ANAT 40 Course Outline as of Fall 2007

CATALOG INFORMATION

Dept and Nbr: ANAT 40 Title: INTRO TO ANAT AND PHYSIO
Full Title: Introduction to Human Anatomy and Physiology
Last Reviewed: 10/14/2019

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	4.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	4.00	Lab Scheduled	3.00	17.5	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	6.00		Contact Total	105.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00 Total Student Learning Hours: 210.00

Title 5 Category:	AA Degree Applicable
Grading:	Grade Only
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	ANAT 70

Catalog Description:
This is an introductory course in human anatomy and physiology, and covers the structure and function of all organ systems of the human body. Basic terminology and concepts will be covered, with an emphasis on structure/ function relationships and homeostasis.

Prerequisites/Corequisites:

Recommended Preparation:
Completion of HLC 160 and CHEM 60, and eligibility for ENGL 100 or ESL 100.

Limits on Enrollment:

Schedule of Classes Information:
Description: Introductory course in human anatomy and physiology. Covers the structure and function of all organ systems of the body. Meets general education req uirement. (Grade Only)
Prerequisites/Corequisites:
Recommended: Completion of HLC 160 and CHEM 60, and eligibility for ENGL 100 or ESL 100.
Limits on Enrollment:

Transfer Credit: CSU;UC.
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**		Effective:	Inactive:
	C	Natural Sciences	Spring 2007	
CSU GE:	**Transfer Area**		Effective:	Inactive:
	B2	Life Science	Spring 2007	
	B3	Laboratory Activity		
IGETC:	**Transfer Area**		Effective:	Inactive:
	5B	Biological Sciences	Spring 2007	
	5C	Fulfills Lab Requirement		

CSU Transfer:	Transferable	Effective:	Spring 2007	Inactive:
UC Transfer:	Transferable	Effective:	Spring 2007	Inactive:

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:
Upon completion of this course students will be able to:
1. Describe the scientific method and apply this knowledge to the course content; differentiate the scientific method from other modes of knowing.
2. Summarize major contributions of the scientific study of anatomy and physiology to civilization.
3. Relate basic chemical concepts and cell structure to the function of organs.
4. Name the organ systems, identify the major organs, and describe their functions.
5. Summarize the structures and functions necessary to accomplish movement of the body.
6. Compare how body-wide communication is accomplished by the nervous and endocrine systems.
7. Name the factors essential for life, and describe how they are supplied, transported and regulated inside the body.
8. Compare the various structures and processes used for defense against injury and infection.
9. Describe human reproductive structures and mechanisms.
10. Apply core concepts of anatomy and physiology to understanding the basis for some common medical conditions.
11. Use a microscope effectively and be able to perform basic physiological measurements such as EKG and blood pressure.

Topics and Scope:

I. Introductory concepts
  A. scientific method
    1. power and limits of scientific method
    2. comparison of scientific method with other modes of learning
    3. contributions of study of anatomy and physiology
  B. levels of biologic organization
  C. human body plan, planes, cavities
  D. anatomical terminology
  E. homeostasis
    1. negative feedback
    2. regulated parameters
II. Cells and tissues: structure and function
  A. macromolecules
  B. organelles
  C. cell membranes and osmosis
  D. metabolism: energy and enzymes
  E. tissues
III. Support and Movement
  A. Integument
  B. Skeletal system
    1. bones
    2. joints
  C. Muscular System
    1. muscles
    2. muscle contraction
IV. Control Systems
  A. Nervous system
    1. neurons and synapses
    2. CNS- central nervous system
    3. PNS- peripheral nervous system
    4. ANS- autonomic nervous system
    5. special senses
  B. Endocrine system
    1. endocrine glands
    2. hormones
  C. Receptors, drugs, poisons
V. Internal Environment
  A. Cardiovascular system
    1. heart and blood vessels
    2. regulation of cardiac function, blood pressure
    3. formation of cardiac action potential and conduction
  B. Respiratory system
    1. lungs, thoracic cavity
    2. structure and function
    3. respiratory gases
    4. regulation of respiration and pH
  C. Urinary System
    1. kidneys and nephrons
    2. osmoregulation
    3. blood pressure and pH regulation
  D. Digestive system

1. gastrointestinal tract and accessory glands
2. digestion
3. regulation of metabolism

VI. Defense
A. Blood
B. Immune system
1. organs, tissue, and cells
2. inflammation
3. specific immune system
4. allergy, anaphylaxis, immunization

VII. Reproduction
A. Male reproductive structures and functions
B. Female reproductive structures and functions
C. Gestation, parturition, lactation

VIII. Laboratory Exercises
A. All of the above mentioned structures will be studied by means of histological specimens, models, charts, and human cadavers or prosections in the anatomy section of course.
B. Physiological lab exercises will be performed on the following topics:
1. homeostasis
2. muscle contraction
3. reflex action
4. sensory receptor function
5. cardiac function
6. pulmonary function
7. renal function
8. acid base balance
9. glucose tolerance test
10. blood typing

Assignment:

1. Weekly reading in text, 40-80 pages per week
2. Study of histological slides, charts, models, and anatomical specimens during lab hours
3. Performance of physiological observations during lab hours
4. Written laboratory assignments, including short essay, fill-in, and diagrams; averaging one assignment every week
5. Homework: brief written reports connecting class material and common medical problems
6. Formal assessment: quizzes, 4 lab practical exams, 4 lecture exams, including objective and essay questions

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Written homework	Writing 10 - 20%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Laboratory assignments	Problem solving 10 - 20%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None	Skill Demonstrations 0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Completion, Lecture exams, objective and essay questions	Exams 60 - 80%

Other: Includes any assessment tools that do not logically fit into the above categories.

Participation in lab	Other Category 0 - 5%

Representative Textbooks and Materials:
Essentials Of Human Anatomy & Physiology, Elaine Marieb, Benjamin Cummings 2006
Essentials Of Human Anatomy & Physiology, 4th Edition, F.H. Martini and E.F. Bartholomew, Prentice Hall 2006
Anatomy and Physiology for Emergency Care, FH Martini, E.F. Bartholomew, BE Bledsoe, Prentice Hall 2002