Prerequisite: Permission of instructor.

PED 254. VARSITY SOFTBALL 1 cr. hr., Activity: 2

This course introduces the fundamental skills and rules of softball. Emphasis is placed on proper techniques and strategies for playing softball. Upon completion, students should be able to play competitive softball. Prerequisite: Permission of instructor.

PED 255. VARSITY TENNIS 1 cr. hr., Activity: 2
This course emphasizes the refinement of playing skills. Topics include continuing the development of fundamentals, learning advanced serves, and strokes and pace and strategies in singles and doubles play. Upon completion, students should be able to play competitive tennis. Prerequisite: Permission of Instructor.

PED 258. VARSITY VOLLEYBALL 1 cr. hr., Activity: 2
This course covers more advanced volleyball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, students should be able to participate in competitive volleyball. Prerequisite: Permission of Instructor.

Physical Science (PHS)

PHS 111. PHYSICAL SCIENCE I 4 cr. hrs., Lec. 3, Lab. 2
This course provides the non-technical student with an introduction to the basic principles of geology, oceanography, meteorology, and astronomy. Laboratory is required.
Prerequisite: MTH 091.
PHS 112. PHYSICAL SCIENCE II 4 cr. hrs., Lec. 3, Lab. 2
This course provides the non-technical student with an instruction to the basic principles of chemistry and physics. Laboratory is required. Prerequisite: MTH 091.

PHS 230. INTRODUCTION TO METEOROLOGY
4 cr. hrs., Lec. 3, Lab. 2
This course is an introductory survey of meteorology emphasizing the hydrologic cycle, cloud formation, weather maps, forecasting, and wind systems. Local weather systems will be given detailed study. Laboratory is required.

Physics (PHY)

PHY 115. TECHNICAL PHYSICS 4 cr. hrs., Lec. 3, Lab. 2
Technical physics is an algebra based physics course designed to utilize modular concepts to include motion, forces, torque, work energy, heat wave/sound, and electricity. Results of physics education research and physics applications in the workplace are used to improve the student's understanding of physics in technical areas. Upon completion, students will be able to define motion and describe specific module concepts; utilize microcomputers to generate motion diagrams; understand the nature of contact forces and distinguish passive forces; work cooperatively to set-up laboratory exercises; and demonstrate applications of module-specific concepts. Prerequisite: MTH 100.

PHY 201. GENERAL PHYSICS I - TRIG BASED
4 cr. hrs., Lec. 3, Lab. 2
This course is designed to cover general physics at a level that assures previous exposure to college algebra and basic trigonometry. Specific topics include mechanics, properties of matter and energy, thermodynamics, and periodic motion. A laboratory is required. Prerequisite: MTH 113 or equivalent.

PHY 202. GENERAL PHYSICS II - TRIG BASED
4 cr. hrs., Lec. 3, Lab. 2
This course is designed to cover general physics using college algebra and basic trigonometry. Specific topics include wave motion, sound, light optics, electrostatics, circuits, magnetism, and modern physics. Laboratory is required. Prerequisite: PHY 201.

PHY 213. GENERAL PHYSICS WITH CAL I
4 cr. hrs., Lec. 3, Lab. 2

This course provides a calculus-based treatment of the principle subdivisions of classical physics: mechanics and energy. Laboratory is required. Prerequisite: MTH 125.

PHY 214. GENERAL PHYSICS WITH CAL II
4 cr. hrs., Lec. 3, Lab. 2
This course provides a calculus-based study in classical physics. Topics included are: simple harmonic motion, waves, sound, light, optics, electricity and magnetism. Laboratory is required. Prerequisite: PHY 213.