

Graduate Medical Physiology II



MCP8042 Spring Semester 2020 Syllabus

Graduate Medical Physiology II is the second of a two-part course intended to provide a thorough introduction to human systems physiology at the level of first year medical school. The course will provide students with an understanding of the function, regulation and integration of human body organ systems, with emphasis on homeostatic maintenance in health as well as in some disease processes. The content of part II will cover respiratory, renal, acid-base, gastrointestinal, endocrine/reproductive and blood physiology. This course is primarily lecture based, but also includes problem-solving, group discussion, and online presentations.

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Registration	Course #	Section	Call #	Credits	Class Schedule*	Location
	MCP8042	001		4 G	Variable	Variable

Assessment	Class Quizzes (20 pts)	20 scores used (Respiration: best 4; Renal/A-B: best 5; Endocrine/Reproduction: best 5; GI: best 4; Blood: best 2) 1 point per quiz = 20 points
Total = 175 pts	Small Group Tests (25 pts)	5 tests 5 questions/points per test (×5) = 25 points
	Exam 1 (60 pts)	Multiple-choice exam covering respiration, renal and acid-base physiology
	Exam 2 (70 pts)	Multiple-choice exam covering endocrine, reproduction, GI and blood
Grading	Grading will be in line with CoM policy with no adjustment for the distribution of scores. There is no option for the remediation of grades after the scheduled final exams (i.e. no make-up test).	

A	90%–100%	B+	82%–84.99%	B–	74%–76.99%	C	67%–69.99%
A–	85%–89.99%	B	77%–81.99%	C+	70%–73.99%	Fail	Below 67%

Also for a passing course grade, the average for the two exams must be greater than 67%.

Prerequisites Acceptance into Special Master's Program in Physiology & Graduate Medical Physiology I

Attendance Attendance is required

Auditing No auditing option

Blackboard & Email Policy Messages sent via Blackboard will be considered sufficient notice. You should make sure that you have entered your preferred email address in Blackboard under Tools → Personal Information → Edit Personal Information.

Textbooks Selected readings from the following textbooks will be required (available online):

- *Medical Physiology*, Third Edition, Walter Boron and Emile Boulpaep (ELSEVIER)
- *Medical Physiology: A Systems Approach* (Lange Medical Books) Hershel Raff, Michael Levitzky

Course Content:

Unit 1: Renal-Respiration-Acid Base

Section 1: Respiration: structure & ventilation, gas exchange and transport, ventilation-perfusion, mechanics, control of breathing.

Section 2: Renal physiology: structure, filtration & clearance, tubular transport, salt & water balance, calcium/phosphate and bone, hydrogen ion balance, renal diseases.

Section 3: Acid-Base physiology: A-B disturbances and problem solving.

Unit 2: Endocrine/Reproduction, GI, Blood

Section 1: Endocrine/Reproduction: signaling, hypothalamus/pituitary, thyroid gland, steroids, adrenal gland, pancreas/glucose homeostasis/diabetes, puberty, male & female reproduction, pregnancy/lactation.

Section 2: Gastro-intestinal physiology: functional anatomy, stomach, pancreas, digestion/absorption, liver/gallbladder, salt and mineral absorption.

Section 3: Hemophysiology: hematopoiesis, hemostasis, iron metabolism.