Massasoit Community College
Brockton, Massachusetts

Course Outline
Fall Semester

COURSE NAME: Anatomy and Physiology I
COURSE NUMBER: BIOL201-03
INSTRUCTOR: Mr. Marc Simmons
OFFICE: S114
OFFICE HOURS: Monday, Thursday, Friday 9:00-10:00, Tuesday 2:00-3:00 and by appointment
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COURSE DESCRIPTION: This is the first part of a two-semester course that presents in a comprehensive manner the structure and function of the human body. Topics include tissues and the integumentary, skeletal, muscular, and nervous 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 (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. N., and Hoehn, K. 2007. *Human anatomy and physiology. Seventh edition.* San Francisco, CA: Pearson Benjamin Cummings.

Lab Manual: Marieb, E. N., and Mitchell, S. J. 2008. *Human anatomy and physiology laboratory manual. Ninth edition. (Cat version).* San Francisco, CA: Pearson Benjamin Cummings.

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.

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. 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. I will be using a tablet PC and all board notes will be uploaded to the course site on CE6 (WebCT). You can then use the text to enhance the explanation of the material covered in class. Quiz and test 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 meet frequently with the instructor for additional help with the course material, study skills, test taking skills, and writing skills. Office hours are posted outside my office door, on my CE6 site and on this syllabus. If these hours are not convenient, please see me about scheduling an appointment. 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, and a writing assignment according to the following point system:

Weekly Quizzes =	5-10 points each =	75 points
3 Lecture Exams =	125 points each =	375 points
Final Exam =		200 points
Laboratory Worksheets =	10 points each =	150 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

There will be a lecture quiz each week (except when we have a lecture exam), which will consist of a short series of multiple-choice questions. There will be **NO** make up of lecture quizzes, so a missed quiz will be assigned a zero grade. However, the lowest lecture quiz grade will be dropped.

Exams will consist of a mixture of multiple choice, true/false, fill-in-the-blank, 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. No lecture exams will be dropped, however since the final exam is cumulative, the grade on the final exam will be substituted for **ONE** missed exam or the lowest exam grade. Exceptions can only be made in extreme 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 worksheets must be turned in one week after the lab was scheduled. Points will be deducted for late labs. If a student misses a lab, he or she must make up that lab within one week of its scheduled date. A student may make up only one lab during the semester.

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.

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.

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 with learning disabilities should contact Andrea Henry, at extension 1805. Students with physical disabilities should contact Mary Berg, at extension 1425. Students at the Canton Campus should contact Stan Oliver at extension 2468."

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.
- Turn off all cell phones, PDA's and iPods before coming to class. During an exam or quiz, if a device in your possession makes any type of audible noise you will earn a zero.
- 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 policies and procedures.

Academic integrity from the college catalog: Students are responsible for maintaining the highest standards of academic honesty and integrity in this course. Violations of academic honesty will usually fall in one of two categories: cheating or plagiarism. Cheating includes, for example, copying or buying the work of others; hiring or persuading others to do work under a false name; concealing notes or other helpful materials during an exam; communicating with your classmates during an exam. Plagiarism is the use of another person's work or ideas as one's own without giving appropriate credit. In short, plagiarism is intellectual theft and is, therefore, taken seriously; consequently, using the ideas or language of others in an oral, written, technical, or artistic work must be properly acknowledged and documented. Students are responsible for understanding what constitutes plagiarism in their classes and should note that these offenses are often very easy for the instructor to catch. In this class, the penalty for cheating and plagiarism will be a grade of zero for the work in question and possibly a failing grade for the course.

DATE	LECTURE SUBJECT	TEXT ASSIGNMENT	LABORATORY TITLE	LAB ASSIGNMENT
SEPT. 3-5	Intro. to Anatomy & Physiology	Chapter 1: P. 1 – 23	Exercise 1: Language of Anatomy Exercise 2: Organ Systems Overview	P. 1-9 P. 15-24
SEPT. 8-12	The Tissue level of Organization	Chapter 4: P. 117 – 150	Exercise 6A: Classification of Tissues	P. 67-81
SEPT. 15-19	The Tissue level of Organization The Integumentary System	Chapter 4: P. 117 – 150 Chapter 5: P. 151 – 174	Exercise 6A: Classification of Tissues Exercise 8: Classification of Body Membranes	P. 67-81 P. 105-108
SEPT. 22-26	The Integumentary System	Chapter 5: P. 151 – 174	Exercise 7: The Integumentary System	P. 91-98
SEPT. 29	**EXAM 1: CH 1, 4, 5**			
OCT. 1-3	Bones and Skeletal Tissues	Chapter 6: P. 175 – 201	Exercise 9: Overview of the Skeleton Exercise 6A: Classification of Tissues	P. 111-118 P. 67-81
OCT. 6-10	Bones and Skeletal Tissues	Chapter 6: P. 175 – 201	Exercise 10: The Axial Skeleton	P. 123-138
OCT. 13	**Columbus Day (No Classes)**			
OCT. 15-17	Joints	Chapter 8: P. 252 – 278	Exercise 11: The Appendicular Skeletal System	P. 145-156
OCT. 20-24	Joints	Chapter 8: P. 252 – 278	**LAB PRACTICAL 1 (LABS 1, 2, 6, 7, 8, 9, 10, 11)**	
OCT. 27	**EXAM 2: CH 6, 8**			
OCT. 29-31	Muscle Tissue	Chapter 9: P. 279 – 323	Exercise 14: Microscopic Anatomy, Organization, & Classification of Skeletal Muscles	P. 187-191
NOV. 3-7	Muscle Tissue Fundamentals of the Nervous System and Nervous Tissue	Chapter 9: P. 279 – 323 Chapter 11: P. 387 – 429	Exercise 15: Gross Anatomy of the Muscular System	P. 197-226
NOV. 10-14	Fundamentals of the Nervous System and Nervous Tissue	Chapter 11: P. 387 – 429	Exercise 17: Histology of Nervous Tissue	P. 257-264
NOV. 17-21	The Central Nervous System	Chapter 12: P. 430 – 489	Exercise 19: Gross Anat. of Brain & Cranial Nerves	P. 279-297
NOV. 24	**EXAM 3: CH 9, 11**			
NOV. 26	The Central Nervous System	Chapter 12: P. 430 – 489	Exercise 19: Gross Anat. of Brain & Cranial Nerves Exercise 21: Spinal Cord and Spinal Nerves	P. 279-297 P. 315-329
NOV. 28	**THANKSGIVING BREAK**	**NO CLASSES**		
DEC. 1-5	The Peripheral Nervous System and Reflex Activity	Chapter 13: P. 490 – 531	Exercise 23: General Sensation Exercise 24: Special Senses: Vision Exercise 25: Special Senses: Hearing & Equilibrium	P. 355-357 P. 363-370 P. 383-386
DEC. 8-12	The Autonomic Nervous System	Chapter 14: P. 532 – 554	**LAB PRACTICAL 2 (LABS 14, 15, 17, 19, 21, 23,24, 25)**	
DEC. 15	**READING DAY**	**NO CLASSES**		
DEC. 17	**FINAL LECTURE EXAM**			