

## **BIO54I Schedule**

Week	Topic/Chapter	Lab Assignment
Week 1	Endocrine System	
Week 2	Endocrine	Lab Ex. 32
Week 3	CH. 12 Blood	Lab Ex. 33a, b  35 a,b,c,d  Take Chapter 11 Test
Week 4	CH. 13  Cardiovascular System	35 all of it  37a,b,c  Take Ch. 12 Test
Week 5	Ch. 14 Lymphatic	41 Take Ch. 13 Test
Week 6	No Video Lecture	Final Exam Ch. 14 Test

1.5 units Applied Human Anatomy and Physiology:

**Winter 2010 Course Dates:** Monday, Jan. 4, 2010 – THURSDAY, February 11, 2010

- Note: the college is closed on Jan. 18, Feb. 12 and Feb. 15, 2010.

**Instructor:** Judy Cuff-Alvarado      email:cuffjudy@deanza.edu

**Office:** KC215      Office Phone: 408-864-8640

**Office Hours for Winter 2010:**

- Mon/ Wed: 2:30-3:30 pm in KC215 (408-864-8640)
- Tuesday in Science Center 9:00 – 11:00am (408-864-8921)

---

**Course Description:** Survey of human anatomy and physiology with emphasis on homeostatic limits of the human body. Topics to be discussed include basic introduction & body organization, chemical basis of life, the cell, its metabolism, tissues and the skin.

**Prerequisites:** High School Biology or BIO10, 11, 12, 13, 14 or 15. Especially designed for students planning careers in Medical Assisting, Licensed Vocational Nursing, Education, Speech, Home Economics, Psychology, Physical Education and/or recreation. Not open to students with credit in Biology 40A, B or C equivalent.

**Advisory:** English Writing 100A, and Reading 201 (or Language Arts 200) or English as a Second Language 161-163

One hour lecture, one and one half hours laboratory, one additional hour to be arranged

**Course Description:** Survey of human anatomy and physiology with emphasis on homeostatic limits of the human body. The endocrine, cardiovascular, and lymphatic systems and the blood.

## **Course Objectives**

The student will be able to:

- A. Distinguish between the endocrine and exocrine glands

- B. Explain how hormones affect target cells and describe gender and ethnicity differences in target cells
- C. Name the locations and actions of the major endocrine glands
- D. Describe the characteristics and functions of blood
- E. Discuss the components of blood and describe variations
- F. Explain the mechanisms of hemostasis
- G. Name and describe the functions of the major parts of the heart
- H. Discuss the cardiac cycle and how it is controlled
- I. Compare the structures and functions of the main types of blood vessels
- J. Describe the major parts and functions of the lymphatic system
- K. Explain the variety of the human's defenses against infection

### **Expanded Description: Content and Form**

- A. Distinguish between the endocrine and exocrine glands
  - 1. Transportation of secretions
  - 2. Regulation of functions to maintain homeostasis, traditional scientific explanations and examples from other cultures
- B. Explain how hormones affect target cells and describe gender and ethnicity differences in target cells
  - 1. Hormone-receptor proteins
  - 2. Steroid and non-steroid hormones
  - 3. Common medical conditions of Western and non-Western cultures
  - 4. Female and male target cells
  - 5. Control of hormones by non-traditional modes
- C. Name the locations and actions of the major endocrine glands
  - 1. Hypothalamus, pituitary, pineal, and thyroid glands
  - 2. Adrenal, thymus, and parathyroid glands
- D. Describe the characteristics and functions of blood
  - 1. Cells and fragments of cells suspended in plasma
  - 2. Transport of nutrients, gases, wastes, hormones, and electrolytes
- E. Discuss the components of blood and describe variations
  - 1. Erythrocytes, leukocytes, and platelets

2. Plasma constituents of organic and inorganic biochemicals
  3. Age, gender, geographic, and ethnic differences in components
- F. Explain the mechanisms of hemostasis
1. Blood vessel spasm
  2. Platelet plug formation
  3. Blood coagulation
- G. Name and describe the functions of the major parts of the heart
1. Coverings, three-layered wall, chambers, and valves
  2. Skeleton of the heart
- H. Discuss the cardiac cycle and how it is controlled
1. Coordination of electrical wave conduction and mechanical muscular contraction
  2. Cardiac conduction system, control by the mind and the body
- I. Compare the structures and functions of the main types of blood vessels
1. Path of blood through the heart and through the body
  2. Arteries, arterioles, capillaries, venules, and veins
- J. Describe the major parts and functions of the lymphatic system
1. Vessels, pathways, and organs
  2. Lymph nodes, thymus, and spleen
- K. Explain the variety of the human's defenses against infection
1. Nonspecific and specific (immunity)
  2. Immune responses based on age, gender, geographic location, and ethnicity
  3. Acquired immunity autoimmunity, and allergic reactions
  4. Western and non-Western approaches to fighting illness

### **Assignments:**

- Weekly Chapter Tests
- Lab Reports
- Extra Credit is optional but strongly encouraged

<b><u>Methods of Evaluating Objectives:</u></b>		<b>Grading Standard for Exams &amp; Final Grade</b>	
4 Chapter Tests 30points	120 pts	100- 90%	A
laboratory Reports	80pts	89%-80%	B
<u>1 Final Exam</u>	<u>100 pts</u>	79-66%	C
		65-50%	D
total points possible	300	Below 50%	F

**Attendance:** Students are required to view each video each week, complete and submit assigned lab work and take weekly chapter tests in lab. This should take approximately 3 hours/week in lab however can vary from student to student. Your attendance and effort significantly influence your ability to learn, enjoy and succeed in this and any course. Each student must sign in and out of lab at each session.

**Essential Student Materials:**

Access to video via streaming or VHS/DVD through the open media lab. Students must also have access to instructor's web page.

**Minimum College Facilities:** Laboratory facilities including microscopes, human tissues slides, anatomical models, computers with interactive capability, headsets for private audio, basic medical equipment for assessment of vision, hearing, reflexes, blood pressure, respiratory capacity, etc.

**Required Texts:**

- Hole, J.W: Essentials of Human Anatomy & Physiology. 10th edition, McGraw Hill Publisher, NY, NY, 2009 ISBN: 978-0-07-296563-6
- Hole, J.W: Essentials of Human Anatomy & Physiology Laboratory Manual. 10th edition, McGraw Hill Publisher, NY, NY 2009 ISBN: 978-0-07-296567-4

***Students who are eligible for reasonable accommodations must speak with the instructor as soon as the need for accommodation is known.***