

BIOLOGY 254: HUMAN ANATOMY AND PHYSIOLOGY II - Spring 2013

Course Description: A lecture and laboratory course in the anatomy and physiology of the human body. Study begins with introductions to basic terminology and cell structure; then extends to a survey of the organ systems. Laboratory study enhanced via microscopic study of tissues, preserved specimens and anatomic models, the use of interactive computer models, cat dissection, and the examination of plastinated cadaver(s). A strong biology background, Biology 132, Medical Terminology or Body Structure and Function is recommended. **Prerequisite: BIOLOGY 253**

Instructor: Michael Dexter Office: First door on the right, by the main entrance
Telephone: (517) 437-3343 x 3054 Email: dextermichaela@jccmi.edu
Office Hours: Tuesday, Wednesday, and Thursday: 12:00 – 2:00 p.m. Other times by appointment.

Biology 254 Website: <http://www.jccmi.edu/academics/science/biocourses/BIO254/BIO254.htm>

Meeting Times and Place: Tuesday, Wednesday, and Thursday, 2:00 – 4:00 p.m., Room 11

Texts: -Tortora & Derrickson – *Principles of Anatomy and Physiology*, 13th edition, 2012.
-Van De Graaff & Crawley - *Photographic Atlas for the Anatomy & Physiology Laboratory*, 7th edition
-BIO 254 Lab Manual & BIO 254 Lecture Outline

Grade: The grade you earn in this course will be based upon total points accumulated on:

1) Scheduled exams	(80 pts. each)	5) Pre-Test Assignments	(5 pts. each)
2) Unannounced quizzes	(5 pts. each)	6) Laboratory attendance	(25 pts.)
3) Lab Practicals	(60 - 80 pts. each)	7) Lab Assignments	(10 pts. each)
4) Research paper	(25 points)		

Grading scale: 4.0 (A) 95-100%; 3.5 (A-/B+) 90-94%; 3.0 (B) 85-89%; 2.5 (B-/C+) 80-84%; 2.0 (C) 75-79%; 1.5 (C-/D+) 70-74%; 1.0 (D) 65-69%; 0.5 (D-) 60-64%. You will be expected to keep a record of your grades. Grade spreadsheets will be posted to the course Educator site.

Absence Policy: You are responsible for all assignments, handouts and materials covered in lecture and in lab. If you must miss a lab exercise or an exam, it is your responsibility to arrange make-up. The privilege of making-up exams and lab practicals will be extended only in the case of emergency, illness, or previously authorized business. Please let me know in advance whenever possible. All make-ups will be different; the second (and subsequent) make-up's point value will be 80% of your actual score. Lab work can be made-up by attending other lab sections or by doing the work on your own. Unannounced quizzes cannot be made up.

General Philosophy: You are an adult and a college student. As such you are expected to be able to work and learn independently, and to be responsible for all assignments and materials. This is a difficult course and will cover a tremendous amount of material which will require hard work and discipline. You will need to keep up, as the pace of the class is fast and accelerates as we cover the last few chapters and get into consolidation and review. There are no quick, easy ways; what you learn here will be directly proportional to the amount of effort you have expended. You are expected to be considerate of the rights of others and not to interfere with those who are trying to study, work and learn.

Miscellaneous:

1. You are expected to keep a complete and well-organized notebook of lecture notes, assignments, grades and other material covered in lecture or lab. This will not be collected or graded but will be for your benefit since it will provide your main source of information.
2. It is expected that problems that occur because you feel an error has been made, you disagree with what has been done, or feel that you have been treated unfairly will be brought to my immediate attention so they can be resolved.

3. There will be **no extra credit projects** for this course, since it is felt that your time will be better allocated in studying the assigned materials.
4. Supplemental materials may be used at your home or in the JCC Computer Labs. **The text's companion website** contains a variety of study aids. ADAM Physiology Modules & Interactions CDs (on various systems) should be available in the LRC (library at main campus).
5. Student tutors may be available on a need basis, at no cost to the student being tutored. Contact the Center for Student Success in Walker Hall (517-796-8415).
6. Students with disabilities who believe that they may need accommodations in this class are encouraged to contact the Center for Student Success as soon as possible to ensure that such accommodations are implemented in a timely fashion.
7. A student found cheating or plagiarizing will receive a score of zero on that exam or assignment, or a grade of 0.0 in the course. In addition, the Academic Deans will be informed of any such incident. JCC's Academic Honesty Policy is at: <http://www.jccmi.edu/administration/deans/Policies/Academic%20Honesty%20Policy.doc>

LABORATORY PROCEDURE: Lab is a very important learning component of this course. Cooperation with other students and the instructor in keeping the lab orderly and clean is expected. Please observe the following laboratory guidelines, and encourage your partners to do the same.

1. Lab assignments and specific instructions will be given at the beginning of each lab period. You will be expected to complete all the assignments that require dissection or lab apparatus during this time. If you run out of time, the questions and practical exercises at the end of each unit can be answered later using standard reference books.
2. You will be expected to return all materials, apparatus, and reference books to their proper place at the end of the lab period. Apparatus that has been used should be washed with tap water and blotted dry with paper towels. Please leave materials neatly arranged; all members of each working group will be held responsible for the condition and return of all lab materials.
3. Consult with other members of the class and the instructor concerning any part of your work. Cooperation and consultation are encouraged; however, make certain that you completely understand everything since you will be held individually accountable for all materials covered.
4. Disruptive behavior and loud conversations will not be permitted. Do not disturb others who are working.
5. You are free to leave the lab when you have completed the assigned materials.
6. 25 points of your final grade will be based on your attitude and effort in lab. Any lab period missed or not worked on conscientiously, in excess of one, will result in a loss of 3 points per lab session. It is your responsibility to make sure that your name is on the sign in sheet each week.
7. Use of the human cadaver mandates a requirement to sign the LEARNING CONTRACT prior to participation of any kind. This contract will require reading and acceptance of: the Human Specimen Respect Policy and the "Anatomy and Physiology Lab Rules." The Rules and Learning Contract can be found on the course JetNet site.

Associate Degree Outcomes (ADOs) for BIO 254

ADO 4 - SCIENTIFIC REASONING

Describe issues raised by scientific advancements in physiology for modern society. Assessed by term paper.
Define scientific terminology and explains basic principles, concepts, and theories of the discipline. Assessed by: pretest/post test and selected exams.

ADO 7 – CRITICAL THINKING

Demonstrate critical thinking through questioning sources. Assessed by term paper.
Interpreting/ analyzing/evaluating clinical information in relation to physiological processes and using factual knowledge to solve clinical problems. Assessed by case studies and physiology lab exercises.

Biology 254: LECTURE AND LABORATORY SCHEDULE

(Subject to change based on unforeseen circumstances)

<u>WEEK OF</u>	<u>LECTURE TOPICS & EXAM SCHEDULE</u>	<u>LAB EXERCISES</u>
April 30	Chapter 15, The Autonomic Nervous System Chapter 16, Somatic Sensations	Sensory Pathways
May 7	Chapter 17, The Special Senses	Special Senses
May 14	Chapter 18, The Endocrine System	Endocrine System, Blood
May 21	LECTURE EXAM #1: Chapters 15 – 17	
May 22	Chapter 19, Blood	
May 23		LAB PRACTICAL #1 (60 points)
May 28	Chapter 19, Blood Chapter 22, The Lymphatic System and Immunity	The Thoracic Cavity
June 4	Chapter 22, The Lymphatic System and Immunity Chapter 20, The Heart (anatomy covered in lab)	The Cardiovascular System
June 11	LECTURE EXAM #2: Chapters 18, 19, 22 Chapter 21, Blood Vessels and Hemodynamics Chapter 23, The Respiratory System	The Respiratory System
June 18	Chapter 23, The Respiratory System Chapter 24, The Digestive System	
June 20		LAB PRACTICAL #2 (80 points)
June 25	LECTURE EXAM #3: Chapters 20, 21, 23 Chapter 24, The Digestive System Chapter 25, Metabolism and Nutrition	Metabolism
July 2	Chapter 25, Metabolism and Nutrition	
July 3	Chapter 27, Fluid, Electrolyte, & Acid-Base Homeostasis	
July 4	No Classes	
July 9	Chapter 27, Fluid, Electrolyte, & Acid-Base Homeostasis Chapter 26, The Urinary System	The Abdominal Cavity
July 10	LECTURE EXAM #4: Chapters 24, 25, 27	
July 16	Chapter 28, The Reproductive Systems Chapter 29, Development and Inheritance	The Urinary System The Reproductive Systems
July 23	LECTURE EXAM #5: Chapters 26, 28, 29	LAB PRACTICAL #3

Human Anatomy and Physiology Student Profile and Learning Contract (Keep for your own records)

Name (Last, First) _____ Date _____
Address (include ZIP) _____
Phone #(s) () _____ Email _____
Earned College Degrees(s) / Date(s) _____
Vocational Objective _____ Major _____
What other science courses do you plan to take at JCC? _____
What are your expectations of this class?

I have read the syllabus, and understand the items and schedule that are indicated in that document. I would like clarification or more information on the following:

As a student taking the Human Anatomy and Physiology course, I understand my responsibilities as follows:

- I am taking this course to improve my knowledge in this subject.
- I understand that this is a very difficult college level course and is not an “easy” course.
- This course builds upon chapters covered, and falling behind will make the course more challenging.
- Attendance and being to class on-time are critical to my success in this course
- I will help my fellow students understand the course material.
- I understand that if I cheat, it may affect my ability to obtain certain jobs in health care or with the government for the rest of my life.
- If I need help or have special problems, I will see the instructor, or request a tutor before I fall too far behind.
- I understand that, while all sections of Bio 254 strive for uniformity, there are particular nuances of policy and grading which are unique to my section, and perfect uniformity across all sections is impossible.
- If I have a complaint about the course, I will first discuss it with the instructor as per JCC policy.
- I will contribute to classroom and laboratory discussions.
- If at any time I feel that something is interfering with the learning environment, I will bring it to the instructor's attention privately so that the instructor can attempt to remedy the situation.
- I will keep a record of my grades and notify the instructor immediately if I feel that an error has been made, or I don't understand why I received a particular grade.
- I will familiarize myself with the “study hints” on the Science Department Web page @ jccmi.edu/Departments/Science/
- I will contribute to the learning environment for all.
- I will read and familiarize myself with the Human Specimen Policy/Laboratory Rules
- I understand that ANY violation of Human Specimen Policy/Laboratory Rules will reduce my grade to a 0.0 for the semester.
- I understand that I will receive a 0.0 unless this contract is returned to Professor Dexter by the Add/Drop deadline. I understand and agree to this learning contract.

Print Name _____ Signature _____
Date _____

Human Anatomy and Physiology Student Profile and Learning Contract (Turn In)

Name (Last, First) _____ Date _____
Address (include ZIP) _____
Phone #(s) () _____ Email _____
Earned College Degrees(s) / Date(s) _____
Vocational Objective _____ Major _____
What other science courses do you plan to take at JCC? _____
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Print Name _____ Signature _____
Date _____

(over, please)

Laboratory Participation Contract

I the undersigned, acknowledge, appreciate and agree that:

- 1) There are inherent risks involved with participation in laboratory activities, and I choose to voluntarily participate with full knowledge that said may potentially be hazardous to me. I agree to follow the safety procedures outlined above and all instructions of my instructors. I understand that I may be forbidden from participating in the laboratory session and future laboratory courses if I violate any safety rule or procedure.

- 2) I voluntarily assume full responsibility for any risk of personal injury, including death, which may be sustained by me as a result of my participation. There may also be other risks which are not fully known or readily apparent.

- 3) I hereby release, waive, and discharge College and its Board of Trustees, its officers, agents, employees and representatives from all claims, demands, liabilities, rights and causes of action of whatever kind or nature, that may result from or occur during my participation, whether caused by negligence of the College, its Board of Trustees, officers, agents, employees or representatives or otherwise. I also agree to indemnify and hold harmless the College for any loss, liability, damage or costs, including court costs and attorney's fees that may occur as a result of my negligent or intentional act or omission while participating in this course.

I HAVE CAREFULLY READ THIS RELEASE OF LIABILITY AND ASSUMPTION OF RISK AND HAVE HAD SUFFICIENT TIME TO SEEK EXPLANATION OF THE PROVISIONS CONTAINED ABOVE. AFTER CAREFUL CONSIDERATION, I SIGN THIS DOCUMENT VOLUNTARILY AND WITHOUT ANY INDUCEMENT.

Print Name _____ Signature _____ Date _____