



Medical Physiology – 2021FS/2022SS

MEDS3026 (4 Credit Hours)

**Concurrent with MCP7000,
Human Physiology**

M/Tu/W/Th (some F) 11:15am-12:10pm

LOCATION – Medical Campus

MSB Room TBD

COURSE DIRECTOR:

Roger T. Worrell, Ph.D.

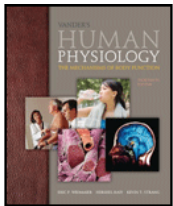
roger.worrell@uc.edu

MSB 4251 (558-6489)

COURSE DESCRIPTION

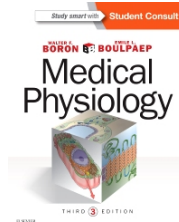
Medical Physiology (formally Human Physiology) is a single-semester, 4-credit-hour lecture based course designed to provide students with an in-depth Medical level understanding of the function, regulation and integration of human body organ systems. Emphasis is placed on a functional understanding of homeostatic maintenance in health as well as in disease processes. The course is suitable for graduate or professional students enrolled in any of the Medical Science Related Programs. The course is an excellent resource for the MCAT and Physiology portions of Step 1 USMLE exam.

The course is primarily textbook-based. Course content includes cell physiology and all major organ systems. Links to other on-line textbook sources will be provided. Final Grade is based primarily on the results of 4 Exams. The course will include written assignments.



SUGGESTED CORE TEXT BOOK:

Vander's Human Physiology
(latest edition, or past 2 editions)
(McGraw Hill)



OPTIONAL TEXT BOOK:

Boron & Boulpaep Medical Physiology
(Elsevier)
Available on-line; COM library

The successful student will be able to:

1. Explain the fundamental concept importance of homeostasis at the cellular, systems and body level and how disruption can affect Health & Wellbeing.
2. Understand cellular function and cell membranes including: diffusion of water and solutes; active transport and facilitative transport systems (comprising ion pumps, channels, and transporters); the origin of the membrane potential; and the basis of membrane excitability.
3. Understand the functional organization of the nervous system and its regulation of body function.
4. Understand cardiovascular physiology and regulation, including an appreciation of the muscular nature of the heart as a fluid pump, as well as the blood vessels as elements for flow and exchange.
5. Understand the function and regulation of the pulmonary system.
6. Understand the function of gastrointestinal physiology and accessory organs as it relates to digestion and absorption of a meal.
7. Understand the function of kidney physiology in blood pressure, electrolyte, and fluid homeostasis.
8. Understand the physiological relationships between endocrine organs, distributed endocrine tissues, and target tissues of endocrine hormones.
9. Understand male and female reproductive physiology.
10. By course end, understand the integrated function of the human system in the context of Health and Disease.

Course Schedule is subject to change by the course director as necessary (e.g., Snow Days, etc). Make-up days will generally be scheduled on Fridays. Exams are generally scheduled to occur on Fridays. A few Fridays will be used for lectures.

GRADING POLICY:

Four exams: Each Exam is worth 22 points of total grade (88 points combined of total grade)

Capstone Review Paper Project: worth 12 points of total grade (12 points combined of total grade)

Total points = 100

The course final grade will be determined by a provided grade calculation sheet.

The final letter grade will be awarded based on the table included in the grade calculation sheet.

Course Policies

1. The student must complete **all** required assignments and Exams in order to receive a passing grade. Those enrolled in MCP 7000 (Graduate level) will have additional written assignments (1 per Exam Period).

2. **Academic Integrity:** The University Rules, including the Student Code of Conduct, and other documented policies of the department, college and university related to academic integrity will be enforced. Any violation of these regulations, including acts of plagiarism or cheating, will be dealt with on an individual basis according to the severity of the misconduct: <http://www.uc.edu/studentlife/conduct> This is directly applicable in regards to maintaining confidentiality in the paper review process! A breach in the confidentiality agreement will be considered a serious breach in the Student Code of Conduct Rules.

3. Disability: Students with disabilities who need academic accommodations or other specialized services while attending the University of Cincinnati will receive reasonable accommodations to meet their individual needs as well as advocacy assistance on disability-related issues. Students requiring special accommodation must register with the Disability Services Office. <http://www.uc.edu/sas/disability>

4. Course Withdrawal: The University policy on withdrawal from this course will be followed. The process for withdrawal and the policies that govern grading are available at: http://www.uc.edu/registrar/withdraw_reg.html

5. **Missed examinations:** Examinations can only be made-up with **prior** (before the examination) approval of the course director. Emergency situations are an exception.

6. Students should refer to the guidelines in the grade calculation sheet regarding their course grade as it develops. For MCP7000 a B- grade or higher is required for passing, For MEDS3026 a D grade or higher is required for passing, although for practical purposes one should have a B- or better.

7. Student Mental Health and Wellbeing is a priority. Students are strongly encouraged to meet with the course director if they have any concerns or questions. A University Faculty/Staff Emergency Situations Guide is present in the office which covers Helping Students, UC Resources and Resource Contact Information. Information for confidential non-mandatory reporting resources is also available. Setting up a time to meet, early on, is particularly important if grade expectations are not met. Roger.Worrell@uc.edu, MSB 4251 (558-6489).

8. No lecture or course material shall be distributed by anyone on servers or sites other than the course canvas site. To do so is illegal. You may download on your personal system for your use only.

Course syllabus and schedule:

The course syllabus and course schedule are subject to modification at any time by the course director as circumstances may dictate. In this event students will be notified of the changes prior to their implementation.

Counseling Services, Clifton Campus

Students have access to counseling and mental health care through the University Health Services (UHS), which can provide both psychotherapy and psychiatric services. In addition, Counseling and Psychological Services (CAPS) can provide professional counseling upon request; students may receive five free counseling sessions through CAPS without insurance. Students are encouraged to seek assistance for anxiety, depression, trauma/assault, adjustment to college life, interpersonal/relational difficulty, sexuality, family conflict, grief and loss, disordered eating and body image, alcohol and substance abuse, anger management, identity development and issues related to diversity, concerns associated with sexual orientation and spirituality concerns, as well as any other issue of concerns. After hours, students may call [UHS at 513-556-2564](tel:513-556-2564) or [CAPS Cares at 513-556-0648](tel:513-556-0648). **For urgent physician consultation after-hours students may call 513-584-7777.**

Title IX

Title IX is a federal civil rights law that prohibits discrimination on the basis of your actual or perceived sex, gender, gender identity, gender expression, or sexual orientation. Title IX also covers sexual violence, dating or domestic violence, and stalking. If you disclose a Title IX issue to me, I am required forward that information to the Title IX Office. They will follow up with you about how the University can take steps to address the impact on you and the community and make you aware of your rights and resources. Their priority is to make sure you are safe and successful here. You are not required to talk with the Title IX Office. If you would like to make a report of sex or gender-based discrimination, harassment or violence, or if you would like to know more about your rights and resources on campus, you can consult the website www.uc.edu/titleix or contact the office at [556-3349](tel:556-3349).