

GMS 6440 | Fundamentals of Medical Physiology

Class Number: 11324

Instructor Information

Tanja Taivassalo

Course Details

Catalog Description: Teaches the basic functions of the human body at a level required for clinical medicine and basic research in medical physiology. This is an introductory course to be taken before courses on specific organ systems physiology. The course covers normal physiology, as well as selected diseases. Concepts are taught using a combination of lectures, online workshops, and online problem sets.

Pre- and Co-Requisites: Prereq: Requires a BA or BS and a strong science foundation with at least 5 full semester courses related to Biology, chemistry and/or physics. A minimum undergraduate GPA = 2.0 is required for admission.

Credit Hours: 1

Course Fees: \$0.00

Additional Course Description

Fundamentals of Medical Physiology (GMS6440) teaches the basic functions of the human body at a level required for clinical medicine and basic research in medical physiology. This is an introductory course to be taken before or simultaneous with courses on specific organ systems physiology. The course covers normal physiology, as well as selected diseases. Concepts are taught using a combination of lectures, online workshop, and online problem sets. The workshops are designed to help the student understand the integration of physiology with genetics, genomics, molecular biology, and cellular physiology as a basis for a better understanding of human disease.

Recommended Materials

BERNE & LEVY PHYSIOLOGY, UPDATED EDITION

ISBN: 9780323393942

Authors: BRUCE M. KOEPPEN & BRUCE A. STANTON

Publisher: ELSEVIER

Edition: 7TH

All Access: This course does not use UF All Access

Course Goals and Objectives

The ultimate goal is for students to develop an understanding of the integrated functions of the normal body and “problem solving” and “critical thinking” skills in evaluating clinical situations.

Expectations and Student Learning Outcomes

After successfully completing this course, students will be able to:

1. Understand the basics of human physiology, anatomy and common disease in each organ system.
2. Understand the normal functions of ion channels and transporters at a level required for an understanding of clinical medicine.
3. Understand membrane potentials.
4. Understand the physiology of body fluids and their control mechanisms.
5. Understand the autonomic nervous system.
6. Understand how physiological processes can be manipulated genetically.
7. Demonstrate the ability to apply physiological principles of clinical and basic science relevancy by multiple choice examinations, workshops, and quiz exercises.

Methods of Evaluation

Grade Breakdown:

- Research Assignments: 20%
- Problem Sets: 35%
- Final Exam: 45%

Grading Scale

Grading Scale

Letter	Percentage Value
A	93 - 100%
A -	90 - 92.99%
B +	87 - 89.99%
B	83 - 86.99%
B -	80 - 82.99%
C +	77 - 79.99%
C	73 - 76.99%
C -	70 - 72.99%
D +	67 - 69.99%
D	63 - 66.99%
D -	60 - 62.99%
E	59% and below

Course Schedule

Problem Set 1: May 24

Problem Set 2: June 7

Problem Set 3: June 14

Problem Set 4: June 28

Problem Set 5: July 12

Research Assignment: July 26

Final Exam: August 2

University Policies and Resources

Information about grading policies, support for students with disabilities, course evaluations, the Honor Code, and other course policies and campus resources can be found on the [Syllabus Policies page](#).

Attendance Policy

Excused and Unexcused Absences

Students may only participate in classes if they are registered officially or approved to audit with evidence of having paid audit fees. The Office of the University Registrar provides official class rolls to instructors.

Students are responsible for satisfying all academic objectives as defined by the instructor. Absences count from the first-class meeting.

Acceptable reasons for absence from or failure to engage in class include illness; Title IX-related situations; serious accidents or emergencies affecting the student, their roommates, or their family; special curricular requirements (e.g., judging trips, field trips, professional conferences); military obligation; severe weather conditions that prevent class participation; religious holidays; participation in official university activities (e.g., music performances, athletic competition, debate); and court-imposed legal obligations (e.g., jury duty or subpoena). Other reasons (e.g., a job interview or club activity) may be deemed acceptable if approved by the instructor.

For all planned absences, a student in a situation that allows an excused absence from a class, or any required class activity must inform the instructor as early as possible prior to the class. For all unplanned absences because of accidents or emergency situations, students should contact their instructor as soon as conditions permit.

Students shall be permitted a reasonable amount of time to make up the material or activities covered during absence from class or inability to engage in class activities because of the reasons outlined above.

If a student does not participate in at least one of the first two class meetings of a course or laboratory in which they are registered, and they have not contacted the department to indicate their intent, the student can be dropped from the course. Students must not assume that they will be dropped, however. The department will notify students if they have been dropped from a course or laboratory.

The university recognizes the right of the instructor to make attendance mandatory and require documentation for absences (except for religious holidays), missed work, or inability to fully engage in class. After due warning, an instructor can prohibit further attendance and subsequently assign a failing grade for excessive absences.

Religious Holidays Guidelines

At the University of Florida, students and faculty work together to allow students the opportunity to observe the holy days of their faith. A student should inform the faculty member of the religious observances of their faith that will conflict with class attendance, with tests or examinations, or with other class activities prior to the class or occurrence of that test or activity. The faculty member is then obligated to accommodate that particular student's religious observances. Because students represent a myriad of cultures and many faiths, the University of Florida is not able to assure that scheduled academic activities do not conflict with the holy days of all religious groups. Accordingly, individual students should make their need for an excused absence known in advance of the scheduled activities.

The Florida Board of Education and state law govern university policy regarding observance of religious holidays.

Guidelines

- Students, upon prior notification to their instructors, shall be excused from class or other scheduled academic activity to observe a religious holy day of their faith.
- Students shall be permitted a reasonable amount of time to make up the material or activities covered in their absence.
- Students shall not be penalized due to absence from class or other scheduled academic activity because of religious observances.

If a faculty member is informed of or is aware that a significant number of students are likely to be absent from class because of a religious observance, the faculty member should not schedule a major exam or other academic event at that time.

A student who is to be excused from class for a religious observance is not required to provide a second party certification of the reason for the absence. Furthermore, a student who believes that they have been unreasonably denied an education benefit due to religious beliefs or practices may seek redress through the student grievance procedure.

Absence due to Illness

A student who is absent from class or any required class-related activity because of illness should contact their instructor, if feasible, as early as possible prior to the missed class or activity.

Students shall be permitted a reasonable amount of time to make up the material or activities covered during an excused absence.

Students should contact their college by the deadline to drop a course for medical reasons. Students can petition the Dean of Students Office to drop a course for medical reasons. The university's policy regarding medical excuse from classes is maintained by the Student Health Care Center.

Twelve-Day Rule

Students who participate in university-sponsored athletic or scholarly activities are permitted to be absent 12 scholastic days per semester without penalty. A scholastic day is any day on which regular class work is scheduled as defined in the approved university calendar.[More Info](#)

The student or student's advisor must notify the instructor as early as possible prior to the anticipated absence to allow ample time for accommodations. Instructors must be flexible and not penalize students when re-scheduling during-term

and final exams, class assignments, and other required activities and must follow the UF Attendance Policy herein and UF Examination Policies. As noted in the UF Examination Policies, during-term exams should be re-scheduled no later than before the end of the semester, while final exams no later than 90 days after the originally scheduled exam time. However, instructors are encouraged to re-schedule final and during-term exams, assignments, and other activities as soon as possible after the last day of the absence and must not penalize the student in any way. [More Info](#)

A group's schedule that requires absence of more than 12 scholastic days should be adjusted so that no student is absent from campus more than 12 scholastic days. Students who previously have been warned in writing by their instructor about the impact of absences on their individual class performance should not incur additional absences, even if they have not been absent 12 scholastic days. The student is responsible to maintain satisfactory academic performance and attendance.

Course Policies and Resources

Learning Resources

1. Recorded video lectures with PowerPoint presentations will be provided on the course website.
2. Recorded video clinical correlation(s) and/or case studies relating to the basic science material.
3. Lecture notes for each video lecture are available as PDF downloads enabled for direct note taking.

Borrowing from the UF Library

Distance learners may borrow materials from the UF Libraries. They may also borrow from associated non-UF libraries using Interlibrary Loan (ILL). See the main library site for distance learners at <http://guides.uflib.ufl.edu/distancelearners> Links to an external site.. See more on ILL -- including an FAQ specially for distance learners -- at <http://cms.uflib.ufl.edu/accesssupport/InterlibraryLoan> Links to an external site.

Accommodations for Students with Disabilities

Students requesting accommodations must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student, who must then provide this documentation to the course director when requesting an accommodation. Contact the Disability Resources Center, <https://dso.ufl.edu/> for information about available resources for students with disabilities.

Academic Honesty

Online classes are subject to the same requirements of academic honesty as all on-campus classes. Please review and be familiar with the Student Conduct Code and Student Honor Code, which can be found at <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code>. UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Student Honor Code specifies a number of behaviors that violate the code, and the possible sanctions. Furthermore, you are obliged to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult the instructor or course coordinator.

Plagiarism

Plagiarism is presenting another person's work as your own. Cheating and plagiarizing are against the University of

Florida Student Conduct Code. Submissions in this course are checked via Turnitin (<http://www.turnitin.com>), a service that compares documents with each other as well as with pages on the Internet and with other assignments previously submitted by other students. If portions of your document were directly copied and pasted from another student's assignment (past or present) or from the Internet, that constitutes plagiarism. Any form of plagiarism will be investigated as set out by the University of Florida Student Conduct Code. From your citations and references, the reader of your paper should be able to tell the source of all your outside information. It may be acceptable to place a few comments in quotes with a citation, but it is never acceptable to copy and paste a long string of text from a source, even if it is cited and even if you change a few words. Anything from another source that is not in quotations must be paraphrased. Also, please note that UF policies require that you create original work for each course. Thus, students are not permitted to submit papers they prepared previously outside of this class, such as for high school or other UF courses.

AI Use Acknowledgment

For this graduate level course, GMS6400C Distance Principles of Physiology, it is imperative that all work submitted is your own. The use of AI tools, including but not limited to, generative language models, code generation tools, and automated essay writer, is strictly prohibited for all assignments. Any work found to have been produced with the aid of such AI tools will result in a zero for that assignment. This policy is in place to ensure the integrity of your learning experience and to respect the academic standards of this course. If you have any questions about this policy or need assistance with your work, please do not hesitate to reach out to your instructor.

GatorEvals UF Faculty Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>

Professionalism Expectations

Maintain honesty, respect, responsibility, and integrity in all course interactions.

Syllabus changes

You will be notified if there are major changes to the syllabus.

Late and Make Up Work Policy

Late Work Policy

Assignments

For assignments that require manual grading (e.g., research papers, projects), the following will apply:

- Unless you have an approved excused absence, a 10% deduction will be applied for each week the assignment is late.

Final Exam

- Make-up exams will only be permitted with approval of an excused absence. Failure to take the final exam without such approval will result in a score of zero.

Technology in the Classroom

Technical Requirements

To access the course and view the online videos, a high-speed internet connection is required, as well as a web browser, a web camera and microphone.

Technical Support

If you have technical difficulties with downloading and accessing course files or ProctorU scheduling, email the academic administrator, Taylor Greene by Canvas email with a detailed description of the problem. If your technical issues are trouble with accessing the VPN or your UF account, please contact the UF Help Desk at 352-392-4357.

Important Notes:

- You will need a government issued photo ID, high-speed Internet connection, a webcam (internal or external), Desktop or laptop computer running Windows 10 or later, Mac OS 11.0 or later. Tablets, including iPads, Chromebooks, and smartphones are not supported.
- Final exams must be scheduled at least 72 hours prior to the due date. As a result, issues that arise on the day of the exam—such as delayed ProctorU account setup, limited time slot availability, or technical problems with Internet or computer access—will not be considered valid excuses for missing the exam deadline.