

AUTO 208

Automatic Transmissions and Transaxles

Prerequisite: AUTO 101

2 lectures, 4 lab hrs per week: 4 hrs credit

This course covers component repair operations, adjustments, and performance testing on automatic transmissions, transmission controls, auto transaxle transmissions, overdrives, and drive lines.

AUTO 210

Automotive Electricity/Electronics II

Prerequisite: AUTO 101 and 107

2 lectures, 4 lab hrs per week: 4 hrs credit

This course covers electrical circuit identification, isolation, testing repair, and component operation. Service units include batteries, starting system, ignition system, charging system, light circuits, gauges, and electrical accessories, and diagnosis on chassis electronics and all electrical components of the vehicle.

AUTO 211

Automotive Engine Performance II

Prerequisite: AUTO 206, 210

2 lectures, 4 lab hrs per week: 4 hrs credit

Student technicians cover the operational aspects of automotive computer output/input control systems, performance diagnosis procedures, repair, service, and OBD I, OBD II, readiness monitors, and IM-240.

AUTO 215

Advanced Automotive Service and Systems

Prerequisite: AUTO 206, 210

2 lectures, 4 lab hrs per week: 4 hrs credit

This course focuses on advanced automotive engine, engine performance, brake, electric/electronic, computer, and transmission system operation and diagnosis.

AUTO 223

Automotive Parts Management

Prerequisite: Placement into ENG 099 or higher

2 lectures per week: 2 hrs credit

Parts training includes the use of parts, equipment and supply catalogs, descriptive nomenclature, stock familiarization, pricing procedures, and inventory control.

AUTO 224

Automotive Service Management

Prerequisite: Placement into ENG 099 or higher

2 lectures per week: 2 hrs credit

This course covers automotive repair shop operations including the use of flat rate manuals, repair and order writing, familiarization with manufacturer and company policies and procedures, and existing labor agreements.

AUTO 298

Internship Seminar

Prerequisite: 12 hrs in AUTO courses

1 lecture per week: 1 hr credit

This course is structured to enable interns to participate in group discussions on current automotive repair practices and experiences related to their internship studies. A written report of work related activities is required.

AUTO 299

Internship: Automotive

Prerequisite: 12 hrs in AUTO and consent of program coordinator

20 lab hrs per week: 2 hrs credit (variable hrs of credit)

This course provides on-the-job experience combined with supervision. It is designed to present service technicians with a performance view of the automotive service professions.

Biological Science

BIOL 100 (IAI: LI 900L)

General Education Biology

Prerequisite: Placement into ENG 099 or higher

3 lectures, 2 lab hrs per week: 4 hrs credit

This one-semester introductory course for non-science majors is designed to fill the general education requirement for life science with a laboratory. The course covers cell biology, genetics, evolution and diversity, plant and animal structure and functions, animal behavior, and ecology. Students cannot receive credit for both BIOL 100 and 112.

BIOL 103 (IAI: LI 901)

Plants and Society

Prerequisite: Placement into ENG 099 or higher

3 lectures per week: 3 hrs credit

This course emphasizes scientific inquiry through selected concepts in biology such as organization, function, heredity, evolution, and ecology. Topics include plant structure, growth, genetics, evolution, physiology, reproduction, and the economic importance and inter-relationships between plants and humans. This course is for non-majors.

BIOL 105 (IAI: LI 905)

Environmental Biology

Prerequisite: Placement into ENG 099 or higher

3 lectures per week: 3 hrs credit

A consideration of the timely and urgent problems of mankind of a biological nature: pollution of air and water, adverse effects of radiation and insecticides on the environment, overpopulation, food production, thermal pollution, noise pollution, and other related topics.

BIOL 106 (IAI: LI 906L)**Heredity and Society**

Prerequisite: Placement into ENG 099 or higher

3 lectures, 2 lab hrs per week: 4 hrs credit

This course is an introduction to basic genetic principles and contemporary issues in biotechnology. The ethical, political, and social implications of biological advances in genetics are addressed.

BIOL 108**Essentials of Anatomy Physiology**

Prerequisite: Placement into ENG 099 or higher

4 lectures per week: 4 hrs credit

The course involves the basic structure and function of the organs and systems of the human body. This one-semester lecture class is recommended for students in the Surgical Technology and Personal Trainer programs.

BIOL 111 (IAI: BIO 910)**Cellular and Molecular Biology**

Prerequisite: High school biology or equivalent; placement into ENG 099 or higher

3 lectures, 3 lab hrs per week: 4 hrs credit

This is a course designed for science and health majors. It provides an introduction to biochemistry, molecular genetics, cell structure, cell function, cellular process, and cell division.

This course also includes an introduction to Mendelian inheritance and gene activity.

BIOL 112 (IAI: LI 900L; BIO 910)**Organismal Biology**

Prerequisite: High school biology or equivalent; placement into ENG 099 or higher

3 lectures, 3 lab hrs per week: 4 hrs credit

This is a course designed for science and health majors. It provides an introduction to the structure and function of microorganisms, fungi, plants, and animals. This course also includes an introduction to evolutionary and ecological principles. Students cannot get credit for both BIOL 100 and 112.

BIOL 115**Microbiology for Surgical Technologists**

Prerequisite: Admission to Surgical Technology program

4 lectures per week: 4 hrs credit

Students learn the impact of microbiology on the practice of aseptic technique and how to apply those principles in controlling infection in the operating room. The immune response, hypersensitivity, vaccines, common pathogens, and the process of infection also are addressed.

BIOL 120**Independent Studies in Ecology**

Prerequisite: Consent of instructor

15 lab hrs per week: 3 hrs credit (variable credit)

This course is designed to allow students to obtain hands-on experience in the various phases of ecosystem restoration and preservation as well as in monitoring the factors involved in ecosystem functioning. Students inventory flora and fauna of ecosystems, monitor water and soil quality, and perform activities needed to maintain viable ecosystems. The course includes field work and writing reports on activities carried out in the field.

BIOL 211**Microbiology**

Prerequisite: BIOL 111 with C or better; or CHEM 105 with a C or better; or high school chemistry within the past 5 years with a C or better.

3 lectures, 3 lab hrs per week: 4 hrs credit

This is an introduction to the study of microscopic organisms, with an emphasis on bacteria. Special attention is given to their structure, physiology, and ecology. This course also includes an introduction to virology, medical parasitology, medical mycology, and immunological concepts. This course is especially beneficial for health profession majors because of the emphasis on the microbial role in the disease process focusing on the epidemiology, clinical manifestation, and treatment of microbial diseases.

BIOL 221**Human Anatomy and Physiology I**

Prerequisite: BIOL 111 with a C or better; or CHEM 105 with a C or better; or high school chemistry within the past 5 years, with a C or better.

3 lectures, 2 lab hrs per week: 4 hrs credit

This is part I of a two-semester sequence of study concerning anatomy and physiology of the human body. Part I includes the study of basic principles of chemistry, cell biology, cellular metabolism, and tissue histology. It also covers the integumentary system, skeletal system, muscle system, and the nervous system.

BIOL 222**Human Anatomy and Physiology II**

Prerequisite: BIOL 221

3 lectures, 2 lab hrs per week: 4 hrs credit

This is part II of a two-semester sequence of study on the anatomy and physiology of the human body. It also covers senses, endocrine system, digestive tract, nutrition, metabolism, respiratory system, cardiovascular system, lymphatic system, urinary system, water and electrolyte balance, reproductive system, human growth and development, and human genetics.