

COURSE SYLLABUS

YEAR COURSE OFFERED: **2016**

SEMESTER COURSE OFFERED: **SPRING**

DEPARTMENT: **BIOLOGY**

COURSE NUMBER: **2302**

NAME OF COURSE: **Anatomy and Physiology II**

NAME OF INSTRUCTOR: **TBD**

The information contained in this class syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

Learning Objectives

Upon successful completion of this course, students will be able to

1. Develop a vocabulary of terminology to effectively communicate and discuss information related to the anatomy and physiology of the cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems of the human body.
2. Recognize the anatomical structures of the human body and explain the physiological functions of these structures.
3. Recognize and explain the role of homeostasis in the normal functioning of the cardiovascular, respiratory, digestive, urinary and reproductive systems.
4. Recognize and describe the interrelationships within and between anatomical and physiological systems of the human body.
5. Synthesize ideas to make connections between knowledge of anatomy and physiology and real-world situations, including healthy lifestyle decisions and diseases.
6. Interpret graphs of anatomical and physiological data.

Core Objectives (CO)

Anatomy and Physiology II addresses the following core objectives to ensure students develop the essential knowledge and skills they need to be successful in college, in a career, in their communities, and in their lives.

- Critical Thinking Skills - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- Communication Skills - to include effective development, interpretation and expression of ideas through written, oral and visual communication

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- Empirical and Quantitative Skills - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
- Team Work - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

Major Assignments/Exams

The course components below are designed to meet the course objectives.

- **Quizzes:** In class quizzes will be given to assess student understanding of covered topics.
- **Exams:** there will be three in-class exams during the semester. Exams will consist of multiple choice, short answer and essay questions covering material presented in lectures.
- **Homework assignments:** there will be periodic problem assignments that will support the material being presented in class.
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Learning Outcomes	CO	Assessment Methods	Criteria/Targets
1. Demonstrate mastery of the fundamental chemistry of biologically important molecules.	CT, COM	Pre- and post-test instruments will be used to track student success in mastering the learning outcomes.	≥75% of students will demonstrate >20% improvement between pre-test scores at beginning of course and post-test scores at the end.
2. Relate cell structures to biological function and describe their role in metabolism.	CT, COM	Quizzes and exams, with questions directed toward specific topics embedded within each exercise to evaluate specific sub-objectives.	≥70% of students will answer the target questions correctly.
3. Recognize the commonalities between organ systems of diverse animal species.	CT	Quizzes and exams, with questions directed toward specific topics embedded within each exercise to evaluate specific sub-objectives.	≥70% of students will answer the target questions correctly.
4. Work with peers to apply content knowledge in problem solving.	EQS, TW	Problem sets related to each course module will be completed within student work groups.	≥75% of students will complete problem sets with correct solutions within their groups.

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5. Effectively communicate solutions and reasoning to classmates and course instructor.	COM	Short written and oral reports pertaining to class modules.	≥75% of students will complete and share written and oral reports on assigned topics with each class module.
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Required Reading

Textbook, TBD (e.g., Marieb E.N. and Hoehn K. 2016. *Anatomy and Physiology*, 10th edition, Pearson)

Recommended Reading

N/A

List of discussion/lecture topics

- The anatomy and physiology of the cardiovascular system, including the heart, blood vessels, and blood, blood circulation and blood pressure
- The anatomy and physiology of the lymphatic system, including the lymph vessels, lymph nodes, and lymph
- The anatomy and physiology of the respiratory system, including gas exchange between the air and the body, and gas transport in the blood.
- The anatomy and physiology of the digestive system, including digestive enzymes and nutrient absorption
- Metabolism and energetics
- The anatomy and physiology of the urinary system, including the structure and function of the kidneys, and fluid, acid-base and electrolyte balance in the body
- The anatomy and physiology of the reproductive system, including fertilization and implantation of the ovum, development, and birth