

# High School Dual Enrollment Course Descriptions

\*Offered Online (Note: Some are offered online only.)

## BIO 105/L Human Biology/Lab \* (Fall Only/Lab Fee Applies)

3-credit course. This course is an introductory study of the biology of the human body. Topics include overviews of the circulatory, digestive, respiratory, nervous, reproductive, excretory, and musculoskeletal systems. Laboratory activities will provide the student with practical experiences in understanding how the human body is organized and how it functions. Students will also address current ethical concerns in the field of biology as they apply to the human body.

## BIO 175/L Human Anatomy & Physiology I/Lab (Lab Fee Applies)

4-credit course. This course studies the fundamental elements of human structure and function including cellular physiology, tissue organization, integumentary system, skeletal system, muscular system, nervous system and senses. Unifying themes, such as homeostasis, will be covered. The laboratory component provides hands-on experiences, which encourage critical thinking, the understanding of scientific methodology and the application of scientific principles as presented in the lecture component of Human Anatomy & Physiology I.

## BIO 176/L Human Anatomy & Physiology II/Lab (Lab Fee Applies)

4-credit course. This course is a continuation of Human Anatomy & Physiology I (BIO 175) and includes the cardiovascular system, lymphatic system and immunity, respiratory system, digestive system and metabolism, renal system, fluid/electrolyte and acid/base balance and reproductive system. Unifying themes, such as homeostasis, will be expanded upon. The laboratory component provides hands-on experiences, which encourage critical thinking, the understanding of scientific methodology and the application of scientific principles as presented in the lecture component of Human Anatomy & Physiology II. *Prerequisite: BIO 175/L*

## BIO 185/L Microbiology/Lab (Lab Fee Applies)

3-credit course. This course provides an introduction to microbiology with an emphasis on the basic principles and concepts including anatomy, classification, physiology and practical uses of microorganisms. Students will develop an understanding of how microorganisms affect our lives by causing disease, destroying things that we consider important or contributing to improving our quality of life. The importance of the prevention of the transmission of infections will be emphasized.

*Prerequisite: BIO 105/L or BIO 175/L*

## BIO 240 Immunology \*

3-credit course. This course will cover principles of immunology, both at the molecular and cellular level, and will address aspects of cell mediated immunity in health and disease. Emphasis will be placed on specific and non-specific immunity and how the systems interact with each other. Other aspects of immunology, such as cancer, autoimmunity, immunology tools and the mechanisms pathogens use to avoid the immune system, will be covered. *Prerequisite: BIO 105/L, BIO 175/L, or BIO 185/L*

CHE 100 General Chemistry I (Spring Only) \*

3-credit course. CHE 100 introduces topics in both general and organic chemistry, including atomic structure, dimensional analysis, the mole, organic nomenclature, chemistry of gasses, and introduces equilibrium.

COM 100 Introduction to Communication \*

3-credit course. Focuses on factors and processes involved in interpersonal communication: source and receiver variables, verbal and nonverbal messages, and strategic interaction. Prepares students to argue policy topics and make short speeches.

ECO 101 Introductory Economics \*

3-credit course. By analyzing the behavior of buyers and sellers in product and factor markets, this course explains how a market economy determines how scarce resources are allocated to the production and distribution of various goods and services. Supply-and-demand models are used to explain the determination of the prices of products and of factor inputs, and the consequences of government controls and of different types of market structures on prices, wages, and economic efficiency are analyzed.

ENG 101 Craft of Language (formerly English Composition) \*

3-credit course. A study of the use and power of words including poetic terms and of how words are best put together in an essay. This is mainly a writing course, and literary form will be used as a means to teach writing. The emphasis will be on expository prose.

ENG 206: Public Speaking & Presentation \* (Spring Only)

3-credit course. A practical course in the oral presentation of carefully crafted material. Based on principles of rhetoric, new and old, the course helps students in discovering, structuring, and expressing ideas with conviction and confidence. Some attention will be given to the appreciation of significant speech texts within these rhetorical traditions. Students will make multiple presentations and engage in peer critiques. *Prerequisite: ENG 101*

ENG 264: Scientific Writing \*

3-credit course. This course introduces students to writing in the empirical and health sciences, with particular focus on clinical research and the scientific method. Students learn to write scientific reports, review essays, literature reviews, scientific articles for publication, and informal science articles. Additionally, students learn about the research and publication cycles of the scientific community as well as how to present papers and posters at conferences. *Prerequisite: ENG 101*

HSC 253 Nutrition: Health and Disease \* (Spring Only)

3-credit course. This course introduces the basic concepts of nutrition, the functions of carbohydrates, fats, proteins, vitamins, minerals, and water in the body, and the role of diet in health and disease. Health topics include heart disease, obesity, hypertension, diabetes, protein energy malnutrition, disordered eating and food safety

### HSC 390 Medical Terminology \*

1-credit course. This course is designed to teach medical terminology to all majors to assist students in the transition to the professional program or graduate school. This course will explore terminology and abbreviations by body systems to enable students to recognize, interpret and utilize medical terminology and abbreviations when reading medical literature, documenting in patient/client charts and working in the healthcare environment.

### MAT 109 Quantitative Reasoning and Skill \* (Spring Only)

3-credit course. This course focuses on the application of mathematics and statistics to interpret and analyze quantitative information. An emphasis is placed on critical thinking and applying conceptually-grounded skills to solve problems in context.

### MAT 115 Clinical Mathematics for the Health Sciences \*

3-credit course. This course is the study of mathematics in the health sciences including medication dosages and applications of algebra and statistics. Students will utilize proportional reasoning and problem-solving strategies to address problems in context.

### MAT 112 College Algebra (Fall Only)

3-credit course. This course involves the study of algebra including its applications and graphs. Course topics include algebraic expressions, linear equations and inequalities, polynomial and rational functions, quadratic equations and inequalities, exponential and logarithmic functions, systems of equations, relations and functions, and radical and root functions.

### MAT 128 Applied Statistics \*

3-credit course. Introduction to statistics and probability: design of a study, measures of central tendency, variability, correlation, regression; probability, random variables, probability distributions, central limit theorem; inferential statistics, hypothesis testing, etc. Students will be required to use a computer software package to solve various statistical problems. Data analysis projects will be assigned.

### PHY 200/L Survey of Physics/Lab (Spring Only)

3-credit course. This course provides an algebra-based introduction to physics, exemplifying the scientific method and leading toward an understanding of technical applications. It includes topics such as measurement, dimensional analysis, systems of units, describing motion, circular and rotational motion, scalars and vectors, laws of motion, force, work, energy, momentum, simple harmonic motion, waves, sound, temperature, heat and heat transfer.

### PSY 100 General Psychology \*

3-credit course. This course introduces the student to the research problems, methods, findings, and basic theory that constitute the scientific investigation of human and animal behavior.

### REL 101 Comparative Religion \*

3-credit course. An Introduction to the comparative study of religion which examines the historical evolution of religions, nature and diversity of religious experience, the concept of a religious world and the diverse types of religious worldviews, the role of myth and ritual in the maintenance of religious worlds, the problem of religious change and the concept of transcendence.

### SOC 101 Introduction to Sociology \*

3-credit course. Introduction to the scientific approach to the study of society, including the study of social structures; studies such topics as how we acquire self-identity, gender, our behavior in groups, bureaucracies, stereotyping, the role of the state, survey research, culture, and collective behavior. This course can count towards public policy and health equity & social justice minors.

### SOC 102 Social Problems \*

3-credit course. A sociological analysis of contemporary social issues including economic crises, concentration of wealth, poverty, crime, sexism, race and ethnic relations, mental illness, population growth, war and peace, and relations with other countries. This course can count towards public policy minor.

### THE 154 Catholic Theological Tradition \*

3-credit course. This course critically engages the Christian, particularly Catholic, understanding of humanity in relation to God. It undertakes this study from historical/chronological, philosophical, or thematic/topical approaches. It introduces central Christian theological concepts, such as the doctrines of Christ, the human person, sin/grace/salvation, sacramentality, and moral principles such as the preferential option for the poor, solidarity, and the common good.