Course Outline
Spring 2010 Semester

***COURSE NAME*:**	Anatomy and Physiology II
***COURSE NUMBER*:**	BIOL202-02
***INSTRUCTOR*:**	Mr. Marc Simmons
***OFFICE*:**	S114
***OFFICE HOURS*:**	Monday, Wednesday, Thursday, Friday 10:00-10:50; Tuesday 1:00-2:00; and by appointment
***PHONE*:**	508.588.9100, EXT. 1668
***EMAIL*:**	msimmons@massasoit.mass.edu

***COURSE DESCRIPTION*:** This is the second part of a two-semester course that presents in a comprehensive manner the structure and function of the human body. Topics include the cardiovascular, respiratory, digestive, urinary, endocrine, and reproductive systems. A dissection component of the lab work is required for successful completion of the course. This course is designed for students in the health programs.

Lecture: 3 hours. Laboratory: 2 hours.

***PREREQUISITE*:** Grade of "C-" or better in Biological Principles I (BIOL121) or successful performance on departmental challenge exam, and Preparing for College Reading II (ENGL092), Introductory Writing (ENGL099), and Fundamentals of Mathematics (MATH010) or waiver by placement testing results or Departmental Approval. Anatomy and Physiology I (BIOL201) must be taken before Anatomy and Physiology II (BIOL202).

***REQUIRED TEXTS*:**

Text: Marieb, E., and Hoehn, K. 2010. *Human anatomy and physiology*. *Eighth edition.* Menlo Park, CA: Benjamin/ Cummings Publishing Co., Inc.

Lab Manual: Marieb, E., and Mitchell, S. 2009. *Human anatomy and physiology lab manual. Ninth edition. (Cat version).* Menlo Park, CA: Benjamin/ Cummings Publishing Co., Inc.

***COURSE OBJECTIVES*:** Human Anatomy and Physiology is designed to provide a comprehensive survey of the structure and function of the human body. The interrelationship between structure and function and the importance of homeostasis are significant unifying themes throughout the study of the major organ systems. The specific objectives for each unit of study will be handed out in class along with outlines of the lectures.

***COURSE OUTCOMES*:** By the time the student has finished both Anatomy &Physiology I and II, he or she should be able to:

1. Use the general steps of the scientific method to form hypotheses, collect and evaluate data, and draw conclusions, in order to learn to distinguish between science and pseudoscience, and to evaluate scientific information in both professional journals and the popular press.
2. Use anatomical vocabulary correctly in order to be able to read and understand the text and laboratory instructions, and communicate effectively in a professional setting.
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, in order to carry out a systematic (as opposed to regional) study of the human body.
5. Apply the basic principles of biology to the function of cells and cell membranes in the human body in order to be able to predict the nature of processes involving membrane transport, receptors, surface area and energy, thus learning from understanding rather than memorization.
6. 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: integumentary, skeletal, muscle, nervous, endocrine, cardiovascular, lymphatic and immune, respiratory, digestive, urinary, and reproductive.
7. 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.
8. Describe the results of homeostatic imbalance of the same important variables in order to relate changes to the underlying causes of disease.
9. Present and interpret data from charts and graphs in order to develop skills in using charts and graphs to convey information, to be able to read and understand professional journals and to understand data used in the workplace and presented at meetings and conferences.
10. Communicate accurately and clearly both in writing and orally in order to educate patients (for students entering allied health fields) and communicate with professional colleagues.
11. 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
12. Use appropriate study skills to ensure success in the course
13. 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. However, private comments and conversations are not allowed.

There are specific factual and conceptual course objectives for each topic. You are expected to complete the assigned pages in the text **PRIOR TO CLASS DISCUSSIONS**. This preparation will allow you to become a more active participant in the learning process, both in lecture and laboratory.

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

Weekly Quizzes =	5-10 points each =	50 points
3 Lecture Exams =	100 points each =	300 points
Final Exam =		200 points
Laboratory Assignments =		250 points
2 Lab Exams =	100 points each =	200 points
Total =		1000 points

Final grades will be determined as follows:

A	=	92.5% or higher	=	925 points or greater
A-	=	90.0% - 92.4%	=	900-924 points
B+	=	87.5% - 89.9%	=	875-899 points
B	=	82.5% - 67.4%	=	825-874 points
B-	=	80.0% - 82.4%	=	800-824 points
C+	=	77.5% - 79.9%	=	775-799 points
C	=	72.5% - 77.4%	=	725-774 points
C-	=	70.0% - 72.4%	=	700-724 points
D+	=	67.5% - 69.9%	=	675-699 points
D	=	62.5% - 67.4%	=	625-674 points
D-	=	60.0% - 62.4%	=	600-624 points
F	=	0.0% - 59.9%	=	0-599 points

Weekly quizzes will consist of a short series of questions and will be given the first ten minutes of class. **DO NOT ARRIVE LATE** or you may find that you have inadequate time to take the quiz. Normally a missed quiz will be assigned a zero grade. However, exceptions may be made for extenuating circumstances with the proper documentation, as decided by the instructor on a case-by-case basis. The lowest lecture quiz grade **or** a zero-grade for a missed quiz will be dropped.

Exams will consist of a mixture of multiple choice, true/false, fill-in-the-blank, figures, definitions, labeling, 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 Pre-lab assignments must be turned no later than the beginning of the scheduled lab. 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.

Lab exams will consist primarily of identification questions. Questions could require you to identify objects with the aid of the microscope, identify structures in a diagram or on a model, or to identify structures in dissections. Handouts will be given for each lab explaining the material you are responsible for on the lab practical. There are no make ups for lab exams. Exceptions will be made only under extraordinary circumstances **and** when the proper documentation is provided.

***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 will **NOT** be tolerated. 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 as soon as possible. Students at the Brockton Campus with learning disabilities should contact Andrea Henry, at extension 1805. Students with physical disabilities at the Brockton Campus should contact Mary Berg, at extension 1425. All students at the Canton Campus should contact Mary Berg at extension 2132."

***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
JAN. 26, 28	The Endocrine System	Chapter 16: pages 594-624	Ex 27: Anatomy and Basic Function of the Endocrine Glands
FEB. 2, 4	Blood	Chapter 17: pages 634-657	Ex 29: Blood Ex. 29B: Blood Analysis: Computer Simulation
FEB. 9, 11	Blood The Cardiovascular System: The Heart	Chapter 17: pages 634-657 Chapter 18: pages 661-687	Ex 30: Anatomy of the Heart
FEB. 16, 18	The Cardiovascular System: The Heart	Chapter 18: pages 661-687	Ex 31: Conduction System of the Heart & ECG's
FEB. 25	**EXAM 1**	**CHAPTERS 16-18**	
FEB. 23	The Cardiovascular System: Blood Vessels	Chapter 19: pages 694-721	Ex 32: Anatomy of Blood Vessels Dissection 4: Blood Vessels
MAR. 2, 4	The Cardiovascular System: Blood Vessels	Chapter 19: pages 694-721	Ex 32: Anatomy of Blood Vessels Dissection 4: Blood Vessels
MAR. 9, 11	The Lymphatic System The Immune Response	Chapter 20: pages 752-761 Chapter 21: pages 766-795	**LAB Exam 1**: Labs 27, 29, 30, 31, 32
MAR. 16, 18	**SPRING BREAK**	**NO CLASSES**	
MAR. 25	**EXAM 2**	**CHAPTERS 19-21**	
MAR. 23	The Respiratory System	Chapter 22: pages 804-840	Ex 36: Anatomy of the Respiratory System Dissection 6: Respiratory System
MAR. 30 **APR. 1**	The Respiratory System	Chapter 22: pages 804-840	Ex 37B: Respiratory Physiology
APR. 6, 8	The Digestive System	Chapter 23: pages 851-901	Ex 38: Anatomy of the Digestive System Dissection 7: Digestive System
APR. 13	The Digestive System	Chapter 23: pages 851-901	Ex 39B Chemical and Physical Processes of Digestion
APR. 15	**EXAM 3**	**CHAPTERS 22-23**	
APR. 20	**PRE-REGISTRATION DAY**	**NO DAY CLASSES**	
APR. 22	The Urinary System	Chapter 25: pages 960-988	
APR. 27, 29	The Urinary System	Chapter 25: pages 960-988	Ex 40: Anatomy of the Urinary System Dissection 8: Urinary System
MAY 4, 6	Fluid, Electrolyte, and Acid-Base Balance	Chapter 26: pages 995-1017	Ex 42: Anatomy of the Reproductive System Dissection 9: Reproductive System
MAY 11	The Reproductive System	Chapter 27: pages 1024-1066	**LAB Exam 2: Labs 36, 37, 38, 39, 40, 42**
MAY 13	**READING DAY**	**NO CLASSES**	
MAY 14-19	**FINAL LECTURE EXAM**		