

Biology 4220 ~ ADVANCED PHYSIOLOGY II
SUMMER 2008

CLASS: **Thursday, 5:30-9:30**

CREDIT HOURS: 3

INSTRUCTOR:

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COURSE DESCRIPTION:

This course is designed to provide the student with a fuller understanding of the mechanisms involved in maintaining homeostasis in the human body. Throughout the course, the student will examine specific details of systemic functions under both normal and pathological conditions. Discussions of the pathophysiologies of common and representative diseases will be used to correlate the theoretical and clinical aspects of human physiological responses. Upon the successful completion of this course, the student will be adequately informed in the discussion of modern theories which explain human physiology and pathophysiology. This information should prepare the student for further studies in this area in graduate school and/or will provide the theoretical basis for clinical assessments and treatments in the medical and health care fields.

Because of the extensive nature of physiology, it is impossible to present all the important aspects of human physiology under the limitations of an eight week course schedule. For this reason, two different Advanced Physiology courses are taught (Biology 4210 and Biology 4220). This course will focus on the following topics of discussion: Immunology, Neurology, Endocrinology, Gastrointestinal Functions, and Reproductive Physiology.

COURSE OBJECTIVES:

At the completion of the course the student will be expected to:

1. Utilize the basic knowledge of the biological and physical sciences in understanding both normal physiological and pathophysiological concepts.
2. Develop a more in-depth understanding of physiological processes as they relate to the function of major body systems.
3. Describe the essential characteristics of basic disease processes affecting the immunologic, neurologic, endocrine, and gastrointestinal systems.
4. Discuss the major concepts related to normal reproductive physiology.

TEACHING STRATEGIES:

Lecture Case Studies Concept Mapping
Discussion Audiovisual

REQUIRED TEXTBOOK:

Guyton, A. C., & Hall, J. E. (2002). *Human physiology and mechanisms of disease* (6th ed.). Philadelphia: Saunders.

EVALUATION METHODS:

Course grades will be based on a total of 200 cumulative points. There will be three written examinations worth 50 points each. Two of these will be group exams done within the class, and the other will be a take-home exam. A brief typed written paper (3 to 4 pages) on a pathological topic is also required. The paper is worth 30 points and is due on **Thursday, July** . Each student will give a 10 to 15 minute presentation of their paper topic in class as scheduled by the instructor. These presentations, plus in-class participation and attendance, are worth 20 points. Pop quizzes may be given at the discretion of the instructor.

Each of the three exams will cover information presented in class and from textbook readings. Exams will consist of multiple choice, matching, and brief essay questions. The exams will NOT be comprehensive. The student’s final grade will be determined from the percentage of points obtained during the course.

GRADING SCALE:

- A 95-100
- A- 93-94
- B+ 91-92
- B 87-90
- B- 85-86
- C+ 83-84
- C 77-82
- D 70-76
- F 69 and below

COURSE POLICIES:

Attendance at all scheduled classes is expected. Absences from class and late attendance will be reflected in the student’s final grade. If the student is ill and unable to attend class and/or take an exam, the instructor should be notified prior to the starting time of class. Failure to notify the instructor prior to a scheduled exam will result in a 10% penalty on the exam grade. If the faculty member cannot be contacted directly, a message should be left on voice mail. It is the responsibility of the student to contact the instructor regarding makeup exams.

Class will start promptly at the scheduled time. Please be conscientious of the starting and break times. Please also place cell phones and pagers on vibrate to avoid in-class disruptions. Lectures may be taped with the permission of the instructor.

Webster University
Biology 4220 - Advanced Physiology II
Class Schedule – Summer 2009

Date	Time	Topic	Reading Assignment
June 11	1730-1830 1830-2130	Introduction to Course Review of the Immune System: Types of Immunity: Cell-mediated & Humoral, Allergies, & Hypersensitivity Discussion of Immune Disorders	Ch 25 (p. 288-295)
June 18	1730-1900 1900-2130	Infectious & Inflammatory Processes: Common Infectious Disorders END OF CONTENT FOR EXAM 1 Neurologic System: Structure & Functions of ; Assessment of	Ch 24 (p. 280-287) Chs 31,37,38,& 39
June 25	1730-1830 1830-1930 1930-2130	EXAM 1 Student Presentations Neuro Cont'd: Pain, Temperature Regulation, Sleep, & Sensory Function	Chs 32, 33, 34, 35, 36, & 40
July 2	1730-1930	Cerebral Hemodynamics: Autonomic Nervous System, Cerebral Blood Flow, Concepts of Intracranial Pressure Regulation END OF CONTENT FOR EXAM 2 EXAM 2 (Take-Home)	Ch 41 Due Thursday, July 9
July 9	1730-1830 1830-2030 2030-2130	Student Presentations Endocrine System: Structure & Functions of Hormonal Regulation & Effects in Body Understanding the Gastrointestinal (GI) System & Related Organs	Chs 49, 50, 51, 52, & 53 Chs 42, 43, & 44
July 16	NO CLASS	Work on Papers	Due Thursday, July 23
July 23	1730-1830 1830-1900 1900-2000 2000-2130	Student Presentations Review Exam 2 GI System Cont'd Understanding the Reproductive System & Functions: Male & Female END OF CONTENT FOR EXAM 3	Chs 54 & 55
July 30	1730-1830 1830-2130	Student Presentations EXAM 3/Course Evaluations	