

BIO 103
Human Biology
Fall 2011

Credit: 3 semester hours; Prerequisites - None

Instructor: Matthew Maready, MD
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Course Description: A survey of the structure and normal functions of the human organism and an introduction to human ecology and genetics. Students will research and prepare oral presentations as part of the requirements for this class. This course will not count toward a major or minor in biology. It can, however, count either as a non-laboratory core science course for non-science majors or if taken with BIO 104, would count as a laboratory core science course.

Instructional Materials: *Human Biology* by Sylvia S. Mader; 12TH edition

Learning Objectives: These objectives are not all-inclusive, but rather represent the basic concepts the student will be exposed to. In all cases, we will explore these topics in both normal human biology and aberrant human biology (i.e. infections, genetic mutations, cancer, etc.)

1. The student will understand cell theory and how it applies to humans.
2. The student will be able to identify the major cells and tissue types that make up the human body.
3. The student will explain the protective and homeostatic functions of the integumentary system.
4. The student will explain how the cardiovascular system works to transport nutrients to and waste products from our cells.
5. The student will identify the cells making up blood and how each functions in immunity and homeostasis.
6. The student will explore how the respiratory system works with the cardiovascular system to transport oxygen to the cells throughout the body.
7. The student will identify the various parts of the immune system and how they all work together.
8. The student will identify some common organisms that plague humanity today and the steps being taken to combat the threat they represent.
9. The student will explain how the digestive system is able to convert food into usable energy for our bodies.
10. The student will explain how the urinary system works to remove waste products from the bloodstream and expel them from the body.
11. The student will identify the parts of the musculoskeletal system and how they function to produce coordinated movement.
12. The student will explore the nervous system and its role in coordinating the body systems in their entirety.
13. The student will identify the major organs involved in the endocrine system and how their hormones serve to regulate homeostasis.
14. The student will identify the components of the male and female reproductive system and explore the complex process of human development.
15. The student will explore human genetics and its role in normal and abnormal development.
16. The student will acquire a basic understanding of cancer as well as explore how cancer in its many guises is diagnosed and treated.
17. The student will explore the role of DNA in the future of healthcare.

Academic Integrity: Mississippi College students are expected to be scrupulously honest. Dishonesty, such as cheating or plagiarism, or furnishing false information, including forgery, alteration or misuse of University documents, records or identification, will be regarded as a serious offense subject to severe penalty, including, but not limited to, loss of credit and possible dismissal. See the *Mississippi College Student Handbook* or University Policy 2.19 for specific information regarding penalties associated with dishonest behavior at Mississippi College. Copies of the *Mississippi College Student Handbook* are available in the Office of the Vice President for Enrollment Management and Student Affairs, Nelson 313. Copies of University policies are available on the Mississippi College web site.

Required Practices:

1. As this is a night course, a great deal of material will be covered each class. It is tremendously important to not only attend each class but to come prepared. Read the assigned chapters for each lecture **prior to coming to class**. Powerpoints for the chapters will also be available on MC Moodle and may include additional material not necessarily covered in the text but which I have deemed important to understanding the evening's topics.
2. In the interest of keeping you on track, there will be a five question quiz at the beginning of each lecture, excluding the course introduction. This amounts to nine five point quizzes. **THEY WILL COVER THE MATERIAL THAT WILL BE COVERED IN CLASS THAT DAY.** In order to be fair, the questions will come only from the required text and not from any additional material mentioned in the notes. I will drop your lowest quiz grade, with missed quizzes counting as zeros. Except in extraordinary circumstances, there will be no make-up quizzes, so please be on time.
3. After each lecture series, there will be a 50 question exam covering the material in the previous three lectures. These will each count 100 points toward your final grade. These are not comprehensive. No grades will be dropped. If you are going to have to miss the day the exam is being given, contact me in advance. This is not a free pass to miss, as if the circumstance does not warrant your absence you will receive a zero for this test. If you must miss the test and the circumstances are appropriate, we will arrange a time for you to take it **BEFORE** the rest of the class. **THERE WILL BE NO MAKE UP EXAMS!!!**
4. At the end of the course there will be a 100 question final exam worth a total of 200 points towards your final grade. **THIS IS COMPREHENSIVE.**
5. Each student will be assigned two case studies to write later in the course which will include a report on a disease process in an actual patient along with questions appropriate to this course. It is expected that responses to the questions be typed and use appropriate grammar. Each case report will be worth 15 pts.
6. Students will be assigned groups early in the semester and will be able to choose a bioethical issue from a list of choices which they will give a presentation on during the last lecture session of the semester. Details will be given at the time of group assignments. All members of the group need to equally participate in both the preparation and the presentation.

Evaluation Method:

3 Exams @ 100pts each.....	300
1 Comprehensive final.....	200
8 Pre-lecture quizzes @ 5pts each.....	40
2 Medical case studies @15pts each.....	30
1 Bioethics group presentation.....	30
Total.....	600

Grading Scale:

A	90 - 100%
B	80 - 89
C	70 - 79
D	60 - 69
F	0 - 59

DO NOT MISS AN EXAM!!!! If you know you are going to be out (for a school function), make arrangements to take the test ahead of time! If you miss an exam other than your final, the grade will become your drop grade.

There are no make-up exams. If you know you are going to be out ahead of time (sports, music, etc), schedule an appointment with me **BEFORE** the exam.

Attendance and Make-up Policy: Lecture sessions meet every Thursday from 6:00pm-9:00pm. Attendance in class is expected. The student (not the instructor) is responsible for any instructions, assignments, or work missed during an absence. Strict adherence to Mississippi College's class attendance policy will be followed. "Any student whose absences, whether excused or unexcused, exceed 25% of the class meetings will receive a grade of "F" in the course." See *The Undergraduate Bulletin*.

A student receives a grade of F in any course immediately upon accumulating 4 absences in semester classes meeting 1 times per week. This is excused or unexcused absences.

Absence Appeal: If a student misses more than the number of class periods specified in university policy and believes that there are reasonable explanations for the absences, he/she may appeal the absences to the dean of the school in which the course is being taught. Students may obtain a Student Absence Appeal Form from the office of the appropriate dean.

Exemptions: Seniors that have a "B" in a given course during the term or semester in which they complete requirements for graduation from MC may be exempted from the final examination in that course, and their daily grades are given as the final grade. This only applies to seniors who are graduating in December!

Special accommodations at Student Counseling Services: In order for a student to receive disability accommodations under Section 504 of the Americans with Disabilities Act, he or she must schedule an individual meeting with the Director of Student Counseling Services **immediately upon recognition of their disability** (if their disability is known they must come in before the semester begins or make an appointment **immediately** upon receipt of their syllabi for the new semester). The student must bring with them written documentation from a medical physician and/or licensed clinician that verifies their disability. If the student has received prior accommodations, they must bring written documentation of those accommodations (example Individualized Education Plan from the school system). Documentation must be current (**within 3 years**). The student must meet with SCS **face-to face** and also attend two (2) additional follow up meetings (one mid semester before or after midterm examinations and the last one at the end of the semester). Please note that the student may also schedule additional meetings as needed for support through SCS as they work with their professor throughout the semester. Note: Students must come in **each semester** to complete their Individualized Accommodation Plan (example: MC student completes fall semester IAP plan and even if student is a continuing student for the spring semester they must come in again to complete their spring semester IAP plan).

Student Counseling Services is located in Alumni Hall Room #4 or they may be contacted via email at hreeves@mc.edu. You may also reach them by phone at **601-925-7790** or **601-925-7791**.

Date	Topics Covered and Assignments
1/12	Class Introduction
1/19	Organization of the Human Body Text: Ch 3-4
1/26	Cardiovascular System Text: Ch 5-6
2/2	Respiratory System Text: Ch 9
2/9	Exam 1
2/16	Lymphatic System and Human Immunity Text: Ch 7 and Infectious Diseases Supplement
2/23	Digestive and Urinary Systems Text: Ch 8-10
2/30	Musculoskeletal System Text: Ch 11-12
3/8	Exam 2 and Case Study 1 Due
3/15	NO CLASS – SPRING BREAK
3/22	Nervous System Text: Ch 13-14
3/29	Endocrine System and Human Reproduction Text: Ch 15-17
4/5	Human Genetics and Cancer Text: Ch 18-20
4/12	Exam 3 and Case Study 2 Due
4/19	Group Presentations and DNA and the Future Text: Ch 21
4/26	Final Exam