



Myocardial Physiology and ECG Analysis

EXPH 6013

Fall

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Office: Ligon Coliseum Building, Room# 209

Office Hours: Mondays and Wednesdays 10:00 AM-1:00 PM.

Course Textbook

Levick's Introduction to Cardiovascular Physiology, 6th Edition. ISBN# 9781498739849

ECG Workout, 8th Edition. ISBN# 9781975174545

I will also provide PowerPoint notes.

Course Teaching Modality

This course will meet in person two times per week.

You will receive regular updates through announcements in D2L or via email.

Course Description

This class develops content in the physiology of the myocardium with a foundation in electrocardiography (ECG). This includes tissue, cellular, and molecular components of the heart and conditions associated with exercise and pathologies. In addition, the content will include ECG lead placement, rate and rhythm of the heart, ECG complexes and intervals, conduction disturbances, arrhythmia, and identification of cardiac myopathies.

Course Evaluation

Collaborative Games.Drawings (5*20 points each)	100 points
Real-Life Scenario Discussions (5*10 points each)	50 points
Quizzes (5*10 points each)	50 points
Exams (3*100 points each)	300 points
	500 points total

A (90–100%) → 450–500 points

B (80–89%) → 400–449 points

C (70–79%) → 350–399 points

D (60–69%) → 300–349 points

F (<60%) → Below 300 points

Course Due Dates Policy

Condition	Can I make up the full credit?	When should I submit my work?
Late submission with valid documentation (illness, tournament, car accident, bereavement, jury duty, religious observance, family emergency, or similar circumstances)	Yes	Within 1 week (must email a valid document, as prior consent is required)
Late submission without valid documentation, even if it is 5 minutes past the due date (within 2 days)	25% deduction per day	Within 2 days



Late submission without valid documentation (after 2 days)	No	Never, the grade will be zero
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Course Communication Policy

1. Read the syllabus carefully before emailing me with any questions.
2. Communication is key in this course. You are strongly encouraged to reach out with any questions.
3. Include your class number (EXPH #####) in the subject line of your email.
4. I will respond to all emails that require a reply within 24 hours, Monday through Friday, between 8:00 AM and 5:00 PM. Emails sent on holidays will be answered on the next business day.
5. If your email is solely to inform me of something or to submit a document, I will acknowledge and address it internally but will not send a confirmation reply such as 'Received' or 'Okay.'
6. You are all adults, and I will not be monitoring your attendance. However, keep in mind that if you choose not to attend class on lecture days, you will miss understanding the concepts in the way it is expected to be known for the exams, and feel lost as the semester progresses, trust me in that.
7. With university-approved documentation, you may make up the missed work within one week. After that, make up opportunities will not be permitted, regardless of documentation. If you do not provide valid documentation, you may still make up the work within two days, with a 25% deduction per day.
8. Please note that I am unable to provide details about what was covered in class during your absence. I kindly encourage you to reach out to your classmates for this information.
9. All quizzes and exams will be completed online in class. Please ensure that you have a fully functional and fully charged computer prior to the quizzes and exams. Retakes will not be granted due to technical issues during the quizzes and exams. It is your responsibility to test your device in advance.
10. All slides are important, as any material not relevant to the exam will not be covered in slides.
11. I do not provide study guides for exams that specify which slides to focus on or skip. All lecture slides are interconnected and contribute to the overall understanding of the material, so it's important to study everything as a cohesive whole.
12. The purpose of the activities is to prepare you for the exams and familiarize you with the types of questions you can expect for the exams.
13. Do not email me requesting grade adjustments, as I do not round up grades. All final grades are calculated exactly as earned.
14. This class does not offer any extra credit opportunities.
15. I do not curve grades. Your grade reflects how much you have learned.
16. There is no such thing as exams being inherently “hard” in this course. Every question on the exams is based on our in-class discussions, PowerPoint slides, and the detailed explanations in the textbook. Active engagement and studying are essential. If your goal is simply to pass the course without truly understanding the material, I can assure you that approach will not be successful in my class and the exams will be perceived as “hard”.
17. If the PowerPoint slides are not enough to fully understand the material, please refer to the textbook. If you need further assistance, feel free to email me with your questions or visit me in my office, I would be happy to help.
18. Cheating will result in a zero and may lead to removal from the course. Do not use cell phones during class activities. Any form of academic dishonesty is easily detectable and will not be tolerated.
19. Be active in class and participate by answering questions as your engagement matters. If I ask a question and no one responds, I will randomly choose someone to answer.
20. If you have any questions about your career, I would be happy to discuss them with you.



21. I am always open to suggestions. If you notice anything that could improve your experience in the class, please discuss it with me now, rather than waiting for the course evaluation and allowing the improvement to benefit students next semester.

Course Schedule

The course syllabus outlines the general plan for the course; however, the instructor reserves the right to adjust any part of the syllabus at any time during the semester as deemed necessary.

Week	Monday	Wednesday
Week 1, Aug 25-29	Syllabus	<ul style="list-style-type: none"> The Funnel Approach to Success in Exercise Physiology The Importance of Studying This Course Exercise Physiology Job Opportunities Expectations Activity
Week 2, Sep 1-5	No Class, Labor Day	Cardiovascular System Overview
Week 3, Sep 8-12	<ul style="list-style-type: none"> Anatomy of the Heart Scenario Discussion #1 	<ul style="list-style-type: none"> Cardiac Cycle Quiz #1
Week 4, Sep 15-19	<ul style="list-style-type: none"> Cardiocirculatory System Game.Drawing #1 	Heart Rate
Week 5, Sep 22-26	<ul style="list-style-type: none"> Stroke Volume & Cardiac Output Game.Drawing #2 	<ul style="list-style-type: none"> Blood Pressure Quiz #2
Week 6, Sep 29-Oct 3	Exam #1	Cardiac Innervation
Week 7, Oct 6-10	<ul style="list-style-type: none"> Autonomic Regulation of the Heart Game.Drawing #3 	<ul style="list-style-type: none"> Cardiovascular Adaptations Quiz #3
Week 8, Oct 13-17	<ul style="list-style-type: none"> Cardiac Monitors Scenario Discussion #2 	Introduction to Electrophysiology Scenario Discussion #3
Week 9, Oct 20-24	Waveforms, Intervals, Segments, Complexes	<ul style="list-style-type: none"> Analyzing a Rhythm Strip Scenario Discussion #4
Week 10, Oct 27-31	<ul style="list-style-type: none"> Sinus Arrhythmias Game.Drawing #4 	<ul style="list-style-type: none"> Sinus Arrhythmias Quiz #4
Week 11, Nov 3-7	Exam #2	Atrial Arrhythmias
Week 12, Nov 10-14	Atrial Arrhythmias	Junctional Arrhythmias and AV Blocks
Week 13, Nov 17-21	Bundle Branch Blocks	<ul style="list-style-type: none"> Premature Ventricular Contractions Scenario Discussion #5
Week 14, Nov 24-28	<ul style="list-style-type: none"> Pacemakers Game.Drawing #5 	No class, Thanksgiving
Week 15, Dec 1-5	Cardiac Drift	<ul style="list-style-type: none"> Cardiac Drift Quiz #5
Week 16, Dec 8-11	Exam #3	