

BIO 253 – Human Anatomy and Physiology I - Winter 2017

Course Description: This is the first course of a 2-semester course sequence in which students study the anatomy and physiology of the human body. The course includes introductions to basic chemistry, biology, and histology, and extends to the survey of the integumentary, skeletal, muscular and nervous systems. This course includes a laboratory component in which students are responsible for performing dissections and making original observations on dissected material. The laboratory experience culminates with the use of a plastinated human specimen for observation. A strong background in biology and/or chemistry is highly recommended.
Prerequisites: ENG 085 and MAT 020.

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Office Hours: Mon. 10:45-11:30 & 1-3
 Tues. 12 -1:20 & 3 -4:30
 Wed. 10:45-11:30 & 3:30--5:15
 Thurs. 12-1:20

Texts and Materials:

Text: PRINCIPLES OF ANATOMY AND PHYSIOLOGY, Tortora & Derrickson; 14th ed. – Recommended text. Other A&P textbooks for a full-year class (25-29 chapters) are acceptable (e.g. Martini, Marieb, Patton, Saladin or Seeley). (There is an online A&P text available at www.openstax.com; however, it is missing important information for the end of this course and the beginning of BIO 254.)

Required: Anatomy and Physiology I Lab Manual, Bradford & Visser, Kendall-Hunt, 2015

Recommended: Course Outline packet, Dr. Visser's edition – (JCC-printed packet)

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

1) Pre-Lecture online Chapter Quizzes (5 pts. each x 10) (14 assigned; highest 10 counted); due before class the first day that chapter is listed in the class schedule	50	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% 0 (F) <60%
2) Class Exams (100 pts. each x 4)	400	
3) Lab Practicals (25-100 pts. each x 3)	225	
4) Pop quizzes & Misc. In-class/lab Work (3-5 pts. each)	25 (approx.)	
5) Lab Participation	60	
6) Pre-test assignments (5 pts. each)	<u>20</u>	
Total:	780 (approx.)	
<i>(Grade spreadsheets are posted on JetNet and on my door; you are responsible for keeping track of your progress in the class and letting me know of any error.)</i>		

Absence Policy: You are responsible for all assignments, handouts and materials covered in lecture and lab. Make-up opportunities for the exams and/or practicals are extended only in the case of emergencies, funerals or hospitalization and require written verification. **Second and subsequent make up exams will be awarded at 80% of the achieved score.** Practicals may not be made up unless you can take the practical with another lab section, otherwise you may either take a zero for the score or take an incomplete for the course and make it up next semester. Pop quizzes and in-class work cannot be made up. Non-attendance during the first three weeks of the semester will result in your being dropped from the class. If you reach the end of semester and cannot complete the class – for extenuating reasons – you may be eligible for an incomplete. (Already earned scores carry over; only the missed work is eligible to be completed during the following semester.)

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; it will require hard work and discipline. You will need to keep up as the pace of the class is fast. There are no quick, easy ways to succeed. What you learn in this class will be directly proportional to the amount of effort you expend. It is expected you will need to spend at least 2 hours/week studying outside of class for every hour you are in class and lab (therefore 12 hours/week).

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. You may feel that you paid for this class so you have the right to do whatever you want, but your classmates paid for it too, and they have the right to not have their learning disrupted by your rude behavior. Cell phones must be on silent mode (if on at all!) and any non-class related use of phones or other electronics during class time risks having the item confiscated.

Miscellaneous:

- No materials will be used during exams except those provided by the instructor (other than a #2 pencil). No electronic devices of any kind are allowed during examinations (except for documented ADA use).
- An exam score adjustment may be used for each exam. The curve is a privilege.
- **There will be no extra credit projects for this course.** Your time will be much better spent studying the assigned materials from Day 1.
- Supplemental materials will be available online and for checkout in the Learning Resource Center (WA) or Center for Student Success (WA). Links to the text's companion website are provided on JetNet.
- Tutors and additional free services for academic success (writing, study skills, test anxiety, math and reading, etc.) can be accessed by calling (517) 796-8415 or by stopping by the Center for Student Success, BW138. Students with documented disabilities should contact the Center for Student Success as soon as possible to ensure that appropriate accommodations are implemented in a timely fashion.
- A student found cheating or plagiarizing will receive a score of 0 on that exam or assignment and may receive a grade of 0 in the course. The Academic Deans will also be informed of the incident. The Academic Honesty Policy can be found at <http://www.jccmi.edu/policies/Academics/Policies/1004.pdf>.
- An iClicker response system may be used in this course. Clickers will be assigned to each student by the instructor. Your assigned clicker must be returned to the instructor at the end of each class session in order to receive your grade. Replacement of lost or damaged clickers is the students' responsibility.

LABORATORY PROCEDURE: Lab is a very important learning component of this course and has its own content. If you will not be able to attend a lab session, please make plans to attend another session that week if at all possible. Please observe the following items and encourage your lab group to do the same.

- 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.
- Any information covered in lab is "fair game" for both lab practicals and class exams. Lab practicals will, however, be limited to identification of materials as listed on the practical study guides.
- The lab period is a time of active learning involving study of various materials, interactive projects, short lecture-style presentations and other activities to enhance class success. Interaction with, and learning from, other members of the class (as well as the instructor) will be a critical part of the lab environment. While group work is important, make certain that you fully understand all material yourself since you will individually be held accountable for all information on the tests.
- While group activities and study are a required part of the lab, disruptive behavior and loud conversations will not be permitted. And speaking of disruptive, appropriate clothing should be worn to lab. Low-cut tops and pants are not only unprofessional, they guarantee that your classmates will be studying a lot more "anatomy" than what is in the lesson plan for the day.
- Sixty points of your final grade will be based on your participation in various activities during lab. Any lab missed or not worked on conscientiously will result in a loss of 3 points per lab session. You will be expected to thoughtfully respond to each lab session's activities.
- You will be expected to return all materials and reference books to their proper place at the end of the lab period. Please leave materials neatly arranged; all members of each group will be held responsible for the condition and return of all lab materials.
- **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". [BIO 253 students will not be dissecting nor working extensively with the human specimen; however, Instructor demonstration of the specimen will be part of the course.]

Anatomy and Physiology Laboratory Rules

Students' increased education in anatomy results from an experience made possible by the selfless acts of thoughtful individuals who have voluntarily chosen to donate their bodies to scientific study. These donated cadavers are gifts that must be accorded the *dignity* and *respect* they deserve. This respect policy applies to not only the plastinated or wet cadaver, but also skeletal material, human organs and any other previously living organism (e.g. cats).

The rules of the Anatomy and Physiology laboratory are based upon RESPECT, SECURITY, SAFETY and MAINTENANCE.

Students must adhere to the following guidelines when learning from these donated cadavers and other materials in the laboratories.

Respect

- At no time should anyone show any disrespect to the cadavers. Inappropriate or improper behavior and/or comments within and outside the laboratory is/are unacceptable. Faculty have determined a respectful name for the cadaver to preserve a sense of humanity for the specimen, other naming will not be allowed.
- At no time will any dissected cadaver tissue or skeletal materials be removed from the laboratory.
- At no time will food or drink be permitted in the human specimen lab.
- All cadaver tissue will be placed in a tissue bin placed under the dissection table. At no time will any other material (i.e. paper products) be placed in this bin.
- Cadavers will be appropriately draped at all times.
- The right of privacy and confidentiality due all medical patients is extended to our anatomical donors.
- At no time will electronic devices be allowed in the laboratory. Absolutely no pictures or videos are to be taken of the cadavers at any time by students. Faculty may take photographs of specimens for educational purposes. Anonymity of the specimen will be considered when taking photographs.
- Appropriate security measures will be taken and access to the laboratory will be limited to those with an approved academic purpose.

Security

- Keep the doors of the laboratory closed. When class is not scheduled, the doors to the lab will be locked.
- At no time will visitors be permitted into the laboratory without first obtaining approval from the full time BIO 155 (anatomy and physiology) instructors. Anyone given access to the specimens must have an approved academic purpose.

Safety for Working with Wet Cadavers

- In case of an EMERGENCY, dial **9-911**. Then dial "0" for the operator to report serious injuries. The Security extension is 8620. Phones are located throughout McDivitt Hall. The main office is in room JM 125, extension 8152.
- FIRST AID SUPPLIES are available in JM 121.
- Students who are pregnant, or believe they may be pregnant, are encouraged to discuss their attendance in these labs with their physician.
- Wearing a lab coat will help to protect clothing from splashes and smells.
- Gloves will be worn at all times when working with the cadavers.

- Wearing of glasses in the laboratory instead of soft contact lenses is advised. Please note the site of the eyewash in the laboratory.
- Bare feet are not allowed, and shoes with tops (not sandals) are recommended.
- All used scalpel blades should be disposed of in the provided “sharps” containers. Never dispose of “sharps” waste baskets or garbage cans. All skin cuts are to be thoroughly washed with clean water. Report all injuries to the laboratory instructor in attendance and complete a JCC Incident Report.
- Safety procedures are in place to limit exposure to chemicals and subsequent risk; however, each student is responsible for their own health. JCC is not responsible for any consequences of exposure to chemical preservative.

Maintenance

- Remember that cadaver dissections will be used again, so tissues should be handled with care. Every effort should be made to keep dissected material, hands, feet and face moist when working with a wet cadaver. The linen shrouds or towels covering the cadavers should be moistened with preservative frequently. All regions not being studied should be draped. When finished or pausing in dissections or observations, completely cover the cadaver.
- Tables should be kept clean and free of excessive tissue.
- Keep the laboratory clean. Individuals are responsible for cleaning up after themselves.

Access to Laboratory Outside of Regularly Scheduled Class Hours

The laboratory is NOT available outside of normally scheduled laboratory time. Occasionally, open laboratory time is scheduled by the laboratory instructors.

Adapted from: <http://dbs.umt.edu/courses/biol312/labpolicy.htm>

General Education Outcomes (GEOs) for BIO 253

The Board of Trustees has determined that all JCC graduates should develop or enhance certain essential skills while enrolled in the college. The General Education Outcome for Bio 253 GEO 4 (Scientific Reasoning – assessed by performance on tests, quizzes and assignments). It also has components that contribute to the “Working Productively with Others” Essential Competency (EC) aspect of JC’s General Education program.

Drop/Add Deadline Jan. 26

Drop with “W” Deadline April 28

BIO 253: HUMAN ANATOMY & PHYSIOLOGY I SCHEDULE – W 2017

Dates are subject to change due to unforeseen circumstances.

<u>DATE</u>	<u>READING & EXAM SCHEDULE</u>	<u>LAB ACTIVITIES</u>
1/16	Chapter 1 – Introduction to Anat. & Phys.	
1/18	Finish Ch. 1; Chapter 4 – Histology	Ex. 1&3 (Pt. 1) [Microscopy]
1/23	Finish Ch. 4	
1/25	Chapter 2 – Chemistry	Ex. 2 & 3 (Pt. 2) [Mitosis]
1/30	Continue Ch. 2	
2/1	Finish Ch. 2	Ex. 3, cont. [Histology]
2/6	Exam 1 (Ch. 1, 2 & 4)	
2/8	Chapter 3 – Cells	Lab Practical 1
2/13	Continue Ch. 3	
2/15	Finish Ch. 3	Ex. 4 & Ch. 7 [Skeleton]
2/20	Chapter 5 – Integumentary System	
2/22	Finish Ch. 5	Ex. 4 & Ch. 8
2/25- 3/5	<i>Spring Break – No Classes</i>	
3/6	Chapter 6 – Bone Tissue	
3/8	Finish Ch. 6	Ex. 4, cont.
3/13	Exam 2 (Ch. 3, 5 & 6)	
3/15	Chapter 9 – Articulations	Ex. 4, cont.
3/20	Chapter 11 – Skeletal Muscles	
3/22	Chapter 10 – Muscle Physiology	Lab Practical 2
3/27	Continue Ch. 10	
3/29	Continue Ch. 10	Ex. 5 [Muscles]
4/3	Finish Ch. 10	
4/5	Chapter 12 – Nervous System	Ex. 5, cont.
4/10	Exam 3 (Ch. 7-11)	
4/12	Continue Ch. 12	Ex. 5, cont. & Human specimen
4/17	Finish Ch. 12	
4/19	Chapter 13 – Spinal Cord	Ex. 6 [Nervous System]
4/24	Chapter 14 – Brain	
4/26	Continue Ch.14	Lab Practical 3
5/1	Finish Ch. 14	
5/3	Exam 4 (Ch. 12-14)	<i>no lab</i>