San Bernardino Valley College
Curriculum Approved: April 05, 2004

I. Catalog Description:

A. Division: Science and Math
Department: Biology
Course ID: BIOL 260
Course Title: Human Anatomy
Units: 4
Lecture: 3 hours
Laboratory: 3 hours
Prerequisites: none

B. Catalog and Schedule Description: This is a comprehensive laboratory course in human anatomy. It is organized to explore the body regionally and systematically. It is primarily oriented toward gross anatomy with extensive dissection of the cat. Histological and cellular anatomy are included as they apply to various structures.

II. Number of times the course may be taken for credit: One

III. Expected Outcomes for Students:

Upon successful completion of this course, the student will be able to:

A. Identify and name 206 human bones and their important processes.
B. Construct meaningful relationships between various structures interregionally and intraregionally in order to aid with term memorization.
C. Locate and name the major muscles of the human body and the dissected cat.
D. Interpret anatomical names in order to reference locations, functions, or relationships.
E. Apply anatomical principles of each organ system to the understanding of specific regional anatomy.
F. Formulate unique memory devices to aid in categorizing and recalling a multitude of anatomical data. (e.g. Flash cards etc.)
G. Synthesize lectures, readings, and laboratory experiences into a multidimensional, systematically integrated concept of the anatomy of the entire human body.

IV. Content:

A. Introduction to anatomy and the human body
1. Organization
2. Anatomical Terms
3. Histology
4. Anatomy of the integumentary system

B. Anatomy of the Lower Limb
1. General anatomy of the skeletal system
2. General anatomy of the skeletal articulations
3. Lower limb bones and their processes
4. Lower limb muscles: their origins, insertions, and actions
5. Lumbosacral plexus and the lower limb nerves and innervations
6. Lower limb arteries and veins
7. Lower limb articulations

C. Anatomy of the Upper Limb
1. General anatomy of the muscular system
2. Upper limb bones and their processes
3. Upper limb muscles: their origins, insertions, and actions
4. Brachial plexus and the upper limb and shoulder nerves and innervations
5. Upper limb arteries and veins
6. Upper limb articulations

D. Anatomy of the Torso

1. General anatomy of the cardiovascular system; fetal circulation
2. Vertebral and rib bones and their processes
3. Muscles of the torso: their origins, insertions, and actions
4. Spinal nerves of the torso and innervations; dermatomes
5. Major branches of the Aorta and Vena Cava
6. Vertebral and sternal articulations

E. Anatomy of the Neck and Head
1. General anatomy of the nervous system
2. Bones of the skull and neck, and their processes and foramena
3. Muscles of the head and neck: their origins, insertions, and actions
4. Brain anatomy, cranial nerves, cervical plexus
5. Arteries and veins of the head and neck
6. Sutures, fontanels, articulations

F. Other Systemic Anatomy
1. Anatomy of the digestive system
2. Anatomy of the respiratory system
3. Anatomy of the urinary system
4. Anatomy of the reproductive system
5. Anatomy of the immune system
6. Anatomy of the endocrine system

G. Laboratory Experiences
1. Dissection of the cat with relevance to the Human Body
2. Memorization of muscle, nerve and blood vessel names (pictorial)
3. Examination of the bones and their processes
4. Dissect the heart and brain

V. Methods of Instruction:

A. Lectured instructions for locating relevant anatomical structures including overhead visualizations and handouts.
B. Reading assignments in the current textbook for descriptions and visual aids
C. Laboratory study of human bones and their processes
D. Laboratory dissection of the cat and other organs, emphasizing muscle, nerve, and vessel locations and organ relationships
E. Written assignments related to lab activities.
F. Computer software relevant to anatomy.

VI. Typical Assignments:

A. Lecture
1. Anatomy of the human heart

B. Reading
1. Read chapter section on fetal circulation
2. Identify the roots, cords, and primary nerves of the Brachial plexus, using a textbook diagram.

C. Laboratory Activity
1. Identify a bone and its processes, both in diagrams and on physical specimens.
2. Dissect a preserved sheep heart (following verbal instructions), and identify the structures of the heart during the dissection.

D. Written Assignments
1. Color and add identifying labels to the diagram as specified in the instruction sheet for “Intro to Human Body.”

E. Computer software activity
1. Use the A.D.A.M. software program to locate the muscles of mastication.

VII. Methods of Evaluation:

A. Methods of Evaluation
1. Quizzes

Typical questions
a. Identify the foramen magnum in this diagram
b. Identify the origin of the indicated muscle in this diagram

2. Exams
Typical questions
a. The primary visual area is located in _____.
b. Which of the following cranial nerves is (are) purely motor?
c. Which muscle of the medial thigh does the obturator nerve not innervate?
d. Predict the consequences of damage to the cerebrum.
e. A ball hit a baseball player on the left side of his skull in the temporal area. He has a ringing in his ear, and he is constantly off balance. Which cranial nerve was damaged?

3. Written assignments
Typical assignment
The student will prepare a written lab report based upon the laboratory examination of the bones of the skull.

4. Class Participation/Involvement
The students will be awarded some credit based upon participation in lecture and lab activities.

5. Final Exam
The final exam will mirror the objective exams given during the class and will reflect the comprehensive content of the course.

B. Frequency of Evaluation
1. Nine (9) quizzes
2. Six (6) exams
3. Five (5) assignments
4. One (1) evaluation of class involvement
5. One (1) final examination

VIII. Typical Text(s):

A. Lecture Texts

1. Tortora, Gerard J. and Grabowski, Sandra R., Principles of Anatomy and Physiology (8th Ed.) New York, NY, Harper Collins College Publishers, 2002.

2. Saladin, Kenneth S. Anatomy & Physiology: The Unity of Form and Function, 2nd ed. Boston: McGraw Hill, 2002.

3. Marieb, Elaine M. Human Anatomy & Physiology, 4th ed. Menlo Park: Benjamin/Cummings Publishing Co., 2003.

B. Laboratory Texts

1. Gilbert, Stephen G. Pictorial Anatomy of the Cat (Rev. Ed.) Seattle, WA., University of Washington Press, 1991.

2. Greenblat, Cat Musculature Chicago, IL., University of Chicago Press, 1991.

C. Supplemental optional references and study guides

1. Kapit, Wynn and Lawrence M. Elson, The Anatomy Coloring Book New York, NY., Harper and Row Publishers Inc., 1990.

2. Stone, R. J. and Stone, J. A. Atlas of Skeletal Muscles. Dubuque, IA., William C. Brown Publishers, 1997.

IX. Other Supplies Required of Students:

Colored pencil set
Dissection kit
Latex gloves
Protective clothing