San Bernardino Valley College
Curriculum Approved: SP01

SBVC - COURSE OUTLINE
Life Science Department - Biology

I. Catalog Description:

A.

Division:	Science
Department:	Biology
Course ID:	BIOL 050
Course Title:	Introductory Anatomy and Physiology
Units:	4
Lecture:	4 hours
Prerequisite:	None.

B. Catalog Description: Introduction to human anatomy and physiology. The course is intended to meet the prerequisite for students entering the Psychiatric Technician program or other professional programs that accept a lecture-only course in human anatomy and physiology.

Schedule Description: Introduction to human anatomy and physiology. The course is intended to meet the prerequisite for students entering the Psychiatric Technician program or other professional programs that accept a lecture-only course in human anatomy and physiology.

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: One

III. EXPECTED OUTCOMES FOR STUDENTS:

Upon successful completion of this course, students should be able to:

A. Discuss major organizational principles in anatomy and physiology.
B. Apply the principles of anatomy and physiology to the particular structure and function of each of the human organ systems.
C. Compare and contrast the structure and function of the major biomolecules, tissues, and organ systems.
D. Conduct a simple analysis of common human disease processes and describe their probable effects on the body.
E. Identify and discuss common health-related issues concerning anatomical and physiological aspects of the human body.

IV. COURSE CONTENT:

A. Major Anatomical and Physiological Principles
   1. structural hierarchy of human anatomy
   2. homeostatic processes
B. Basic Chemistry of Life
   1. elements
   2. energy
   3. chemical Reactions
C. Cellular Anatomy and Physiology
   1. cell membranes
   2. cell transport
   3. cellular organelles
   4. overview of metabolic pathways
      a. synthetic
      b. degradative

D. Tissue Structure and Function
   1. Basic Structure and Classification of Tissues
   2. Epithelial, Connective, Muscular, and Nervous Tissue Structure and Function
E. Integument
   1. integument as an organ
   2. structure and function of epidermis and dermis
   3. integument physiology
F. Skeletal System
   1. osseous tissue structure
   2. skeletal system structure and function
G. Muscular System
   1. structure of skeletal, cardiac, and smooth muscles
   2. skeletal muscle function
H. Nervous and Sensory Systems
   1. nervous system as a homeostatic device
   2. functional aspects of the nervous system
   3. anatomical features of the central and peripheral nervous systems
   4. structure and function of selected sensory organs
I. Endocrine System
   1. comparison of endocrine and nervous system
   2. hormone production and action
   3. structure and function of endocrine glands
J. Digestive System
   1. overview of digestive process
   2. structure and function of the digestive tract
K. Blood and the Cardiovascular System
   1. blood cells and plasma
   2. heart structure and function
   3. arteries, capillaries, and veins
L. Respiratory System
   1. structure and function of respiratory system
   2. oxygen and carbon dioxide transport
M. Urinary System
   1. kidney structure and function
   2. osmoregulation
   3. ureter, urinary bladder, and urethra structure and function
N. Lymphatic System and Immune System Function
   1. relationship of lymphatic and cardiovascular systems
   2. lymph organ structure and function
   3. immune system components and disease-fighting systems
O. Male and Female Reproductive Systems
   1. male reproductive anatomy and physiology
   2. female reproductive anatomy and physiology
   3. conception and human development

V. METHOD OF EVALUATION:

A. Lecture supported by audio-visual aids
B. Directed discussions
C. Use pf anatomical models and preserved materials
D. Group Activities

VI. TYPICAL ASSIGNMENTS:

Write an analysis describing the likely physiological consequences to various human organ systems as a result of a specified disease.

VII. EVALUATION:

Students are evaluated using a combination of essay, short answer, definition, and objective questions. Students critical thinking abilities are assessed in problem solving essay questions.

VIII. TYPICAL TEXTS:

A. Seeley, Stephens, Tate. *Essentials of Anatomy and Physiology*. 5th ed. WCB/McGraw-Hill
B. Hole, J. *Essentials of Human Anatomy and Physiology.* 5th ed. WM. C. Brown Co.
C. Mader, S.J. *Understanding Human Anatomy and Physiology.* 2nd ed. WM. C Brown Co.

IX. OTHER SUPPLIES REQUIRED OF STUDENTS:

None.