College of San Mateo
Official Course Outline

1. **COURSE ID:** BIOL 250 **TITLE:** Human Anatomy **C-ID:** BIOL 110B
   Units: 4.0 units **Hours/Semester:** 48.0-54.0 Lecture hours; 48.0-54.0 Lab hours; and 96.0-108.0 Homework hours
   Method of Grading: Letter Grade Only
   Prerequisite: BIOL 100, or BIOL 101 (offered at Skyline) or BIOL 110 or BIOL 130

2. **COURSE DESIGNATION:**
   Degree Credit
   Transfer credit: CSU; UC
   AA/AS Degree Requirements:
   CSM - GENERAL EDUCATION REQUIREMENTS: E5a. Natural Science
   CSU GE:
   CSU GE Area B: SCIENTIFIC INQUIRY AND QUANTITATIVE REASONING: B2 - Life Science
   CSU GE Area B: SCIENTIFIC INQUIRY AND QUANTITATIVE REASONING: B3 - Laboratory Activity
   IGETC:
   IGETC Area 5: PHYSICAL AND BIOLOGICAL SCIENCES: B: Biological Science
   IGETC Area 5: PHYSICAL AND BIOLOGICAL SCIENCES: C: Science Laboratory

3. **COURSE DESCRIPTIONS:**
   Catalog Description:
   Structural organization of the human body: Study of the gross and microscopic anatomy of the organ systems. Laboratory study using human cadaveric prosections. Extra supplies may be required. Primarily intended for students of nursing, physiotherapy, physical education and related fields.

4. **STUDENT LEARNING OUTCOME(S) (SLO'S):**
   Upon successful completion of this course, a student will meet the following outcomes:
   1. Use anatomical language to effectively communicate about the structure and function of the human body.
   2. Identify anatomical structures from the cellular to the organismal level of organization.
   3. Describe structural and functional relationships between anatomical structures.
   4. Evaluate anatomical information and data in order to differentiate between normal structures and those affected by clinical conditions.

5. **SPECIFIC INSTRUCTIONAL OBJECTIVES:**
   Upon successful completion of this course, a student will be able to:
   1. Use anatomical language to effectively communicate about the structure and function of the human body.
   2. Identify anatomical structures from the cellular to the organismal level of organization.
   3. Describe structural and functional relationships between anatomical structures.
   4. Evaluate anatomical information and data in order to differentiate between normal structures and those affected by clinical conditions.

6. **COURSE CONTENT:**
   Lecture Content:
   The course content must include, but is not limited to the following:
   1. Cellular structures
   2. Histology
   3. Embryology
   4. Integumentary system
   5. Skeletal system
   6. Muscular system
   7. Surface (External) Anatomy
   8. Nervous system including special senses (sensory organs)
   9. Endocrine system
   10. Cardiovascular system
   11. Lymphatic system
   12. Respiratory system

13. Urinary system
14. Digestive system
15. Reproductive system
16. Comparison of normal versus diseased, injured or age-related structural changes in any or all of the above organ systems.

Lab Content:

The Laboratory content/activities include, but is not limited to, the following:

1. Identification of microscopic structures and tissues.
2. Identification of bones and bone features.
3. Identification of skeletal musculature and muscle features.
4. Identification of internal organs.
5. Dissection of organs or observation of dissected organs.
6. Dissection of organisms or observation of dissected organisms.
7. Identification of structures on models or other representations of the body.
8. Demonstration of understanding of three dimensional relationships of body structures with one or more of the following activities:
   A. model building or
   B. interaction with 3D digital simulations or
   C. palpation/inspection of a live human or
   D. demonstrating with human structures with non-human items (for example, carving a potato in the shape of the thalamus).

7. **REPRESENTATIVE METHODS OF INSTRUCTION:**

Typical methods of instruction may include:

A. Lecture
B. Lab
C. Discussion
D. Observation and Demonstration
E. Other (Specify): Emphasis is placed on the use of inquiry-based methods and active learning strategies including the use of anonymous polling methods to help guide discussions and expose misconceptions. Employment of activities and assessments designed to develop critical thinking skills. Lectures are accompanied by computerized demonstrations and presentation materials, transparencies, and other supplementary material including online assignments, assessments and resources. Structured as well as impromptu discussions. Laboratory demonstrations and exploration of models and specimens and digital resources.

8. **REPRESENTATIVE ASSIGNMENTS**

Representative assignments in this course may include, but are not limited to the following:

Writing Assignments:

The students complete narratives focused on describing anatomical features or directions of clinical procedures (for evaluation).
The students complete written quizzes with short answers as well as more open-ended responses. Students also complete worksheets, compose maps (for evaluation).
Note: Many of these writing assignments develop and assess the student's critical thinking skills as they apply their knowledge and understanding of anatomical problem.

Reading Assignments:

Students are assigned to read passages from various textbooks, primary literature pieces (scientific journals) and case studies focused on problems of clinical anatomy (for evaluation).
Note: Many of these reading assignments are done in class and the student's reading skill towards understanding is developed and assessed using techniques based on the Reading Apprenticeship framework.

Other Outside Assignments:

Online quizzes, and adaptive learning modules, online questions following or embedded within online videos, creation of outlines and concept maps (for evaluation). Assignments to create physical or digital models of body structures.

9. **REPRESENTATIVE METHODS OF EVALUATION**

Representative methods of evaluation may include:

A. Class Participation
B. Class Work
C. Exams/Tests

D. Group Projects
E. Lab Activities
F. Oral Presentation
G. Portfolios
H. Projects
I. Quizzes
J. Research Projects
K. Simulation
L. Written examination
M. 3-5 lecture exams consisting of multiple-choice questions, fill-in questions, matching, and short answer and essay questions. Laboratory Exams to assess knowledge and understanding of three-dimensional structures of the body and body structure relationships. Homework assignments to synthesize and summarize course content. Group or individual student presentations and demonstrations

10. **REPRESENTATIVE TEXT(S):**
Possible textbooks include:
A. Martini, F. H. and Tallitsch, R. B.. *Human Anatomy*, 8th ed. Pearson, 2014
B. McKinley, M., O'Loughlin, V. and Bidle, T. . *Anatomy & Physiology: An Integrative Approach*, 2nd ed. McGraw-Hill, 2015
C. Marieb, E. N. and Hoehn, K.. *Human Anatomy and Physiology*, 10th ed. Pearson, 2015
D. OpenStax College. *Anatomy & Physiology*, 2013 ed. OpenStax, 2013
Possible manuals include:
A. Hebert, H., Krabbenhoft, M. & Chinn, J.. A Photographic Atlas for Anatomy and Physiology, Pearson, 10-24-2015
B. Eder, D.. Laboratory Atlas of Anatomy and Physiology, McGraw-Hill, 06-19-2008
C. Patton, K.T.. Anatomy & Physiology Laboratory Manual and E-Labs, Elsevier, 01-01-2019

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