HUMAN PHYSIOLOGY - BIO 3200 (001)
COURSE SYLLABUS – SPRING/SUMMER 2020
WAYNE STATE UNIVERSITY

Instructor Information

Professor: Dr. Martin D. Spranger, Ph.D.
BIO Office #: (313) 577-2873(4) (leave message with office personnel)
Email Address: **mds@msu.edu** (preferred method of contact)
Office Hours: TBD – will be posted on Canvas

Teaching Assistant Information

Graduate Teaching Assistant (GTA): Austin Wellette (wellette@msu.edu)
Undergraduate Teaching Assistant (TA): Anthony Mrocko (mrockoan@msu.edu)
Review Session Times: (TBD - will be posted on Canvas) (see pg. 9)

Student Information

There is a very rich social, cultural and ethnic diversity here at WSU and in this very class. Take advantage of this! Meet, talk and study with your classmates, no matter how different they are from you.

The student to professor ratio in this course is ~200:1. It would be impossible for me to reach out and develop a rapport with each and every one of you this semester. However, it would be essentially effortless for you to develop a rapport with me. There is only one of me. So, ask questions during class, attend office hours, email me or just randomly reach out and introduce yourself and chat…about anything!

Course Information

Lecture Location: Remote/Online (via Zoom)
Lecture Days/Time: Monday & Wednesday @ 4:30 - 6:00 PM
Course Website: https://canvas.wayne.edu (see pg. 9 for details)
Facebook Group: www.facebook.com/groups/2486151061697821 (see pg. 9)

Required Materials:

1) Text: Human Physiology, D.U. Silverthorn, 8th ed. (2019)
2) Top Hat subscription ($26 fee) (see the ***Top Hat Syllabus*** for details)
3) Wi-Fi device (e.g., laptop, tablet, iPad, iPhone, Droid, etc.) (see the ***Top Hat Syllabus*** for details)
4) Zoom application (https://zoom.us/download)

Recommended Resources:

1) Wikibooks - Human Physiology online book (https://en.wikibooks.org/wiki/Human_Physiology)
2) Khan Academy - Biology & Physiology lessons and practice (https://www.khanacademy.org/science)
3) CrashCourse - Anatomy & Physiology YouTube videos (https://www.youtube.com/playlist?list=PL8dPuuaLjXtOAKed_MxxWBNaPno5h3Zs8)
4) GetBodySmart – Anatomy & Physiology animations and quizzes (https://www.getbodysmart.com)

Course Description

This is an **intensive** course that thoroughly covers the fundamental concepts and principles of human physiology. Physiology of the entire human body will be covered in this 3 credit, 13 week course. Aside from discussing all organ systems by investigating their functionality at the cellular, tissue and organ levels of organization, the overlying theme of the course will be that of *systems integration*. We will first study how individual organ systems work as stand-alone functional units. As the semester progresses, we will integrate our understanding of these systems so to build a picture of the organism level of organization (i.e., you). It will be assumed that you already possess a solid understanding of the fundamental concepts in biology.

Learning Outcomes

If you perform very well in this course, you will not only possess a solid understanding of human physiology, you will also have developed and strong collegiate work ethic. And, with these skills, you will be fully capable of…

1) Explaining the molecular and cellular mechanisms that underlie the normal physiological processes of all human organ systems.
2) Understanding the pathology of disease states without formal coursework in pathophysiology. You learned many disease states in this course, and with your strong command of normal physiology, you have the capacity to evaluate diseases and propose mechanistic bases for the pathology. Moreover, with your understanding of molecular and cellular mechanisms, you can scientifically rationalize drug therapies employed to treat these conditions.
3) Confidently communicating, both written and verbally, with proper terminology and pronunciation, all aspects of normal human physiology with your peers, your physician, your pharmacist, and your future professors.
4) Employing the study skills and work ethic you developed in this course to perform very well in any, and all, of your courses throughout your entire academic career.
5) Excelling on biology/physiology sections on pre-health, professional school exams (e.g., PCAT, MCAT, etc.).

Professor's Mission

My primary mission is to provide you a quality education. You will be provided an educational opportunity that can benefit you, and the society in which you live, regardless of your career path. I will encourage you to develop strong study skills. I will constantly challenge you to think on a higher level. I will expect your best. And, most importantly, I will hopefully inspire you and get you excited about physiology!

If you accept my challenge, I offer you a guarantee that is inherent in my design of this course. If you perform very well in this course, you will move forward with an exceptional and enduring working-knowledge of human physiology. You will have also acquired the analytical thinking, reasoning and study skills required to succeed at the highest level in the next phase of your academic studies. In other words, you will leave this class a legitimate academic – a student with all the tools necessary to achieve whatever academic goals you set your mind to.

Course Examinations

There will be **four** lecture exams as scheduled in the lecture outline (see pg. 8). Each exam will be worth 60 points and consist of 60 multiple-choice and true/false type

questions. The exams are not cumulative in the strict sense of the word. However, since the major theme of this course is *systems integration*, important concepts from previous exams, that tie into concepts in subsequent lectures, will naturally find their way into subsequent exams. I will point out these important concepts during lecture throughout the semester – so stay tuned! I will only source information presented in class for examination questions (i.e., what I say, what is on my PPT slides and questions I ask via Top Hat). Exam IV is the Final Exam, but is not cumulative. I will automatically replace the lowest score of your first 3 exams with the average score of all 4 of your exams **IF** your Exam IV score is greater than the average score of your first 3 exam scores: **(EX IV > (EX I + EX II + EX III)/3)**.

** There will be **no make-up exams** offered except for University excused absences such as hospitalization or death of an immediate family member. **

☞ Exam Logistics

All examinations will be taken remotely, and online, utilizing a feature of our classroom response system (Top Hat) called Top Hat Test. See the ***Top Hat Syllabus*** for details.

☞ Final Exam Schedule

Date/Time: Monday, July 27th @ 4:30 - 6:00 PM
Location: Remote/Online

* Final Exam Policy (wayne.edu/registrar/registration/exam-schedule)

Top Hat (Quiz, Participation and Attendance Points)

Top Hat (TH) is a classroom response system that I will employ to help keep you "on your toes" and engaged during lecture. **Quiz (Q), Participation (P) and Attendance (A) Points** offered via TH will be worth a combined 20% of your overall course grade (**Q** - 40% of the 20%; **P** - 40% of the 20%; **A** - 20% of the 20%). I will post the numerical points you earn for **Q**, **P** and **A** on D2L following each examination period. The above percentages will be calculated at the end of the semester.
The above percentages will only be calculated at the end of the semester.

** It is essential that you read the ***Top Hat Syllabus*** for complete details regarding TH grading, registration, policies and technical information. **

Course Grading

300 points are available to be earned: 240 points for lecture exams and 60 points for Top Hat (see the ***Top Hat Syllabus*** for details). I may or may not adjust individual lecture exam scores. I will not adjust the overall course scores. Course grades will be determined from total point accumulation at the end of the semester. To calculate your grade at any point during the semester, see the ***How to Calculate Your Grade*** document.

Grading Scale and Table

The following tables can be used to approximate and input your grade throughout the semester:

Percent	Grade
93-100	A
90-92.99	A-
87-89.99	B+
83-86.99	B
80-82.99	B-
77-79.99	C+
73-76.99	C
70-72.99	C-
67-69.99	D+
63-66.99	D
60-62.99	D-
59.99 or below	F

Lecture Exam	Points
I	/60
II	/60
III	/60
IV	/60
Top Hat	/60
Total	/300

Disputes/Challenges

You will have one week after I post Exam scores and Top Hat points to Canvas to challenge these grades/points. Failure to challenge within this period indicates a willingness to accept your grades/points assigned as is. I will not dispute grades/points at the end of the semester. All these issues must be resolved one week after the posting of these grades/points to Canvas.

Add/Drop Policy

Adding and Dropping a course is done electronically through your Academica account. Information regarding the last day to DROP this course can be found at: https://wayne.edu/registrar/registration/dropping-and-withdrawing/.

General Policies

- ☞ I have zero-tolerance for cheating. If you are caught cheating, you will get a zero for that exam (under this circumstance, this zero cannot be replaced). Hold yourself, and your classmates, to the highest ethical standards!
- ☞ I am happy to write a letter of recommendation for any student that earns an "A" in my course and demonstrates strong personal characteristics. I can only determine the latter if you develop a rapport with me. Building strong, professional relationships is key to becoming a professional.
- ☞ When emailing me, please address me, write without utilizing texting acronyms and shorthand, use spellcheck, and always sign with your name. These simple efforts go a long way, regardless of who the recipient of your email is. Please put "WSU" in the subject of the email too.

Special Considerations for Individuals with Disabilities

If you have a documented disability that requires accommodations, you will need to register with Student Disability Services for coordination of your academic accommodations. The Student Disability Services (SDS) office is located at 1600 David Adamany Undergraduate Library in the Student Academic Success Services department. SDS telephone number is 313-577-1851 or 313-577-3365 (TTY: telecommunication device for the deaf; phone for hearing impaired students only). You must notify me of your accommodation within the first week of classes

Religious Holiday Conflicts

If you have a conflict with any of the exam times due to religious reasons, you must notify me within the first week of classes. No make-up exams will be given unless I am notified by this date.

Disclaimer

This course syllabus is subject to modification at the discretion of the instructor without prior notice. Lecture topics and/or scheduled times may be changed to accommodate class progress. Students must keep regular attendance, monitor Canvas for updates and take note of any such changes as appropriate.

Any specific issue not covered by this syllabus will be resolved using University policies. Disputes that cannot be resolved following the guidelines present in this syllabus will be resolved by following the guidelines of the University "Student Due Process."

Instructor's Advice

1) Want it!
2) Take this class seriously starting yesterday.
3) Be willing to make sacrifices.
4) Attend all lectures, participate and ask questions. Get engaged!
5) Read the book.
6) **Diligently and consistently apply the study skills in the Study Skills Video.**
8) Be proactive. If you have trouble keeping up or need help, see me ASAP.

Course Outline

	Unit	Topic	Number of Lectures	Topic Readings	Unit Exam Date
Course Content	Unit 1	Introduction to Physiology	1	1, 3, 6	Wednesday 5/20/20
		Molecular Level of Organization	5	2	
		Cellular and Tissue Levels of Organization	5	3, 5	
		Nervous System (Cells)	7	8	
	Unit 2	Nervous System (PNS Afferent)	8	10	Monday 6/15/20
		Nervous System (PNS Efferent)	5	11	
		Muscle Physiology	8	12	
	Unit 3	Cardiovascular System (Heart and Vasculature)	7	14, 15	Monday 7/06/20
		Cardiovascular System (Blood)	5	16	
		Respiratory Physiology	6	17, 18	
	Unit 4	Endocrine System	7	7	Monday 7/27/20
		Digestive System	5	21	
		Renal Physiology	4	19, 20	

* **First day of class**: 5/04/20
* **Memorial Day (no class)**: 5/25/20 (Friday (5-29-20) scheduled as a Monday)
* **Last day of class**: 07/24/20

Review Sessions

There will be a Graduate Teaching Assistant (GTA) and an Undergraduate Teaching Assistant (TA) this semester (see pg. 1). They will hold weekly (optional) content review sessions via Zoom. The TAs will also manage Top Hat and monitor the Facebook Group Page activity. I will introduce the TAs and talk more about the review sessions the first week of class. Once the TAs establish their review session dates/times, this information will be posted on Canvas.

Canvas Information

Canvas will serve as our course website. I highly encourage you to check this website daily for any potential announcements. This will be the primary means by which I communicate with you. The course syllabus, lecture videos, PPT lecture slides, and other important course documents will be located here. You can view your Exam and Top Hat scores throughout the term by clicking on the "grades" link.

Facebook Information

I have created a Facebook Group (www.facebook.com/groups/2486151061697821) specifically for this course. Use this Facebook Group as a discussion board. Ask questions of your peers and, more importantly, answer questions posted by your peers. When asking questions, provide some of your own understanding about the concept so that someone can help you precisely where you are stuck. Just asking for an answer (and getting it) will not be helpful to you. Answering other's questions helps reinforce your own understanding of the material. Feel free to share study tips, notes, cool websites you have found, etc. with your classmates here. Please note that our Facebook Group is for professional use only. In other words, please do not treat this as a personal Facebook account. This group is solely for human physiology discussion to aid in your learning experience in Bio 3200.