

METROPOLITAN STATE COLLEGE OF DENVER
Office of Academic Affairs

REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences

Department: Biology

CIP Code: 26.0706

Prefix & Course Number: BIO 2320 Crosslisted With*: _____

Course Title: Human Anatomy and Physiology II

Check All That Apply: Required for Major: __ Required for Minor: __ Specified Elective: X
Required for Concentration: _____ Elective: _____ Service Course: X

Credit Hours: 4 (3+3)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture 45 Lab 45 Internship _____ Practicum _____ Other (please specify type and hours): _____

Schedule Type(s): 6,B Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned**):

** NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): _____

Prerequisite(s): BIO 2310 or permission of instructor

Corequisite(s): _____

Prerequisite(s) or Corequisite(s): _____

Banner Enforced:

Prerequisite(s): _____

Corequisite(s): _____

Prerequisite(s) or Corequisite(s): _____

Catalog Course Description:

This is the second of two courses addressing the structure and function of the human body. Topics include endocrinology; circulation; and the respiratory, digestive, urinary and reproductive systems. Course content and class level are designed for allied health science students and for human performance, sport and leisure studies majors.

APPROVED:

[Signature]
Department Chair/Institute Director

4 OCT 05

[Signature]
Dean

Date
10/20/05

[Signature]
Associate VP, Academic Affairs

Date
1/19/06

Date

*If crosslisted, attach completed Course Crosslisting Agreement Form

Prefix and Course Number:

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Required Reading and Other Materials will be equivalent to:

Seeley, Stephens and Tate, *Anatomy and Physiology*, McGraw Hill, 2003 or current edition

Marieb, *Human Anatomy and Physiology Laboratory Manual*, Benjamin/Cummings, 2004 or current edition

Specific (Measurable) Student Behavioral Learning Objectives (format: 1, a, i, ii, etc.):

Upon completion of this course the student should be able to:

Lecture

1. Explain the functions of the organs of the respiratory, digestive and reproductive system.
2. Explain the anatomy of the kidney and the functions of the nephron.
3. Explain the initiation and conduction of impulses through the heart.
4. Explain the functional anatomy of the heart.
5. Explain the relationship between the hypothalamus and hypophysis, and the functions of the hormones of the hypophysis.
6. Describe the functions and controls of the heart and blood vessels.
7. Describe the role of erythrocytes in gas exchange and transport.
8. Explain immune mechanisms.
9. Explain mechanisms of blood clot.
10. Describe mechanisms and controls breathing.
11. Describe excretory and regulator functions of the kidney.
12. Explain general and specific endocrine control for all glands.

Laboratory

1. Identify surface features of the body.
2. Identify organs of respiratory, digestive, urinary and reproductive systems.
3. Identify heart structure.

Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/Internship (experience, responsibilities and supervision) (format: I, A, 1, a, etc.):

- I. Lecture Content (taught with basically a lecture format and extensive teaching handouts.)
 - A. Endocrinology
 1. Survey of the endocrine organs and their hormones
 2. Hormonal mechanisms
 - B. Circulation
 1. Anatomy and physiology of the heart
 2. Pulmonary and systemic flow circuits
 3. Hemodynamics
 4. Blood and its components
 - C. Respiratory System
 1. Anatomy of respiratory system
 2. Breathing mechanics
 3. Gas transport
 4. External and internal respiration
 - D. Digestive System
 1. Anatomy of digestive system
 2. Chemistry of digestion
 3. Neuronal and hormonal controls of digestion
 4. Absorption

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- E. Urinary System
 - 1. Anatomy of urinary system
 - 2. Renal Physiology
- F. Reproductive System
 - 1. Anatomy of male and female reproductive system
 - 2. Female reproductive cycle

- II. Laboratory Outline (taught with diagrams, laboratory manual, specimens and computers)
 - A. Circulatory System (dissection of Sheep heart and cat blood vessels)
 - B. Pulse Rate and Blood Pressure
 - C. Respiratory System (dissection of cat)
 - D. Measurement of Lung Volumes
 - E. Digestive System (cat dissection)
 - F. Urinary and Reproductive Systems (cat dissection)

Evaluation of Student Performance (format: 1, a, i, ii, etc.):

- 1. Two or more lecture examinations
- 2. Two or more laboratory tests
- 3. A final examination