

NROSCI/BIOSC 1070, Honors Human Physiology
MSNBIO 2070, Human Physiology
Fall Semester, 2018

Classroom: Scaife Hall Lecture Room 3

Class Meetings:

Lectures: Monday, Wednesday — 5:30-6:45 PM

PBLs and Exams: Friday — 3:00-5:00 PM

Grading:

Your grade will be calculated as follows:

- 20% from each of 4 exams
- 12% from group learning exercises
- 5% for course participation and homework (Tophat)
- 3% for completing the Neurophysiology Modules during the first three weeks of class

General Info

Exams will cover material presented in lectures and handouts. Although textbook readings will not explicitly be covered on examinations, students are highly encouraged to at least skim this material to provide a better understanding of information from lectures. Furthermore, the textbook should be used as a reference while studying lecture notes and handouts and preparing for problem-based learning exercises.

If a legitimate reason (illness, death in family, medical school interview, etc.) prevents a student from taking an exam on the scheduled date, he or she **must** notify Dr. Yates in advance and pre-arrange an alternate time to take the exam. If arrangements are not made **BEFOREHAND**, the student will receive a failing grade for the exam.

Academic Integrity Statement

Cheating/plagiarism will not be tolerated. Students suspected of violating the University of Pittsburgh Policy on Academic Integrity, from the February 1974 Senate Committee on Tenure and Academic Freedom reported to the Senate Council, will be required to participate in the outlined procedural process as initiated by the instructor. A minimum sanction of a zero score for the quiz or exam will be imposed.

Disability Resource Statement

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Resources and Services, 140 William Pitt Union, 412-648-7890/412-624-3346 (Fax), as early as possible in the term. Disability Resources and Services will verify your disability and determine reasonable accommodations for this course.

Course Schedule

Readings are from Guyton and Hall text unless indicated

Date	Topic	Lecturer	Reading
Block 1 - Cardiovascular/Muscle			
27-Aug Monday	Course Overview and Logistics; Cardiovascular 1	Yates	pp. 169-178
29-Aug Wednesday	Cardiovascular 2 <i>Hemodynamics</i>	Yates	pp. 179-188
31-Aug Friday	Muscle Contraction 1 <i>Skeletal Muscle</i>	Yates	pp. 75-96
3-Sep Monday	Labor Day Holiday <i>No Class</i>		
5-Sep Wednesday	Muscle Contraction 2 <i>Smooth and Cardiac Muscle</i>	Yates	pp. 97-105; 109-112
7-Sep Friday	Control Mechanisms 1 <i>Neural Mechanisms and Prep for PBL 1</i>	Yates	pp. 773-785
10-Sep Monday	Control Mechanisms 2 <i>Endocrine Signaling</i>	Yates	pp. 925-937
12-Sep Wednesday	Return to Cardiovascular System <i>Integration / Electrical Events and ECG / Cardiac Cycle</i>	Yates	pp. 330-331; 113-122; 283-291
14-Sep Friday	Problem Based Learning Activity 1 <i>Paralytics and Myesthenia Gravis</i>	TAs	PBL Activity 1
17-Sep Monday	Cardiovascular 3 <i>Determinants of Cardiac Output 1</i>	Yates	pp. 245-258
19-Sep Wednesday	Cardiovascular 4 <i>Determinants of Cardiac Output 2</i>	Yates	pp. 245-258
21-Sep Friday	Problem Based Learning Activity 2 <i>Antiarrhythmic Agents</i>	TAs	PBL Activity 2
24-Sep Monday	Cardiovascular 5 <i>Neural and Local Control of Blood Flow 1</i>	Yates	pp. 203-225; 227-243
26-Sep Wednesday	Cardiovascular 6 <i>Neural and Local Control of Blood Flow 2</i>	Yates	pp. 203-225; 227-243

Date	Topic	Lecturer	Reading
28-Sep Friday	EXAM #1: 8/27 - 9/19 Lectures (Cardio 1-4/Muscle Contraction/Control Mechanisms) & Neurophysiology Modules		
1-Oct Monday	Cardiovascular 7 <i>Capillary Dynamics</i>	Yates	pp. 189-201; 305-321
3-Oct Wednesday	Cardiovascular 8 <i>Exercise Cardiovascular Responses; Integrated Responses; Clinical Issues</i>	Yates	pp. 259-281; 293-302
5-Oct Friday	Problem Based Learning Activity 3 <i>Orthostatic Intolerance</i>	TAs	PBL Activity 3
Block 2 - Renal			
8-Oct Monday	FALL BREAK <i>No Classes</i>		
9-Oct Tuesday	Renal 1 <i>Functional Anatomy of the Kidney</i>	Sved	pp. 323-346
10-Oct Wednesday	Renal 2 <i>Tubular Processing 1</i>	Sved	pp. 347-369
12-Oct Friday	Problem Based Learning Activity 4 <i>Heart Failure</i>	TAs	PBL Activity 4
15-Oct Monday	Renal 3 <i>Tubular Processing 2</i>	Sved	pp. 371-407
17-Oct Wednesday	Renal 4 <i>Regulation of Fluid Osmolarity / Control Mechanisms</i>	Sved	pp. 409-426; 427-442
19-Oct Friday	Problem Based Learning Activity 5 <i>Confusion</i>	TAs	PBL Activity 5
22-Oct Monday	Renal 5 <i>Renal Disease</i>	Sved	Supplement
24-Oct Wednesday	Renal 6 <i>Renal Hypertension</i>	Sved	Supplement
26-Oct Friday	Exam #2: 9/24 - 10/17 Lectures (Cardio 5-8/Renal 1-4)		

Block 3- Respiration

29-Oct Monday	Respiration 1 <i>Blood Composition, Clotting, Mechanics</i>	Yates	pp. 445-454; 483-494; 497-507
31-Oct Wednesday	Respiration 2 <i>Respiratory Mechanics</i>	Yates	pp. 497-507; 509-526
2-Nov Friday	Problem Based Learning Activity 6 <i>"Out of Sorts"</i>	TAs	PBL Activity 6
5-Nov Monday	Respiratory 3 <i>Pulmonary Circulation</i>	Yates	pp. 527-537
7-Nov Wednesday	Respiratory 4 <i>Control of Respiration</i>	Yates	pp. 539-548
9-Nov Friday	Problem Based Learning Activity 7 <i>Respiratory Disease</i>	TAs	PBL Activity 7
12-Nov Monday	Respiration 5 <i>Clinical Aspects & Review</i>	Yates	pp. 549-557; 561-565; 569-574; 409-426

Block 4 - Gastrointestinal, Thermoregulation, and Growth Regulation

14-Nov Wednesday	Gastrointestinal 1 Physiology of Gastrointestinal Function 1	Yates	pp. 797-842
16-Nov Friday	Exam #3: 9/22 - 11/12 Lectures (Renal 5-6/Respiratory)		
19-Nov Monday	Gastrointestinal 2 Physiology of Gastrointestinal Function 2	Yates	pp. 843-849; 881-902; 983-999
26-Nov Monday	Gastrointestinal 3 <i>Metabolism 1</i>	Yates	pp. 853-880; 951-963; 965-982
28-Nov Wednesday	Gastrointestinal 4 <i>Metabolism 2</i>	Yates	pp. 853-880; 951-963; 965-982
30-Nov Friday	Temperature and Growth Regulation	Yates	pp. 911-922; 1001-1019

Block 5 - Reproductive and Developmental Physiology

3-Dec Monday	Reproduction 1 <i>Male and Female Reproductive Physiology</i>	Yates	pp. 1021-1054
5-Dec Wednesday	Reproduction 2 <i>Female Reproductive System; Pregnancy and Contraception</i>	Yates	pp. 1055-1069
7-Dec Friday	Developmental Physiology <i>Fetal and Neonatal Physiology; Physiology of Aging</i>	Yates	pp. 1071-1081
TBD	Exam #4: 11/14- 12/07 Lectures (Gastrointestinal/Growth & Temperature Regulation/Reproduction)		