

Course Outline
Fall 2015 Semester

COURSE NAME: Survey of Human Form and Function
COURSE NUMBER: BIOL 115 - M1
INSTRUCTOR: Dr. Elena Zoubina
OFFICE: S110
OFFICE HOURS: by appointment
EMAIL: ezoubina@massasoit.mass.edu

COURSE DESCRIPTION:

This course is designed for students who are enrolled in the Paramedic program. This course does not meet the requirement for BIOL 201 Anatomy and Physiology I or BIO 202 Anatomy and Physiology II for nursing and allied health students. Topics include an introduction to the structure and function of the human body, cells, tissues, levels of organization, and a survey of all 11 systems of the body. The course consists of a combination of lecture and laboratory experiences in addition to a peer discussion of relevant clinical cases. A dissection component of the laboratory work is required for successful completion of the course.

Lecture: 2 hours. Laboratory: 2 hours. 3 Credits

REQUIRED TEXTS:

Bledsoe, B.E., Martini, F.H., Bartholomew, E.F., Ober, W.C. and Garrison, C.W 2007. *Anatomy & Physiology for Emergency Care. Second edition.* Prentice Hall.

COURSE OBJECTIVES: Survey of Human Form and Function is designed to provide a general survey of the structure and function of the human body. By the time the student has finished the course, he or she should be able to:

1. Understand the definitions of the terms anatomy and physiology and be able to explain how they are related. Use anatomical and physiological terminology correctly in order to be able to read and understand the text and laboratory instructions, and communicate effectively in a professional setting.
2. Understand the basic structure and function of a general animal cell and be able to describe distinguishing characteristics of the cells that make up the body tissues.
3. Observe and describe differences in basic tissue types in order to be able to predict tissue and organ function based on structure.
4. List the eleven organ systems, the organs they include, and their basic function.
5. Relate structure to the function of cells, tissues, and selected organs in order to demonstrate an understanding of the physiology of the eleven systems of the human body.
6. Describe the homeostatic condition and control systems for important variables including body temperature, pH, blood pressure, electrolyte levels, blood glucose levels, PO₂ and PCO₂ in order to understand the nature of the "normal" or "healthy" condition.
7. Describe the results of homeostatic imbalance of the same important variables in order to relate changes to the underlying causes of disease.

8. Communicate accurately and clearly both in writing and orally in order to communicate efficiently with patients and professional colleagues.
9. Work safely in the laboratory and follow simple laboratory protocols in order to work cooperatively to complete laboratory exercises and conduct experiments using the scientific method
10. Use appropriate study skills to ensure success in the course
11. To strengthen Core Competencies of Critical Thinking, Technology Skills, Oral Communications, Quantitative Skills, Reading, and Writing in order to increase success in this and other courses and in the workplace.

CLASS FORMAT:

We will use a lecture/discussion approach. You are encouraged to contribute relevant information whenever appropriate and upon recognition by the instructor. After studying each topic, you will be provided a clinical case to discuss with others in the Discussion section of the Canvas. You are expected to contribute at least one original posting and two replies for each case discussion.

A reading guide will be handed out for each chapter which will include the text assignments as well as specific factual and conceptual objectives for each topic. These objectives should guide your reading and help you to organize your lecture notes and reading notes in preparation for lecture exams.

How to Prepare for Lecture and Laboratory

The student should spend a minimum of two hours preparing for each class by pre-reading the assigned pages from the text and laboratory exercises and reviewing the material from the previous class. Reading assignments on the syllabus are general and refer to the chapter(s) in the text that related to the material covered in lecture. Use the guide given to you in class to direct your reading in the text. It is helpful to look over the material related to the topic before coming to class as this preparation will allow you to become a more active participant in the learning process. Class discussion will be augmented by use of handouts, PowerPoint, and computer simulations. Exam questions will come from material covered in lecture and lab.

During laboratory sessions students will work individually or in small groups to complete the assigned tasks. Procedures are outlined in the laboratory exercises. The student should carefully read over each procedure before coming to lab. The instructor will demonstrate all new procedures.

Students are encouraged to contact the instructor for additional help with the course material, study skills, test taking skills, and writing skills. Students are also strongly encouraged to use the ARC for individual and small group tutoring. The ARC also has a wide variety of review materials that many students have found very useful. Students are also encouraged to use the interactive study guide that is packaged with your text.

GRADING:

Your final grade will be determined by a series of announced quizzes, one-hour lecture exams, final exam, laboratory exams, laboratory exercises, laboratory quizzes and case study discussions according to the following point system:

Lecture Quizzes =	10X10 points each =	100 points
Case Reports =	15X10 points each =	150 points
Lecture Exams =	3X100 points each =	300 points
Final Exam =		200 points
Dissections =	8X10 points each =	80 points
Laboratory reports =	15X5-20 points each =	170 points

Total = 1000 points

Final grades will be determined as follows:

A	=	94%	or higher
A-	=	90.0%	- 93.9%
B+	=	87.0%	- 89.9%
B	=	83.0%	- 86.9%
B-	=	80.0%	- 82.9%
C+	=	77.0%	- 79.9%
C	=	73.0%	- 76.9%
C-	=	70.0%	- 72.9%
D+	=	67.0%	- 69.9%
D	=	63.0%	- 66.9%
D-	=	60.0%	- 62.9%
F	=	0.0%	- 59.9%

Exams will consist of a mixture of multiple choice, fill-in-the-blank, matching, definitions, and short answer questions. You will not be allowed to make up an exam during the semester, so a missed exam will be assigned a zero grade. Exceptions will be made only under extraordinary circumstances **and** when the proper documentation is provided.

The final exam will have the same format as a lecture exam. It will be a **comprehensive exam** on the major concepts discussed throughout the semester. A missed final exam will not be made up or an I grade given except under extraordinary circumstances and by prior arrangement. The final exam date will be scheduled by the registrar.

Laboratory Post-lab assignments must be turned in no later than one week after the lab was scheduled. Points will be deducted for late assignments. If a student misses a lab, he or she is responsible for making arrangements with the instructor for making up the material.

***ATTENDANCE
POLICY:***

You are expected to attend all meetings of the course each week. An outgoing spirit of active participation is your best assurance of success. If extenuating circumstances force you to miss a class, please inform me in advance (if possible) or upon your return to class. You are responsible for making up any material missed.

You are expected to be present in the classroom at the **BEGINNING** of the class period. **LATE ARRIVALS** disturb the class and should be avoided. Likewise with early departures.

HELPFUL HINTS:

When having difficulties, seek help from the instructor at the first indication of problems. Set up study groups with other students in lecture and laboratory. Prepare for each class by completing objectives. Prepare for each lab by reading lab directions prior to laboratory. There are several resources available if extra help is needed.

***DISABILITY:
SERVICES***

The Biology department embraces the position of the disability service providers at the college. Students with disabilities who believe that they may need accommodations in the classroom are encouraged to contact a Disability Counselor: Andrea Henry at x 1805, Julie McNeil-Kenerson at x1424 or Cathy Brogna at x1425 as soon as possible in order to ensure that such accommodations are implemented in a timely fashion.

***STUDENT
RESPONSIBILITIES:***

Freedom to teach and freedom to learn are inseparable facets of academic freedom. The freedom to learn depends upon appropriate opportunities and conditions in the classroom, on the campus, and in the larger community. The responsibility to secure and respect general conditions conducive to the freedom to learn is shared by all members of the academic community - students, faculty, and staff members.

The orderly operation of the college or classroom would suggest that students:

- Be prepared academically for each class.
- Attend class regularly.
- Arrive at class on time and remain until the end of the class.
- Consult with their instructor prior to class if it is necessary to leave class early.
- Adhere to the college policy prohibiting food, drink, smoking, and the use of tobacco in the classroom.
- Treat all college property with respect.
- Leave the classrooms and laboratories neat and tidy.
- Respect the rights of others to an education and not disturb the learning process in any way.
- Obtain a copy of the student handbook and become familiar with college policies and procedures.

LECTURE ASSIGNMENT AND TESTING SCHEDULE

DATE	LECTURE SUBJECT	TEXT ASSIGNMENT	LABORATORY TITLE
SEPT. 14	Introduction	Ch.1 p.2-24	Language of anatomy.
SEPT.21	Chemical level of organization Cell Structure and Function	Ch.2 p.29 -54 Ch.3 p. 58-89	The Microscope
SEPT.28	The Tissue Level of Organization	Ch.4 p. 94-117	Classification of tissues.
OCT. 5	Exam 1 Integumentary system	Ch.5 p. 122-147	The Integumentary system. Drain and prepare cats for dissections.
OCT.1	Skeletal System	Ch.6 p.150-199	Overview of the skeleton.
OCT.19	Muscular System	Ch.7 p.206-253	Gross and microscopic anatomy of the muscular system.
OCT. 26	Nervous System	Ch. 8 p.258-319	Anatomy of the brain and the spinal cord. Brain dissection
NOV. 2	Exam 2 Endocrine System	Ch.10 p.366-401	Anatomy of the Endocrine system Initial cat dissections.
NOV. 9	Lymphatic System and Immunity	Ch.14 p.510-540	Blood typing
NOV. 16	Blood The Heart	Ch.11 p.406-433 Ch.12 p. 436-464	Heart dissection
NOV. 12	Blood Vessels and Circulation	Ch. 13 p.466-507	Anatomy of Cardiovascular system, Blood vessels dissection
NOV. 23	Respiratory System	Ch.15 p.546-580	Anatomy of Respiratory system. Respiratory system dissection.
NOV. 30	Exam 3 Digestive System	Ch.16 p.584-623	Anatomy of Digestive system. Digestive system dissection.
DEC.7	Urinary System	Ch.18 p.658-690	Anatomy of Urinary system. Urinary system dissection.
DEC.14	Reproductive System	Ch.19 p.696-726	Anatomy of Reproductive system. Reproductive system dissection.
DEC. 21	FINAL LECTURE EXAM		