# BSC 105 - HUMAN BIOLOGY Fall 2018

**INSTRUCTOR:** Dr. Thomas Ditty Office: TVMHS Room 201

Email: Thomas.ditty@k12.wv.us

**LECTURES:** Monday-Friday 1:02-2:32 PM

**LABS:** One per week

**REQUIRED TEXTS, ADDITIONAL READING, AND OTHER MATERIALS**

Human Biology, 15th or 14th or 13th editions by S.S. Mader & M. Windelspecht

Lab manual (available only at Marshall Bookstore)

14th Edition available through the textbook Loan Program: http://www.marshall.edu/uc/textbook-loanprogram/

**TECHNOLOGY REQUIREMENTS:** A computer that runs Microsoft Office or an equivalent.

**COURSE DESCRIPTION:** This course focuses on the fundamentals of biological human structure, function, and interactions with the environment. The course is divided into lecture and laboratory instruction. Lectures will introduce students to how humans are related to other living organisms, cell function, basic human anatomy, and fundamental functions of the human body, basic human genetics, human evolution and human impact on the global ecology. In the laboratory, students will interact with and observe specimens as a way of reinforcing what was learned in the classroom.

**UNIVERSITY POLICIES:** By enrolling in this course, you agree to the University Policies. Please read the full text of each policy by going to http://www.marshall.edu/academic-affairs/policies/.

**STUDENT LEARNING OUTCOMES/OBJECTIVES**

* Students will be able to correctly use scientific terminology and explain basic biological concepts clearly and accurately (communication, critical thinking)
* Students will be able to describe human body systems and how they function (communication, critical thinking)
* Students will be able to accurately conduct and describe laboratory experiments and their importance in the broader perspective of understanding science (communication, critical thinking, technology)

**LEARNING OUTCOMES WILL BE ASSESSED AS FOLLOWS:**

Critical thinking: Critical thinking outcomes will be assessed via laboratory assignments, classroom exams and group discussions.

Communication: Students will be required to correctly spell anatomical structures on practical lab exams and in group discussions.

Technology: Students will be required to learn how to use a microscope.

**ATTENDANCE POLICY:** You are expected to attend all scheduled lectures and laboratory sessions.

Lectures are designed to explain difficult material, indicate relative importance of specific topics, answer questions, and give guidance and direction in your studying. If you are not present it will be much more difficult for you. If you miss a class session, it is your responsibility to obtain all assignments and materials.

**LABORATORY ATTENDANCE AND LAB GRADES:** Your lab grade will be calculated from graded data sheets. The student must hand in each data sheet by the end of each lab period – no late data sheets are to be accepted.

**EXAMS:** There are **several exams** scheduled during this course; look at your course schedule. All three are worth 100 points each, and all are **non-cumulative** and of the same length. Tests may include multiple choice, figure labeling, true-false, or other types of questions.

**MAKE-UP EXAMS**: Make-up exams are NOT ordinarily given. If you miss an exam you must provide an acceptable excuse within 24 hours of the scheduled time for the exam. **If you do not, you will not be permitted to take a make-up and a “0" will be scored for this exam.** Make-up exams will be given ONLY in the event of (1) an officially approved absence, (2) a death in the immediate family, or (3) an illness that prevents you from attending class on the scheduled exam day. In the case of illness, you must provide a note signed by a physician stating that you could not be present during the exam period for medical reasons.

**ATHLETES:** Members of sports teams that must travel on exam days may take the exam early. We should meet and arrange this as early in the semester as possible.

**GRADING:** Final letter grades for the course are determined on the percent of total possible points achieved by the following scale:

# A=90-100%, B=80-89%, C=70-79%, D=60-69%

Your final average will include lecture exam grades, lab sheet grades, and case study discussions in class.

**Assessment** **Points**

|  |  |
| --- | --- |
| Lecture Exam 1 | 100 or 10% |
| Lecture Exam 2 (Mid-term) | 200 or 20% |
| Lecture Exam 3 | 100 or 10% |
| Final Exam | 100 or 20% |
| Lab Grades | 200 or 20% |
| Class Participation/Cooperation | 100 or 10% |
| Quizzes, research papers, Assignments | 100 or 10% |

**ACADEMIC DISHONESTY IN ANY FORM WILL NOT BE TOLERATED.** All written assignments,

laboratory reports, and exams are to be independent efforts of each student. (see University Policies above). You are responsible for knowing the University's policies, which can be found in the student handbook or at these web addresses: http://www.marshall.edu/academicaffairs/policies/#AcademicDishonesty. Ignorance of the policies is not an excuse. No electronic devices, EVER, will be allowed during tests.

In the lab, most experiments will be done in groups, but I expect that all assignments will be written up independently. Exceptions to independent work will only be allowed in cases where you are expressly instructed to write up your assignment in groups.

**STUDENTS WITH DISABILITIES:** Students are entitled to receive accommodations for documented physical, learning and psychological disabilities (see University Policies above). No accommodation can be allowed until documentation is received, and it must be received several days in advance of the exams to allow me time to arrange the accommodations required. For more information, please visit http://www.marshall.edu/disability/ or contact Office of Disability Services Prichard Hall 119, phone 304696**‐**2271.

**TENTATIVE COURSE SCHEDULE**

Date Lecture Topics Readings

1. 8/20 Introduction; What’s biology/science? Chapter 1, 2

8/24 Chemicals of life & Cells Chapter 2 & 3 LAB: Laboratory Safety

1. 8/27 Cells Chapter 3

8/31 Organization of body systems Chapter 4 LAB: Scientific Measurement

1. 9/04 Cardiovascular system Chapter 5

Cardiovascular system Chapter 6

LAB:

1. 9/10 Immune system & Infectious disease Chapter 7&8

Immune system & Infectious disease Chapter 7&8

**9/13 Exam 1**

LAB: Column chromatography

1. 9/17 Digestive system Chapter 9

9/21 Respiratory system Chapter 10

LAB: Microscope & Cells

1. 9/24 Urinary system Chapter 11

9/28 Urinary system & lecture review Chapter 11

LAB: Circulation

1. 10/1 Skeletal system Chapter 12

LAB: Immunology

1. 10/08 Skeletal system Chapter 12

Skeletal system Chapter 12

**10/12 Exam 2**

LAB: Digestion

1. 10/15 Muscular system Chapter 13

Nervous system Chapter 14

LAB: Skeleton

1. 10/22 Nervous system Chapter 14

10/26 Endocrine system Chapter 14

LAB: Nervous system

1. 10/29 Endocrine system & lecture review Chapter 16

LAB: Embryology

1. 11/5 Reproductive system Chapter 17

**11/8 Exam 3**

Development & aging Chapter 18

LAB: Genetics

1. 11/12 Human genetics Chapter 19

11/16 Human genetics Chapter 21&22

LAB: Protein synthesis

1. 11/19-23 Thanksgiving break

1. 11/26 Human evolution Chapter 23

Human evolution Chapter 23

LAB: Population growth & human impact

1. 12/3 Ecology & Ecosystems Chapter 24

12/10 Human Interactions Chapter 25

LAB: No lab

# XVII 12/17 Final Exam

**HELP**

If you are having trouble or not doing as well as you want to (or need to) come talk to me! It is my job to try to help you.

Marshall also has organizations helping students that are having problems:

1. College of Science free tutoring in Science 209. You can get free extra help from your own TA or from another TA that is involved with this class. It can even be a TA from one of the other professors’ classes. The TAs’ office hours will be posted on the door of 209 by the end of the first week of classes. Simply pick a TA or time that works for you.

1. University College Tutoring Center (in Smith Communications Building Room 211. You can view the drop-in tutoring schedule on line and even request a tutor on line at: http://www.marshall.edu/uc/tutoring-services/