

## BIOLOGY

### BIOL-110 Non-Majors Biology 4 cr.

An understanding of how biological issues affect society is crucial for citizens of today's society. This non-majors course is an introduction to such issues as cloning; genetics, genetic screening and genetically modified organisms; global warming and the carbon cycle; population growth, environmental hazards, ecology, evolution and biodiversity, especially local flora. Prerequisites: Scores of 70+ (Engl); 58+ (Reading); or completion of ENGL 095 and RDNG 095. Corequisite: ENGL and RDNG 095 can be taken concurrently. Semester offered: Fall and Spring. This course does not substitute for BIOL 121 or 122.

### BIOL-112 Human Body Structures and Functions (3+2p) 4 cr.

The organization, metabolic processes and regulation of cells and tissues. Basic concepts of the physical and chemical operation of the organs and systems of the human body. System review to include integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary and reproductive systems. This course does not substitute for BIOL 121, 252, or 253. Non-transferable. Semester offered: Fall and Spring.

### BIOL-121 Introductory Biology I (3+2p) 4 cr.

An introduction to the basic processes of living organisms. Topics to be covered will include cell structure and function, cellular reproduction, metabolism, photosynthesis, the basic chemical processes, introductory biochemistry, energetics, enzyme structure and function, protein synthesis, and basic Mendelian genetics. Semester offered: Fall and Spring. [NM Common Course Number BIOL 1214, Area III; Laboratory Science Core]. Prerequisite: Scores of 85+ (English); 82+ (Reading); 66+ (Arithmetic) or successful completion of MATH 095. Co-requisite: RDNG 113 and/or ENGL 111 can be taken concurrently.

### BIOL-122 Introductory Biology II (3+2p) 4 cr.

An introduction to dynamic processes of living things, and includes local natural history, population genetics, ecology and evolutionary dynamics. Prerequisite: Scores of 70+ (English), 58+ (Reading); or completion of or concurrent enrollment in ENGL 095 and RDNG 095. Semester offered: Fall and Spring. [NM Common Course Number BIOL 1224, Area III; Laboratory Science Core]

### BIOL-210 Field Biology 2 cr. to 4 cr.

A field oriented course to be offered during semester break, interim session or the summer. This course will consist of travel and field-based biological education at distant sites. The course may involve attendance at one to several preparatory classes before field work begins. May require additional travel and accommodation fees. Semester Offered: On Demand.

### BIOL-220 General Botany (3+2p) 4 cr.

This course is an introduction to plant biology for majors and non-majors. Topics include plant cell biology, anatomy, physiology, and pollination studies as well as phylogenetic study of Fungi and photosynthetic Bacteria and Protista. Plant ecology and introductory plant systematics will also be introduced. Semester Offered: Spring.

### BIOL-222 Invertebrate Zoology (3+2p) 4 cr.

This course will provide an introduction to all phyla of invertebrates, emphasizing the unifying characteristics within each group. It will examine how form relates to function, and differences in structure and physiology between phyla. Systematics and phylogenetic relationships will be discussed. Prerequisite: BIOL 121 or BIOL 122. Semester Offered: Fall of even-numbered years.

### BIOL-223 Vertebrate Zoology (3+2p) 4 cr.

This course covers the taxa of animals with backbones: fishes, amphibians, reptiles (including birds) and mammals. It includes relationships, structure, niches and behaviors. Prerequisite: BIOL 122. Semester Offered: Fall of odd-numbered years.

### BIOL-224 Microbiology (3+3p) 4 cr.

This course is an introductory survey of microorganisms. It is not limited to the study of pathogenic bacteria, but will also cover protists and fungi. Within this context principles of isolation, taxonomy, ecology and physiology will be covered. Prerequisite: BIOL 121. Semester offered: Fall, Spring and Summer (on demand).

### BIOL-230 Environmental Conservation (3+2p) 4 cr.

Topics covered include the study of basic ecological principles, human population growth and its impact on the global environment, including air, water and land pollution; global climate change; renewable and non-renewable energy sources; and biodiversity. Prerequisite: Accuplacer score of 70+ (English); 58+ (reading). Semester Offered: Fall, Spring.

### BIOL-237 Ethnobotany (3+2p) 4 cr.

Integrates classical botanical knowledge and identification techniques with historical and current native uses of plants for food, healing, fiber, housing, arts, and sacred activities. Although a broad view will be taken, this interdisciplinary course will emphasize the ethnobotany of the Four Corners region. The class may include field trips. Prerequisites: ENGL 099; RDNG 095; Semester offered: Fall.

### BIOL-240 Ecology (3+2p) 4 cr.

A study of the dynamics of biological systems. Covers population genetics, population ecology (interactions such as mutualism, competition and predation), and evolutionary theory. Prerequisite: BIOL 122. Semester offered: Spring.

### BIOL-250 Systematic Botany (3+2p) 4 cr.

A study of classification and taxonomy of vascular plants. Topics covered in lecture and laboratory deal with taxonomic principles and philosophy, nomenclature, terminology, use of keys, and history of classification systems. The use of cytogenetics, anatomy, ecology, palynology, chemistry, and the computer in modern systematics is discussed. Students will learn to recognize many of the major plant families and will be taught the methods of botanical fieldwork. A plant collection will be made. Field trips are required, including a three-day excursion to southeastern Utah. Semester offered: On Demand.

### BIOL-252 Human Anatomy and Physiology I (3+2p) 4 cr.

The organization of cells and tissues and their metabolic and homeostatic processes and regulation. Physical and chemical operation of organs and systems of the human body, including the integumentary,

skeletal, muscular and nervous systems. Prerequisite: BIOL 121 or high school biology within the last 5 years. CHEM 110 or equivalent and HTP 110 are strongly recommended. Semester offered: Fall, Spring and Summer.

**BIOL-253 Human Anatomy and Physiology II (3+2p) 4 cr.**  
Physical and chemical operation of the organs and systems of the human body, including endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary and reproductive. Basic concepts of metabolism, energy, fluid and electrolyte balance, heredity and human development. Prerequisite: BIOL 252. Semester Offered: Fall and Spring.

**BIOL-255 Introduction to Genetics (3+2p) 4 cr.**  
This course will provide an introduction to modern genetic principles, including mechanisms of inheritance (Mendelian rules and non-Mendelian inheritance), molecular genetics, population genetics, and modern genetic laboratory techniques. Prerequisite: BIOL 121. Semester offered: Fall.

**BIOL-260 Introduction to Cell Biology (3+2p) 4 cr.**  
The fine structure of prokaryotic and eukaryotic cells, their chemical composition and organization, cell metabolism, and bioenergetics. A description of major research tools used by cell biologists. Prerequisites: BIOL 121, CHEM 111. Semester Offered: Spring of odd-numbered years.

**BIOL-281 Pathophysiology I 3 cr.**  
This is the first of a two semester course designed for students pursuing degrees in health careers or biological sciences. The initial material covers the central concepts of cellular and tissue pathophysiology. Thereafter, a systematic survey of genetic diseases, cancer, and the diseases of the immune, nervous, endocrine, and reproductive systems is undertaken. The etiology, pathophysiology, clinical manifestations, and other clinical considerations are discussed. Prerequisites: BIOL 252. Semester offered: Fall.

**BIOL-282 Pathophysiology II 3 cr.**  
The second semester of pathophysiology builds on the information acquired during the first semester. The systematic survey of diseases continues with the hematologic, cardiovascular, respiratory, urinary, digestive, musculoskeletal, and integumentary systems. The etiology, pathophysiology, clinical manifestations and other clinical considerations are discussed. Prerequisite: BIOL 281. Semester offered: Spring.

## BUILDING TRADES (Carpentry)

**CARP-111 Beginning Carpentry I 8 cr.**  
Applied theory and practice dealing with safety, blueprints, design, specifications, and hand/power tools. Corequisite: CARP 115. Semester offered: Fall.

**CARP-115 Beginning Carpentry II 10 cr.**  
Applied theory and practice in plot and foundation layout, floor and wall framing, and roof and exterior wall construction. Corequisite: CARP 111. Semester offered: Fall.

**CARP-121 Intermediate Carpentry I 8 cr.**  
Applied theory and practice in form and residential concrete, window

and door installation, and finishing materials. Prerequisites: CARP 111, CARP 115. Corequisite: CARP 127. Semester offered: Spring.

**CARP-127 Intermediate Carpentry II 10 cr.**  
Applied theory and practice in interior wall material and application, exterior trim and finish, and finishing materials. Corequisite: CARP 121. Semester offered: Spring.

**CARP-195/196 Special Topics 1-4 cr.**  
Specific subjects and credits to be announced in the Schedule of Classes. May be repeated one or more times for additional credit. Semester offered: On Demand.

**CARP-221 Construction Supervision 6 cr.**  
This course is offered to degree seeking and advanced carpentry students. Students will be instructed in supervision, estimating, construction materials, tools, and equipment used in the construction trade. Estimating the ratio of labor to material cost for rough framing, exterior finish, and interior finish carpentry will also be covered. Prerequisites: CARP 111, CARP 115, CARP 121, CARP 127. Semester offered: Fall and Spring.

**CARP-280 Cooperative Education 1-10 cr.**  
The student will be employed at an approved work station which will provide relevant learning experiences that are directly related to the student's career and educational goals. The student will be supervised and evaluated jointly by his/her employer and San Juan College personnel. Semester offered: On Demand.

## BUSINESS ADMINISTRATION

**BADM-114 Intro to Business 3 cr.**  
A survey course presenting an overall integrated picture of American business and its operations. Included are such topics as forms of business ownership, management, internal organization, production, personnel, labor relations, marketing, short-term and long-term finance, insurance, accounting principles, business law, and entrepreneurship. Prerequisites: ENGL 095 or APEN 070+; and RDNG 095 or APRD 058 Semester offered: Fall, Spring and Summer.[NM Common Course Number: BUSA 1113, Business Transfer Module]

**BADM-132 Intro to Financial Planning 3 cr.**  
This course emphasizes the decision-making processes necessary for all aspects of personal financial planning. It familiarizes the student with a budgeting framework that enables the coordination of current goals with future goals. Students will be introduced to various aspects of major financial decision-making. Prerequisites: ENGL 095 or APEN 070+; and RDNG 095 or APRD 058+. Semester offered: Spring.

**BADM-134 Supervision 3 cr.**  
This course is intended for those who either want to become supervisors or want to improve their present level of supervisory skills and knowledge. Management principles and their application to actual on-the-job situations are presented enabling students to contribute more effectively to the goals of the organization. Prerequisites: ENGL 095 or APEN 070+; and RDNG 095 or APRD 058+. Semester offered: Fall and Spring.