

\*\* Only available for nursing students

AUHS GENERAL EDUCATION COURSE NUMBER TITLE	QUARTER UNITS
<p><b>CHEMISTRY151 A &amp; B: General, Organic and Bio-Chemistry</b>  <i>(4 credit units/ 50 clock hours)</i>            This course is a descriptive course in inorganic and organic chemistry. Basic laws and chemical calculations are stressed with an emphasis on theory and technique of qualitative analysis. Organic chemistry includes the exploration of the principles underlying the chemistry of living systems providing an introduction to the chemistry of bioenergetics, metabolism, biosynthesis, and molecular physiology.</p> <p><b>CHEMISTRY151 A &amp; B L: General, Organic and Bio-Chemistry - Laboratory (2 credit units/30 clock hours)</b>            Lab portion of the Chemistry 151 A &amp; B: General, Organic and Bio-Chemistry</p>	6
<p><b>BIOLOGY 200 A: Human Anatomy</b>  <i>(3 credit units/35 Clock Hours)</i>            This course provides a comprehensive study of the structure and functions of the human body through analysis of the body systems. The student will progress from the cellular structure and function of each system to homeostatic mechanisms among all systems and the external environment.</p> <p><b>BIOLOGY 200 A L: Human Anatomy - Laboratory</b>            (1 credit units/30 Clock Hours)            Lab portion of the Biology 200A: Human Anatomy</p>	4
<p><b>BIOLOGY 200 B: Human Physiology</b>  <i>(3 credit units/35 Clock Hours)</i>            This course provides students with an understanding of the basic principles and concepts of cellular and organ system physiology and pathophysiology. The course will include an introduction to the chemistry and metabolism of biological molecules including: carbohydrates, lipids, amino acids, proteins, and nucleic acids; and coverage of vitamins and their components, with emphasis on their relationship to disease states and drug therapy. The biological basis of common clinical disease states is also examined. Pathophysiology is described as a disruption of normal homeostatic mechanisms that progresses beyond the normal compensatory capabilities of the human body.</p> <p><b>BIOLOGY 200 B L: Human Physiology - Laboratory</b>            (1 credit units/30 Clock Hours)            Lab portion of the Biology 200 B: Human Physiology</p>	4
<p><b>BIOLOGY 230: Pathophysiology</b>  <i>(4 credit units/ 40 Clock Hours)</i>            This course explores the response of the human body to illness and injury with respect to common disorders of the major physiologic systems. Clinical correlations are provided to assist the health professional in applying this knowledge toward proposing therapeutic interventions. <b>*Prerequisite:</b> BIOLOGY 200A; BIOLOGY 200B</p>	4
<p><b>MICROBIOLOGY 201: Microbiology</b>  <i>(3 credit units/35 Clock Hours)</i>            This course introduces the fundamental principles of microbiology, including general aspects of the structure, metabolism, multiplication, genetics and classification of bacteria, fungi, protozoa,</p>	4

and viruses; the methods used to control these microorganisms, the human body's natural defense mechanisms, and selected microbial pathogens.	
<b>MICROBIOLOGY 201 L: Microbiology - Laboratory</b> (1 credit units/30 Clock Hours) Lab portion of the Microbiology 201: Microbiology	
<b>PHARMACOLOGY 210: Clinical Pharmacology</b> (3 credit units/ 30 Clock Hours) This course is an introduction to the basic principles of pharmacology with a focus on pharmacokinetics, pharmacodynamics, and therapeutic implications for major drug categories as well as natural products, including principles of medication administration. <b>*Prerequisite:</b> CHEMISTRY 151A & B	4
<b>Physics 305 and 305L: College Physics I</b> (4 credit units) The course is aimed at developing the interest of the student in physics concepts and principles required to describe and predict the motion of objects. The laboratory component will provide an opportunity for the student to perform experiments and the concepts discussed in class. The course will empower the student to understand the techniques and methods of experimental physics and the analysis and interpretation of experimental data.	5
<b>Physics 403 and 403: College Physics II</b> (4 credit units) The course aims to advance and develop the interest of the student in physics concepts and principles required to describe and predict the motion of objects. The laboratory component will provide an opportunity for the student to perform experiments and the concepts discussed in class. The course will empower the student to understand the techniques and methods of experimental physics and the analysis and interpretation of experimental data. <b>*Prerequisites:</b> Physics 305	5

AUHS GENERAL EDUCATION COURSE NUMBER TITLE	QUARTER UNITS
<b>MATHEMATICS 110: Quantitative Reasoning</b> (4 credit units/ 50 Clock Hours) Principles of quantitative reasoning, data presentation, descriptive statistics, correlation, probability, distributions of random variables, sampling distributions, interval estimation, and statistical inference, with multi-disciplinary applications.	4
<b>STATISTICS 415: Statistics</b> (4 credit units/ 40 Clock Hours) This course includes development and application of the following topics: Descriptive and Inferential Statistics, Mathematics of Finance, Linear Programming and Graph Theory.	4
<b>CALCULUS 102: Calculus I</b> (4 credit units) This course is an introduction to calculus, the subject that studies change. The concept of limit, the key idea of calculus will be introduced. Using the limit we will be able to understand the notion of instantaneous rate of change (the derivative), and the total change (the integral). The course will be presented using a conceptual approach that emphasizes understanding. <i>*Prerequisites: Mathematics 110</i>	4
<b>CALCULUS 201: Calculus II</b>	4

(2 credit units)

This course builds on the solid knowledge of Calculus I, particularly differentiation and integration techniques and their applications. Following the discussion of techniques of integration ( including areas, volumes, work, arc length, surface area, and center of mass), the reviews the calculus of curves defined by parametric equations and curves defined in a new coordinate system called polar coordinates. The course concludes with an in-depth discussion of series and their application to the representation of functions by power series. The student will emerge knowing how to integrate combinations of elementary functions with accuracy and confidence. \*Prerequisites: *Calculus 102*