COURSE OUTLINE : BIOL 120
D Credit – Degree Applicable
COURSE ID 005079
Cyclical Review: April 2019

COURSE DISCIPLINE : BIOL

COURSE NUMBER : 120

COURSE TITLE (FULL) : Human Anatomy

COURSE TITLE (SHORT) : Human Anatomy

CALIFORNIA STATE UNIVERSITY SYSTEM C-ID : BIOL 110

CATALOG DESCRIPTION

BIOL 120 covers the systems of the human body including microscopic and gross anatomy of the following systems: integumentary, skeletal, muscular, nervous, circulatory, respiratory, lymphatic and immune, digestive, urinary, male and female reproductive, and endocrine. The effects of disease and aging on these systems are also included in the course. The laboratory includes the study of tissues using the microscope, a study of bones of the human skeleton, and the use of models to illustrate respective systems of the human body. Dissections of a sheep brain, cow heart, and cow eye are made to illustrate comparative parts of human anatomy. Observations are also made of a human cadaver. This course is primarily intended for nursing, kinesiology, and other health related majors.

Total Lecture Units:3.00

Total Laboratory Units: 2.00

Total Course Units: 5.00

Total Lecture Hours:54.00

Total Laboratory Hours: 108.00

Total Laboratory Hours To Be Arranged: 0.00

Total Faculty Contact Hours: 162.00

Recommended Preparation: BIOL 115 is strongly recommended for students with a limited background in the biological sciences.

ENTRY STANDARDS

	Subject	Number	Title	Description	Include
1	BIOL	115	Human Biology	identify the body systems, their organs and functions;	Yes
2	BIOL	115	Human Biology	demonstrate knowledge of the functions of the cell and its organelles	Yes
3	BIOL	115	Human Biology	recognize the primary tissues that make up the human body;	Yes

EXIT STANDARDS

1 identify major structures in the 11 systems of the human body;
2 identify the basic features of cells and their organization as tissues;
3 identify the four major tissue types;
4 identify subtypes of tissues within each major tissue type (e.g., areolar connective tissue, cardiac muscle, simple vs. stratified epithelium);
5 identify the location and function of subtypes of tissues in various organ systems;
6 describe the structure-function relationship of each organ system (e.g., the nephron and its role in the kidney);
7 demonstrate proper use of a microscope to identify major tissue types in histological slides;
8 identify all major bones and bone markings using human bones and models;
9 identify all major muscles (including knowledge of origin, insertion, and action) using anatomical models;
10 identify all of the major structures of organ systems using models and tissue slides;
11 identify major organs and structures in a human cadaver;
12 demonstrate proper dissection techniques for organs (e.g., cow eye, sheep brain).

STUDENT LEARNING OUTCOMES

1 identify and name all the bones and their markings in the human body and explain the process of bone development;
2 identify, name and explain the actions of all the major muscle groups in the human body and describe the contractile mechanism of skeletal muscles
3 identify the major structures and neurons of the central and peripheral nervous systems and their functions
4 identify and describe the function of the major cellular organelles and the four major human tissue types and subtypes
5 identify and name the structures of the heart and major blood vessels, path of blood flow, as well as the structure and function of the respiratory, immune and lymphatic systems
6 identify and name the major organs of the digestive, urinary, reproductive and endocrine systems and their functions

COURSE CONTENT WITH INSTRUCTIONAL HOURS

	Description	Lecture	Lab	Total Hours
1	A. Cell Structures and Tissues 1. Levels of organization in the human body 2. Use of the microscope 3. Cells and organelles 4. Four tissue types 5. Integumentary system 6. Cell division 7. Membrane transport 8. Embryology	6	12	18
2	B. The Skeletal System 1. The axial skeleton 2. The appendicular skeleton 3. Joint classification	10	20	30

3	C. The Muscular System 1. Muscle tissue 2. Internal structure of skeletal muscles 3. Vertebral muscles 4. Muscles of the thorax and abdomen 5. Muscles of the pelvis and perineum 6. Muscles of the shoulder, arm, forearm, and hand 7. Muscles of the hip, thigh, leg and foot 8. Muscles of the back 9. Muscles of the face, head and neck	10	20	30
4	D. The Nervous System 1. The central nervous system a. The brain b. The spinal cord 2. The peripheral nervous system a. Cranial nerves b. Spinal nerves c. Autonomic nervous system	6	12	18

5	E. Sensory Systems 1. Vision 2. Olfaction 3. Audition 4. Taste 5. Other senses	1.5	3	4.5
6	F. The Circulatory System 1. The heart 2. Blood vessels 3. Blood	3	6	9
7	G. The Respiratory System 1. Conducting structures 2. Respiratory structures	1.5	3	4.5
8	H. The Lymphatic and Immune Systems 1. Lymphatic tissues 2. Lymphatic organs 3. Nonspecific immune system (inflammatory response) 4. Specific immune system	1.5	3	4.5

9	I. The Digestive System 1. Tissues and structures of the alimentary canal 2. Tissues and structures of the accessory digestive organs a. Pancreas b. Liver c. Gall bladder d. Salivary glands	4	8	12
10	J. The Urinary System 1. Tissues and structures of the urinary tract 2. Tissues and structures of the kidney a. Anatomy of the nephron b. Blood supply	4	8	12
11	K. The Reproductive System 1. Tissues and structures of the male reproductive system 2. Spermatogenesis 3. Tissues and structures of the female reproductive system 4. The menstrual cycle	5	10	15
12	L. The Endocrine System 1. Function of hormones 2. Anatomy of the hypothalamus 3. Anatomy of the pituitary gland 4. Anatomy and location of the major endocrine glands	1.5	3	4.5
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OUT OF CLASS ASSIGNMENTS

1 laboratory reports (e.g. a written report that includes the title, purpose, materials, procedures, results, and conclusions for each laboratory exercise);
2 laboratory worksheets (e.g. questions that promote an understanding of structure- function relationships in organ systems).

METHODS OF EVALUATION

1 midterm examinations and final examination, including essay questions;
2 laboratory practical exams;
3 laboratory quizzes;

METHODS OF INSTRUCTION

- [x] Lecture
- [x] Laboratory
- [ ] Studio
- [ ] Discussion
- [x] Multimedia
- [ ] Tutorial
- [ ] Independent Study
- [ ] Collaboratory Learning
- [x] Demonstration
- [ ] Field Activities (Trips)
- [ ] Guest Speakers
- [ ] Presentations

TEXTBOOKS

Title	Type	Publisher	Edition	Medium	Author	IBSN	Date
Human Anatomy	Required	San Francisco: Pearson		Print	Marieb, Elaine	978-0-321-82241-3	2014