

**HUMAN PHYSIOLOGY - BIO 3200
COURSE SYLLABUS - SPRING/SUMMER 2018
WAYNE STATE UNIVERSITY**

Instructor Information

Course Instructor: Prof. Martin D. Spranger, Ph.D.
Off. Location/Hrs.: 1117 Science Hall; MW after lecture (or by appointment)
Email Address: mds@msu.edu (preferred method of contact)
Biology Office: (313) 577-2873(4) (leave message with office personnel)

Course Information

Lecture Location: 146 Deroy
Lecture Times: Monday & Wednesday 4:30 - 6:00 PM

Required Materials:

- 1) *Human Physiology: An Integrated Approach*
7th ed. (2013), by D.U. Silverthorn
- 2) Top Hat subscription (\$24 fee) (see pp. 4, 10-11 for details)
- 3) Wi-Fi device (e.g., laptop, tablet, iPad, iPhone, Droid, etc.)
(see pp. 10-11 for details)

Course Website: www.blackboard.wayne.edu (more information on pg. 11)

Facebook Group Page: www.facebook.com/groups/201118513830472/

Teaching Assistant (TA): Austin Hunsucker (wellette@msu.edu)

Recitation Times: (TBD - will be posted on D2L) (see pg. 10)

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) Serving as a supplemental instructor (SI) for this course in the future, dominating biology/physiology sections on pre-health, professional school exams (e.g., PCAT, MCAT, etc.), and pursuing a health profession.

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 of the first three exams will 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). I will automatically drop the lowest score of your first three exams. You must take all exams and complete the course to qualify for this dropped exam option. Exam IV is the Final Exam. There will be no make-up exams offered. For whatever reason you miss one of the first three exams, it will simply be your dropped exam (in other words, you do not need to tell me why you missed the exam).

☞ 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 throughout the term will be assigned and linked 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 are required to bring scantrons (form #882) for each lecture exam.
- * I will collect your scantrons and your exam booklet after each exam. The key for the exams can be viewed during office hours or during recitation sessions. Each key will be available for your review only up until the start of the material for the next exam. You cannot take pictures of the exam keys. Due to logistical issues, the Final Exam key will not be made available.
- * 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.

Top Hat (Quiz, Participation and Attendance Points)

Top Hat 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 Top Hat will be worth a combined 14% of your overall course grade (Q - 40% of the 14%; P - 40% of the 14%; A - 20% of the 14%). I will post the numerical points you earn for **Q, P** and **A** on BB 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 4-5 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 Top Hat. 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 Top Hat points can result in you losing a half-letter 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. They are 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). For Top Hat technical details see (pp. 10-11).

Final Exam Schedule

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

☞ **Location:** 146 Deroy

* Principles governing the Final Exam Week Schedule can be found at (<http://reg.wayne.edu/students/exams.php>).

Grading

A total of 210 points are available to be earned: 180 from lecture exams and a combined 30 points for Top Hat (see pg. 4). I may or may not adjust individual lecture exam scores. I will not adjust the overall course scores. The following tables can be used to approximate your grade status throughout the term:

Grading Scale

| 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 |
| Final/IV | /60 |
| Top Hat | /30 |
| Total | /210 |

Disputes/Challenge Option

You will have one week after I post exam scores and Top Hat points to BB to challenge these grades/points. Failure to challenge within this period indicates a willingness to accept your grades/points assigned on BB 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 BB.

Add/Drop Policy

Information regarding the last day to ADD or DROP this course can be found at: (<https://reg.wayne.edu/students/registration>). **Adding and Dropping a course is done electronically through Academicia.** If you withdraw from this course after the drop period has ended, you will receive a mark of "WP" (withdrawal with a passing grade earned to date), "WF" (withdrawal never attended, or no graded work to date). An "F" grade will be assigned to students who fail to withdraw before the withdrawal deadline.

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 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 have what is known as a zero-tolerance rule for cheating. If you are caught cheating, you will get a zero for that exam (under this circumstance, this zero cannot be used as a "dropped" exam). 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 rapports is key to becoming a professional.
- ☞ When emailing me, 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 "Bio 3200" 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 (SDS) for coordination of your academic accommodations. The SDS office can be reached at 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 gladly meet with you privately during my office hours to discuss your special needs. SDS' 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 **05/14/18**. 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. Closure of the University is announced by the following mechanisms:

1. University Newslines (313) 577-5345*
2. WSU Homepage (www.wayne.edu)*
4. WDET-FM (Public Radio 101.9)
5. other local radio and television stations

* Note: information on closures and class cancellations is likely to be found at these locations before it is broadcast by local radio and television stations.

Disclaimer

This course syllabus is subject to modification at the discretion of the instructor without prior notice to the student. Lecture topics and/or scheduled times may be changed to accommodate class progress. Students must keep regular attendance and take note of any such changes as appropriate. Any changes made will first be announced in class and then posted on our BB site (see pg. 11).

Instructor's Advice

- 1) Want it!
- 2) Take this class seriously starting yesterday.
- 3) Be willing to make sacrifices.
- 4) Attend all lectures.
- 5) Participate and ask questions. *Get engaged!*
- 6) Use my PowerPoint slides to facilitate note-taking in class.
- 7) Read the book.
- 8) Be proactive. If you have trouble keeping up or need help, see me ASAP.
- 9) **Diligently and consistently apply the study skills presented in the Study Skills Video provided to you.**
- 10) :-)

Lecture Outline

| DATE | TOPIC | CHAPTER |
|----------------------|---|-------------|
| M/07 W/09 | Introduction to Physiology Molecular Level of Organization | 1,3,6 2 |
| M/14 W/16 | Cellular & Tissue Levels of Organization Cellular & Tissue Levels of Organization | 3,5 |
| M/21 W/23 | Nervous System Cells Nervous System Cells | 8 |
| M/28 W/30 | Memorial Day (no class) Exam I | |
| F/01 | <u>June</u> Peripheral Nervous System (Afferent) | 10 |
| M/04 W/06 | Peripheral Nervous System (Afferent) Peripheral Nervous System (Efferent) | 11 |
| M/11 W/13 | Muscle Physiology Muscle Physiology | 12 |
| M/18 W/20 | Exam II Cardiovascular System (Heart & Vasculature) | 14,15 |
| M/25 W/27 | Cardiovascular System (Heart & Vasculature) Cardiovascular System (Blood) | 16 |
| M/02 W/04 F/06 | <u>July</u> Independence Day (no class) Respiratory Physiology Digestive System | 17,18 21 |
| M/09 W/11 | Exam III Digestive System | |
| M/16 W/18 | Endocrine System Endocrine System | 7 |
| M/23 W/25 | Renal Physiology Reproductive Physiology | 19,20 26 |
| M/30 | Final/Exam IV | |

Recitation Sessions

There will be one Teaching Assistant (TA) for this course this semester (see pg. 1). The TA will help organize the class into smaller groups for weekly (optional), student-centered learning opportunities. The TA will also manage and run Top Hat. I will introduce the TA and talk more about the recitation (review) sessions the first week of class.

Top Hat (Technical Information)

I will utilize the classroom response system, Top Hat, to administer daily quizzes, to pose spur-of-the-moment questions during lecture for participation points and for random attendance. For quiz and participation points, you will respond to these multiple choice or true/false type questions by submitting your choices with your Wi-Fi device (e.g., laptop, tablet, iPad, iPhone, Droid, etc.). As a result, you will receive real-time, in-class feedback on not only your performance, but the entire class' performance. This type of feedback is invaluable!

Top Hat can be found @ tophat.com. You can register (\$24 fee) utilizing the following information:

- ☞ Course Name: **BIO 3200 Human Physiology - Summer 2018**
- ☞ Direct URL: **<http://app.tophat.com/e/142176>**
- ☞ 6-digit course code: **142176**

You **must be registered** for our Top Hat course (tophat.com/e/142176) by **05/07/18** to start receiving Q, P, and A points. If you do not register for our Top Hat 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 access ID, not your student ID. Your access ID is merely your WSU email minus the "@wayne.edu." For example, my WSU email is ab1791@wayne.edu. Therefore, my access ID is ab1791. Therefore, my Top Hat "student ID" is ab1791.**

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

- 1) Via your laptop, tablet or iPad running our specific Top Hat course (tophat.com/e/142176) 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. 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

Blackboard Information

Blackboard 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 syllabus, my PowerPoint lectures, and other course documents will be available under the "content" link. My audio lecture recordings will be available under the "Echo360 Cloud" link. Every effort will be made to provide the PPT lecture slides on Blackboard a day or more before class. 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. I do not video capture. I feel that regular attendance is essential to success in my course and streaming my lectures at home is inconsistent with this philosophy. Exam grades and Top Hat points will be available in the Grade Center.