

HUMAN PHYSIOLOGY - BIO 3200 (001)
COURSE SYLLABUS - SPRING/SUMMER 2019
WAYNE STATE UNIVERSITY

Instructor Information

Professor: 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

Teaching Assistant (TA) Information

TA & Top Hat Manager: Michael Orozco
Email Address: orozcom4@msu.edu
Review Session Times: (TBD - will be posted on D2L) (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, study and hang-out with your classmates, no matter how different they are from you.

The student to professor ratio in this course is ~100:1. 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 in class, chat with me at the podium after lecture, come to office hours, email me or just randomly stop by my office to introduce yourself and chat...about anything!

Course Information

Lecture Location: 146 DeRoy
Lecture Days/Time: Monday & Wednesday @ 4:30 - 6:00 PM
Course Website: <https://canvas.wayne.edu> (see pg. 11 for details)

Required Materials:

- 1) Text: Human Physiology, D.U. Silverthorn, 8th ed. (2019)
- 2) Top Hat (\$24 fee) (see pp. 4, 5 & 10 for details)
- 3) Wi-Fi device (e.g., laptop, tablet, iPad, iPhone, Droid, etc.) (see pp. 4, 5 & 10 for details)

Recommended Resources:

- 1) Human Physiology online book, by Wikibooks
(https://en.wikibooks.org/wiki/Human_Physiology)
- 2) Biology & Physiology Lessons and Practice, by Khan Academy
(<https://www.khanacademy.org/science>)
- 3) Anatomy & Physiology YouTube videos, by CrashCourse
(https://www.youtube.com/playlist?list=PL8dPuuaLjXtOAKed_MxxWBNaPno5h3Zs8)

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 possess a solid understanding of basic cellular structure and function and are 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 many disease states without formal coursework in pathophysiology. You learned many disease states in this course, however with your strong command of normal physiology, you have the capacity to evaluate diseases you are unfamiliar with and propose mechanistic bases

for the pathology. Moreover, with your understanding of molecular and cellular mechanisms, you can scientifically rationalize the 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) Dominating 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 get you excited about physiology! In return, I give 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 understanding of the human body. You will have also acquired the necessary analytical thinking, reasoning and study skills required to succeed at the highest of levels in the next phase of your studies.

Course Examinations

There will be **four** lecture exams as scheduled in the lecture outline (see pg. 9). Each exam will be worth 60 points and consist of 60 multiple-choice and true/false type questions. Since the major theme of this course is *systems integration*, important concepts from previous exams that tie into concepts on subsequent lectures will find their way into subsequent exams. 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. There will be **no make-up exams** offered except for University excused absences such as hospitalization or death of an immediate family member.

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:

$$(EX\ IV > (EX\ I + EX\ II + EX\ III)/3).$$

☞ Exam Logistics

Other than a couple #2 pencils, you **MUST** bring with you to each lecture exam your WSU OneCard. There are two reasons for this: One, it has your student ID# on it. Your grades will be posted throughout the term on Canvas according to your student ID#. You must write (and bubble in) this nine-digit number on all of your scantrons. Two, it has your picture on it. You will be required to verify that it is indeed you that is taking your exam.

- * You will be required to bring Scantrons (form # 882) for each lecture exam.
- * I have a 20/1 policy for exam tardiness. If you arrive more than 20 minutes late or after the 1st student has completed the exam and left the room (whichever comes first), you will not be allowed to take the exam. You will not be allowed to take the exam at another time or take a make-up exam.

☞ Final Exam Schedule

Date/Time: Monday, July 29th @ 4:30 - 6:00 PM

Location: 146 DeRoy

- * 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.

- ☞ **Quizzes** will be held at the beginning of each lecture period and will consist of approximately 5 multiple-choice and true/false questions on material from the previous week. Regular attendance and studying will be required to perform well on the quizzes.

- * Each quiz question will be worth 1.0 point for correctness.

- ☞ **Participation** questions will consist of material from the current lecture. Several of these questions will be asked during each lecture. These will be multiple-choice and true/false questions designed to probe your mind, help guide your thought process as I lecture, and to add impact and emphasis. Being in class and participating is all that is required to get full credit.
 - * Each participation question will be worth 1.0 point for participation.

- ☞ **Attendance** will be taken at random utilizing TH. I reserve the right to take attendance the minute class begins, the minute before it ends, and anytime in between.
 - * For each instance I take attendance you will receive 1.0 point.
 - * **In addition, if you miss attendance on any given day, you will be exempt from all quiz and participation points offered for that day.**

Missing TH points can result in you losing a half-point of your grade at the end of the semester (i.e., an A versus an A-). While these points carry a fairly significant weight, they purely exist for your benefit (TH = an exam grade). TH is designed to help keep you "on your toes" and aid in your learning experience. **No make-up opportunities will be offered, under any circumstances, for quiz, participation or attendance points** (in other words, please do not contact me with an excuse why you missed a quiz or an opportunity for participation or attendance points - **I will not accept any excuse**). For TH technical details see (pg. 10).

Grading

A total of 300 points are available to be earned: 240 points for lecture exams and 60 points for Top Hat (see pg. 6). 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. It is mandatory that you keep record of all your scores (see the files posted on Canvas about how to calculate your grade at any point during the semester).

Grading Scale

The following tables (below) can be used to calculate your course grade:

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 of 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 Academics account. Information regarding the last day to DROP this course can be found at: <https://wayne.edu/registrar/registration/dropping-and-withdrawing/>. If you officially withdraw from this course, it will appear on your transcript with a mark of "WP" (withdrawal with a passing grade), "WF" (withdrawal with a failing grade) or "WN" (withdrawal given to students who did not attend any classes and/or did not complete any assignments and/or did not participate in credit-earning activities by the withdrawal date). An "F" grade will be assigned to students who stop attending class without officially withdrawing.

General Policies

- ☞ **I will not tolerate any talking in class while I am lecturing.** This is very disrespectful to myself and your fellow classmates. If I can hear you, so can the people around you. I don't have time to deal with chronic behavioral issues. You will be asked to leave the lecture hall on the second occurrence you disrupt class, and you will be unable to return to lecture until you schedule a personal meeting with me. If someone around you is chronically disturbing you, please let me know in private.
- ☞ I will utilize all the class time allotted for this semester. Coming late to class and leaving early is very distracting to myself and your fellow classmates. If you know you are going to arrive late or leave early, please sit in the back of the lecture hall. Whenever you enter or exit the lecture hall, please use the back doors, and please be quiet and courteous.
- ☞ 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). If I take your exam from you, I have already witnessed you cheating on several independent occasions and have enough evidence/witness support to seek university disciplinary action. Leave the lecture hall immediately if I take your exam from you. You can contact me via email later to schedule a meeting with me in person to discuss the situation.
- ☞ 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).

Once you have your accommodations in place, I will be glad to meet with you privately during my office hours to discuss your special needs. Student Disability Services' mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at WSU.

Religious Holiday Conflicts

If you have a conflict with any of the scheduled classes or exam times due to religious reasons, you must notify me in writing no later than 05/13/19. No make-up exams will be given unless I am notified in writing by this date.

Unexpected University Closures

If the University is officially closed on an exam day, the exam will be held on the next regularly scheduled class day.

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.

Lecture Outline

Day	Date	Topic	Chapter/Reading
M	05/06	Introduction to Physiology	1, 3, 6
W	05/08	Molecular Level of Organization	2
M	05/13	Cellular & Tissue Levels of Organization	3, 5
W	05/15	Cellular & Tissue Levels of Organization	
M	05/20	Nervous System (Cells)	8
W	05/22	Nervous System (Cells)	
M	05/27	Memorial Day - No class	
W	05/29	Exam I	
F	05/31	Peripheral Nervous System (Afferent)	10
M	06/03	Peripheral Nervous System (Afferent)	
W	06/05	Peripheral Nervous System (Efferent)	11
M	06/10	Muscle Physiology	12
W	06/12	Muscle Physiology	
M	06/17	Exam II	
W	06/19	Cardiovascular System (Heart/Vasculature)	14, 15
M	06/24	Cardiovascular System (Heart/Vasculature)	
W	06/26	Cardiovascular System (Blood)	16
M	07/01	Respiratory Physiology	17, 18
W	07/03	Respiratory Physiology	
M	07/08	Exam III	
W	07/10	Endocrine System	7
M	07/15	Endocrine System	
W	07/17	Digestive System	21
M	07/22	Digestive System	
W	07/24	Renal Physiology	19, 20
M	07/29	Exam IV	

* This schedule is tentative. It is your responsibility to keep regular attendance and make note of any potential modifications.

Review Sessions

There will be a teaching assistant (TA) this semester (see pg. 1). They will hold weekly (optional), student-centered learning opportunities. The TA will also manage Top Hat and monitor the Facebook Group Page activity. I will introduce the TA and talk more about the review sessions the first week of class. Once the TA establishes their review session times/locations, this information will be posted on Canvas.

Top Hat (Technical Information)

TH is an internet-based classroom response system. You will respond to in-class questions with your Wi-Fi device (e.g., laptop, tablet, iPad, iPhone, Droid, etc.). As a result, you will receive real-time, in-class feedback.

TH can be found @ <https://tophat.com>. A link to sign up (\$24 fee) for our TH course will be emailed to you approximately one week prior to the first day of class. You can register prior to receiving this invitation utilizing the following information:

- ☞ Course Name: **BIO 3200 - Summer 2019**
- ☞ Direct URL: **<http://app.tophat.com/e/513834>**
- ☞ 6-digit course code: **513834**

You **must be registered** for our TH course (<http://app.tophat.com/e/513834>) by **05/06/19** to start receiving **Q, P** and **A** points. If you do not register for our TH course by this date, you will not get points retroactively. No exceptions will be made.

**** When registering, Top Hat asks for your "student ID." Please enter your AccessID, not your student ID. Your AccessID is merely your WSU email minus the "@wayne.edu." For example, my WSU email is ab1791@wayne.edu. Therefore, my AccessID is ab1791. Therefore, my Top Hat "student ID" is ab1791.****

Once registered, you will be able to earn quiz and participation points by responding to my in-class questions in one of following three ways:

- 1) Via your laptop, tablet or iPad running our specific Top Hat course (<http://app.tophat.com/e/513834>) on a web browser.
- 2) Via text message. Text your responses to 1-(315)-636-0905.
- 3) Via the free Top Hat mobile application available at the App Store for iPhones/iPads and Google play for Android phones/Android tablets.

* Response times for questions will be limited (about 1 minute/question). Therefore, you should always have the Top Hat webpage/application open on your Wi-Fi device or the phone # (1-(315)-636-0905) saved as a favorite on your phone for text messaging.

* If you are having problems with connectivity, you can always submit your responses via "off-line mode."

**** For technical support contact: support@tophat.com or 1 (888) 663-5491****

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 another means by which I can communicate with you important information regarding the class. The course syllabus, my PPT lecture slides, audio lecture recordings and other important course documents will be located here. Every effort will be made to provide the PPT lecture slides on Canvas a day or more before class. I have requested that this course be recorded (audio only) by the University. Because of the vagaries of electronic recording, I cannot guarantee that all classes will be recorded. I am not saying that this will be a chronic issue, but if you are concerned, I recommend recording the lectures with your own recording device. If a lecture recording is not posted in a timely manner or is nonexistent, please contact the Library Computing Helpdesk (313-577-1114). I do not video capture. I feel that regular attendance is essential to success in my course and streaming my lectures at home is counterintuitive to this philosophy. You can view your Exam and Top Hat scores throughout the term by clicking on the "grades" link.

FAQs

Q1. What information will be covered on the exams?

A1. 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).

Q2. How do I succeed in this course?

A2. Watch the Study Skills Video posted on Canvas. In short:

- I. Come to all classes.
- II. Take jot notes in class.
- III. Re-listen to the lectures and take detailed notes.
- IV. Make sense of your notes (i.e., learn).
- V. Rewrite your notes in your own words in a conversational manner.
- VI. Come and see me or your SI to see if you are on the right track with your study process.
- VII. Don't wait for the second exam to get serious.
- VIII. Stay on track and don't fall behind.

Q3. Is the Final Exam a cumulative exam?

A3. No. The Final Exam is just Exam IV.

Q4. Will I get a copy of my exam back to review?

A4. No. Your exam booklet will not be returned to you. However, you will get a detailed analysis of your scoring sheet emailed to you, and you will be able to compare this to the key available in my office or with the SI during review sessions. The key for each exam will only be available for review until the start of the material for the next exam. You cannot copy or take pictures of the key.

Q5. Can I make-up an exam if I miss it?

A5. Make-up exams are only offered for University excused absences such as hospitalization or death of an immediate family member.

Q6. Can I take an exam if I arrive late?

A6. It depends on how late. If you arrive more than 20 minutes late or after the 1st student has completed the exam and left the room (whichever comes first), you will not be allowed to take the exam.

Q7. What do I do if I get an email that I am not properly enrolled in Top Hat?

A7. Follow these instructions to get it right:

When registering, Top Hat asks for your "Student ID." Please enter your AccessID, not your Student ID. Your AccessID is merely your WSU email minus the "@wayne.edu." For example, my WSU email is ab1791@wayne.edu. Therefore, my AccessID is ab1791. Therefore, my Top Hat "student ID" is ab1791.

Q8. If I miss a class, will I be excused for the Top Hat points that I missed?

A8. No. No make-up opportunities will be offered, under any circumstances, for quiz, participation or attendance points (in other words, please do not contact me with an excuse why you missed a quiz or an opportunity for participation or attendance points - I will not accept any excuse).

Q9. How much will missing one class affect my grade?

A9. Essentially not at all. See the document posted on Canvas that shows you a sample calculation.

Q10. If I end up with an 89.99% in the course, will my grade be rounded-up to a 90%?

A10. No. I may or may not adjust individual exam scores, but I will not adjust the overall course scores.

Q11. Can I do a project/paper to improve my grade?

A11. No.

Q14. How soon will my exam scores be posted?

A14. Usually within 24-48 hours.

Q15. Can I record the class?

A15. Yes, I encourage it, but the lectures (audio only) will be recorded by the University as well.

Q16. Do I have to print out the PPT lecture slides?

A16. No. However, I encourage that you do and bring them to class to take jot notes on. If you decide to print them you have several options available. You may print black or grey scale rather than color and you may print 2, 4, or more slides to the page. You may also download the outlines to your computer and annotate them during lecture.

Q17. Does anyone ever get an A in this course?

A17. Yes, plenty. 16% of last summer's class earned an "A".