St. Catharine College
Summer 2007 Course Schedule
BIO 204011: Anatomy & Physiology I

TIME: MTWR. 8.30-10.20 (Lecture/(Lab)
(Rm HS-206)
LECTURER: Dr. Mansim Okafor, Ph.D
Office: HS-031

Phone #: (859) 336-5082 ext. 1244
e-mail address: mansimokafor@yahoo.com
Office Hrs: by appointment

Text: Anatomy & Physiology (6th edition) by Rod R. Seeley, Trent D. Stephens and Philip Tate (McGraw Hill)
Text (L): Human Anatomy & Physiology Lab Manual (2nd Edition) by Terry R. Martin (McGraw Hill)
Standard Writing Manual: A Pocket Style Manual (3rd Edition) by Diana Hacker (Bedford/St. Martins

Course Description: This course covers the following: Basic Cytology, Basic Histology, Muscular System, Integumental System, Skeletal System, Nervous System and Endocrine System.

Objectives: In this course, students will learn the Cell Structure and Function, Tissue Structure and Function as well as the histology, gross anatomy and specialized functions of the Muscular, Integumental, Skeletal, Nervous, and Endocrine systems. Emphasis will be placed on tissue modifications for the specialized functions, as well as on common malfunctions resulting from injury, disease and genetic makeup. Where possible, mention will be made of new developments in the field especially in molecular biology and gene therapy. Knowledge gathered in the course will serve as stable foundation for Anatomy and Physiology II as well as specialized disciplines such as nursing, radiology, sonography, medicine and related allied health programs.

Learning Outcomes: At the end of this course, the student should be able to do the following:

a. Identify all the major cell organelles and their functions
b. Identify the different tissue types, their characteristics and their functions
c. Describe the functions of each system
d. Identify the organs that make up each system and their functions
e. Identify the major components of the organs and their functions
f. Identify the major tissues in the organs, their characteristics and their functions
g. Describe how each system or the organ is regulated
h. Predict the outcome of changes in or failure of each tissue, organ or system
i. Differentiate between normal and pathophysiological conditions of tissues, organs and systems
j. Contribute meaningfully to any discussion on the system

Lecture Format: Each class will begin with a brief review of the previous lecture. The lecture period will end with a Question and Answer session. Extra credit will be given for student participation in the Question and Answer sessions. Note, however, that only relevant questions and beneficial input will attract compensatory credit. TAPING OF LECTURES IS PERMITTED.

Grading:

Grade D: 60-69% (A passing grade at SCC, which will not transfer.)
Grade C: 70-79% (A passing grade, which will transfer.)
Grade B: 80-89% (An above average grade.)
Grade A: 90-100% (Outstanding scholarship *with evidence of initiative and originality as well as knowledge.*)
THERE IS NO CURVING; GRADES WILL BE RECORDED AS EARNED.

Evaluation System and Policies: There will be 4 non-cumulative exams and a final exam, which will be cumulative. **Make-up exams will ONLY be given if there is sufficient reason for missing the scheduled**

exam. **Such make-up exams will consist predominantly of essay-type questions.** Missed labs will be difficult to make up. Attendance for labs will be different from that of lectures, and **no points will be awarded for labs not attended even if lab work is completed**. For Critical thinking evaluations, students will be assigned two journal articles for critical analyses. Exams should be free from cheating and assignments should be original works. If for any reason other people's works are used, due credits should be given to the original authors. Cheating of all sorts would be punished in proportion to the offence. No grades would be given for any plagiarized work and copying in exams would result in at least failure of that particular test. Late submission of assignments would result in a 50% loss of points for every day the assignment is overdue.

Final Grade breakdown:

Exam #1 = 20%
Exam #2 = 20%
Exam #3 = 20%
Exam #4 = 20%
Lab = 20%
TOTAL = 100%

COURSE OUTLINE: Chapters 1-16 will be covered in this course but not sequentially (see attached schedule).

Test/Exam Dates: 06/22/09, 07/06/09, 07/24/09, and 08/02/09 (See Course Schedule below)

Wk	Date	Topic	Chapter
1.	06/08/09.	**Cell Structure and Function** Function. Plasma membrane, membrane transport Cytoplasm, Cell organelles (centroiles, ribosomes, endoplasmic reticulum[rough and smooth golgi, lysosomes, mitochondria, nucleus)	3
	06/09/09	DNA structure. Protein Synthesis (Transcription & translation), Cell Divisions: interphase, **mitosis** , **meiosis**	
	06/10/09	**LAB #1 (Microscopy)**	
	06/11/09	**Histology**. Characteristic, classification and functions of Epithelia,	4
2.	06/15/09	Connective tissue, Cartilage bone, muscular, nervous tissues	
	06/16/09	**Integumentary system**. Hypodermis and skin. Assessory skin structures (Hair and nails)	5
	06/17/09	**LAB #2 Histology**	
	06/18/09	**Skeletal System** Functions. Cartilage histology, Bone types	6
3.	06/22/09	**Test #1 (Cells and Histology)**	
		Skeletal System	
		Structure of long bones, Bone histology (matrix, osteoblasts, osteocytes and osteoclasts)	
	06/23/09	Bone Development (intramembranous and endochondral ossifications). Repair/remodelling	
	06/24/09	Gross Anatomy – Axial skeleton. Skull anatomy (bones and sutures)	7
	06/25/09	Gross Anatomy – Vertebral column anatomy (cervical, thoracic, lumber, sacral)	
4.	06/29/09	Gross Anatomy—appendicular skeleton (Pectoral girdle/Upper extremities)	
	06/30/09	Gross Anatomy— appendicular skeleton (Pelvic girdle/Lower extremities)	
	07/01/09	**Lab #2 (Skeletal System)**	
	07/02/09	Joints	8

5.	07/06/09	**Test #2 (Skeletal System)**	
		Muscular system Functions. Properties, Types. Structure of cardiac and skeletal muscle	**9**
	07/07/09	Fine structure, sliding filament theory	
	07/08/09	**Lab #3**	
	07/09/09	Depolarization, Neuromuscular junction, excitation/contraction coupling	
6.	07/13/09	Muscle: Gross Anatomy (head/neck)	**10**
	07/14/09	Muscle: Gross Anatomy (Chest/abdomen)	
	07/15/09	**LAB #5 (Muscular System)**	
	07/16/09	Muscle: Gross Anatomy (Appendages)	
7.	07/20/09	**Test #3 (Muscular System)**	
		Nervous system Functions, Central and periferal, Neuron structure, Neuron	**11**
		Types Neuroglia (astrocytes, ependymal, microglia, oligodendrocytes	
	07/21/09	Action potential , Synapse	**12**
	07/22/09	Spinal cord, reflex arc	
	07/23/09	Brain stem (Medulla/pons)	
8.	07/27/09	Cerebellum, Cerebrum	
	07/28/09	Sensory and Motor areas	**13**
	08/29/09	Special organs (ear/eye)	
	08/30/09	**Final Test (Nervous Systems)**	

Revised 06/01/09 MCJ