



## Human Physiology I, Fall 2020 Course Syllabus:

PSL 431, 4 Credits

Lectures every Monday, Wednesday, Friday from 1:50 – 2:40 PM

Recitations on Wednesday or Thursday (depending on registered section, see Page 2)

Course Modality: Online

Course Location: [MSU Zoom](#) and [D2L](#) (See pages 2 and 12-16 for detailed information)

**Course Description:** This course is open to juniors and seniors and covers cell physiology and the nervous, vascular, cardiac and respiratory systems. At the end of this course, students will be able to describe how these systems work at the molecular, cellular, tissue and system levels.

**Safety Considerations Due to COVID-19:** The large size of PSL-431 makes it impossible to have socially-distanced face-to-face meetings, which is essential to prevent spread of the COVID-19 virus. We will therefore conduct all course activities remotely via Zoom and D2L. If you are on campus for other reasons follow the [Mandatory Cloth Face Covering Policy](#) and [MSU Community Compact](#) to keep our community safe.

### **Required Textbook for PSL-431 and PSL-432 (choose Print OR Digital option):**

Human Physiology: From Cells to Systems, by Lauralee Sherwood, Cengage Publishing; 9th Edition.

- 1) **Print:** ISBN #9781305616721, Available from MSU Bookstore, Amazon, etc.
- 2) **Digital:** 4 or 12-month Cengage Unlimited subscription. Purchase from [Cengage.com](#).
  - If you only plan on taking PSL-431, but not the subsequent course PSL-432, then select the 4-month subscription: ISBN #9780357700006.
  - If you plan on taking PSL-432 in SS21, which uses the same textbook, you should select the 12 month subscription (it will save you money across both courses): ISBN #9780357700013.

### **Required Technologies: Computer with Camera and High-Speed Internet**

Per MSU [guidelines and policies](#), all undergraduates are required to have a laptop computer that connects to the internet, and you will need it for PSL-431. Alternately, or if you are experiencing technical issues you can use computers at the [MSU Computer Labs](#) or consult MSU resources for [How To Connect Online](#).

- Lectures are given via Zoom Webinar. No camera is required for lectures.
- Recitations and recitation quizzes are conducted via Zoom. During the recitation you are expected to be on camera and to actively participate.
- Exams are given via D2L. No camera is required for exams.

### **Attendance Policy**

- **Lectures:** Students are strongly encouraged to attend the synchronous lectures given via Zoom webinar so that they have an opportunity to engage with the content and ask questions. However, attendance is not required at lectures and will not be tracked. Cameras are not required during lectures.
- **Recitations:** Students are expected to attend weekly recitation sections given via Zoom. They are also expected to be on camera at all times during the recitation and to actively participate in discussions. Attendance is required to complete the weekly recitation quiz.

**Instructors:** PSL 431 is *team-taught* by 3 instructors. Office hours or other appointments with instructors will be held via Zoom. Instructors can also be contacted via email and will try to reply within 24 hours.

Instructor	Email	Office Hours	Zoom Office Hour Link
<b>Gina Leininger, Ph.D.</b> (Course Coordinator) Pronouns: she/her/hers	<a href="mailto:leininger@msu.edu">leininger@msu.edu</a>	M 9:30-10:30 AM & Th 2:00-3:00 PM <b>or email for an appointment</b>	<a href="https://msu.zoom.us/j/92229551053">https://msu.zoom.us/j/92229551053</a> Meeting ID: 922 2955 1053 Passcode: 593759
<b>Hongbing Wang, Ph.D.</b> Pronouns: he/him/his	<a href="mailto:wangho@msu.edu">wangho@msu.edu</a>	T & Th, 2:00-3:00 PM	<a href="https://msu.zoom.us/j/98989827139">https://msu.zoom.us/j/98989827139</a> Meeting ID: 989 8982 7139 Passcode: 744136
<b>Richard Miksicek, Ph.D.</b> Pronouns: he/him/his	<a href="mailto:miksicek@msu.edu">miksicek@msu.edu</a>	M, W & F, 3:00-4:00 PM	<a href="https://msu.zoom.us/j/93160836619">https://msu.zoom.us/j/93160836619</a> Meeting ID: 931 6083 6619 Passcode: 880808

### Who to Contact If You Have Questions About...

- **Grading, D2L Membership, Lecture Recordings, Adding, Dropping, Registration Issues, Exam Conflicts:** [Contact Dr. Leininger](#)
- **Course Content:** Contact the Instructor who taught the particular lecture/concept
- **Attending a Different Recitation Section:** If you have a good reason for needing to attend a different recitation section (e.g. illness, unavoidable travel conflict, etc.) then **get permission from [Dr. Leininger](#) PRIOR to attending any other recitation section.**
- **Technical Assistance with Zoom or D2L:**
  - Visit the MSU Help site at <http://help.msu.edu>
  - Visit the Desire2Learn Help Site at <http://help.d2l.msu.edu>
  - Call the MSU IT Service Desk at (517)432-6200, (844)678-6200, or [ithelp@msu.edu](mailto:ithelp@msu.edu)

**Lecture Time & Location:** MWF, 1:50 – 2:40 PM, <https://msu.zoom.us/j/91992475943>, Passcode 383856

**Recitation Time & Location:** Attend your registered recitation section using the section-specific Zoom link

Sec #	D	Time	Zoom Recitation Link	TA
001	W	10:20 - 11:10 AM	<a href="https://msu.zoom.us/meeting/register/tJAoceqvgT0rGNOvMnmCqvhXEDG7OKvTMiLb">https://msu.zoom.us/meeting/register/tJAoceqvgT0rGNOvMnmCqvhXEDG7OKvTMiLb</a>	Zayn Al-Zahid <a href="mailto:alzahidz@msu.edu">alzahidz@msu.edu</a>
003	W	11:30 - 12:20 PM	<a href="https://msu.zoom.us/meeting/register/tJwlf-mtrzksHdReyksNlum8tKO0ccCJH0wl">https://msu.zoom.us/meeting/register/tJwlf-mtrzksHdReyksNlum8tKO0ccCJH0wl</a>	
005	Th	1:50 - 2:40 PM	<a href="https://msu.zoom.us/meeting/register/tJcod-2hqzsiGdwqoON75UbBosGLE0QFfw5A">https://msu.zoom.us/meeting/register/tJcod-2hqzsiGdwqoON75UbBosGLE0QFfw5A</a>	
002	W	10:20 - 11:10 AM	<a href="https://msu.zoom.us/meeting/register/tJ0vcuGtqD4uHdN_TLm_KSm1sK_MggyRhAxW">https://msu.zoom.us/meeting/register/tJ0vcuGtqD4uHdN_TLm_KSm1sK_MggyRhAxW</a>	Thomas Turkette <a href="mailto:turkette@msu.edu">turkette@msu.edu</a>
004	Th	11:30- 12:20 PM	<a href="https://msu.zoom.us/meeting/register/tJYkdOipqDojGtRnEnNizOS6wSaWBSae1Nbl">https://msu.zoom.us/meeting/register/tJYkdOipqDojGtRnEnNizOS6wSaWBSae1Nbl</a>	
006	Th	6:30- 7:20 PM	<a href="https://msu.zoom.us/meeting/register/tJMucumupj8sHdHJomGAJ4JZ-EpJu8dq7stL">https://msu.zoom.us/meeting/register/tJMucumupj8sHdHJomGAJ4JZ-EpJu8dq7stL</a>	

**Tutors:** Contact [Dr. Leininger](#) if you are interested in obtaining a tutor.

**Course Platforms:** This course will be delivered **online** via Zoom and the course management system, D2L. You will need your MSU NetID to login to [MSU Zoom](#) and to login to the course from the [D2L homepage](#).

### **Access D2L for Course Materials, Exams and Grades**

- The [D2L](#) folder **FS20-PSL-431-All Sections-Human Physiology I** contains:
  - Lecture and Recitation Materials
  - Recorded Lectures (note that recitations are not recorded)
  - Weekly Practice Questions (optional, but strongly encouraged!)
  - [Review Quizzes \(GRADED – find these in the Calendar and Lecture Materials!\)](#)
  - Practice Exams
  - [Unit and Final Exams \(GRADED – find these in the Calendar and Lecture Materials!\)](#)
  - Grades

### **Honors Option**

Read the information on the PSL-431 Honors Option found at **D2L → Content → HONORS OPTION**. Then, if interested, email [Dr. Leininger](#) to initiate the Honors Option process. The online Honors Option contract must be completed and filed **BY THE END OF THE DAY ON SEPTEMBER 30<sup>th</sup>, 2020** to be eligible. Any member of the PSL-431 instructor team may supervise an Honors Option, which consists of writing a 10-12 page paper on a topic agreed upon by you and instructor.

### **Lecture Format:**

- **38 lectures are given via “live” Zoom Webinar by instructors**, recorded, and then subsequently posted to [D2L](#). Recorded lectures are available for viewing but **not** download due to copyright restrictions.
- Glitches sometimes occur with recording and we do not guarantee that all lectures will be recorded/posted. Thus, if you do not attend the “live” lecture, you run the risk of missing material.
- All course materials are the copyrighted property of the course Instructors and Michigan State University. Students are therefore not permitted to make, post, or otherwise distribute recordings of the lectures or other course material without the advance written permission of the course Instructors.

### **Recitation Format:**

- 13 Recitations will be led by TAs and focus on a challenging concept (or 2) from the previous lectures. Recitations will enable you to “actively exercise” concepts to enhance your learning.
- [Download Recitation materials and work through them PRIOR to coming to Recitation](#). Preparing ahead of time will help you get the most of out the recitation.
- **There is a Quiz at the end of each recitation (5 multiple-choice questions, 10 points)**
  - The quiz only covers material from the recitation. If you work through the recitation materials ahead of time *and* participate in the recitation you should be able to ace it.
  - One quiz question will come from the weekly practice questions
  - Recitation quizzes are administered via Zoom. You must register for each recitation meeting in advance to get the Zoom meeting information and to be able to take the quiz. See registration links on Page 2.
- **Your 3 lowest quiz scores (out of 13) will be dropped.**
- **No make-up quizzes will be given. If you miss recitation, you get 0 points on the quiz, but this can count as one of your 3 dropped quizzes.**

- If you must miss multiple recitation meetings due to a documented, prolonged health or personal issue, contact [Dr. Leinninger](#) to discuss possible accommodations.

## Grading Policy

There are 695 points in this class. These come from:

Item	Points	# Questions	Notes	% of Grade
Syllabus Quiz	5	5	See D2L	1%
10 Review Quizzes	50	10 per quiz	5 points per Quiz	7%
13 Recitation Quizzes	100	5 per quiz	Really 130 pt, but <u>Drop 3 quizzes</u>	14%
Exam 1	90	30	3 points per question	13%
Exam 2	90	30	3 points per question	13%
Exam 3	90	30	3 points per question	13%
Exam 4	90	30	3 points per question	13%
Cumulative Final	180	60	3 points per question	26%
<b>TOTAL POINTS</b>	<b>695</b>			

- **Review Quizzes:** There are 2 review quizzes per unit (Cell, Nervous, Circulatory, Vascular and Respiratory) for a total of 10 quizzes. There are 10 questions per quiz, each worth 0.5 points. Each quiz is offered during an ~3-day “release window” on D2L; after the window closes the quiz CANNOT be made up. SEE D2L COURSE CALENDAR AND LECTURES SECTION FOR THE QUIZ RELEASE WINDOWS AND LINKS TO QUIZZES. *Review quizzes include exam-level questions to encourage you to prepare in a timely and appropriate fashion.*
- **Recitation Quizzes** are composed of 5 multiple-choice questions, 2 points each. *Note that recitation quiz questions are meant to help you learn concepts, and so are less difficult than exam questions.*
- **Exams 1 - 4** are each composed of 30 multiple-choice questions, 3 points each. *Practice exam questions are similar in difficulty to the real exams. Use practice exams to prepare!*
- **The Cumulative Final** consists of 30 multiple-choice questions from the final section of the course (similar to a regular exam), **plus** 30 multiple-choice cumulative questions (e.g. questions from each of the five units covered in the course.) Each question is worth 3 points.

**Grade Dissemination:** All grades on course assessments and final course grades will be posted in D2L. Contact [Dr. Leinninger](#) if you wish to discuss your grade in general. If you wish to discuss a content-related questions (e.g. an exam or quiz question), you should contact the instructor who presented the content.

**Determination of Final Course Grades:** Final grades are determined by the percentage of points earned out of the total possible (695) points as per the table below:

Students earning ___ of possible course points	Will Receive a Grade of ___ or better
≥ 90%	4.0
89% to 85%	3.5

Students earning ___ of possible course points	Will Receive a Grade of ___ or better
84% – 80%	3.0
79% - 75%	2.5
74% - 70%	2.0
69% - 65%	1.5
64% - 60%	1.0
59% and below	0.0

adjust for yearly variations in test difficulty and class performance. The final grade curve will not be more rigorous than the straight grading scale and will be designed to help, not hurt, the student.

- In practice, the straight grading scale described above may be curved, if needed, to

- Petitions to re-evaluate a course grade will be considered in writing only (by e-mail) and must be submitted to Dr. Leininger within one week after the beginning of the semester following completion of this 2020 PSL 431 course, according to University guidelines.

### **Missed Exams:**

- Make-Up Exams are only possible if a student has a *legitimate health emergency* (serious illness, not a cold) or serious extenuating circumstances (refer to grievance policy below.)
- **Documentation** of the emergency must be provided by a physician on their letterhead, with their signature and contact information. Dr. Leininger reserves the right to contact the physician regarding the illness/condition that caused the student to miss the exam.
- If you unexpectedly miss an exam, Contact Dr. Leininger within 24 hours of the exam. Make-ups will be negotiated solely with Dr. Leininger.
- Note that a make-up exam may not be the same as the exam given during the normal exam period. Instructors reserve the right to use an alternate exam/final.

### **Policy on Overlapping Final Exams:**

- This course follows the [MSU Final Exam Policy](#)
- According to University policy you may be eligible to take the final exam at an alternative time **IF** you have 2 final exams scheduled at the same time **OR** you have 3 final exams scheduled on the same calendar day (e.g. 3 final exams on the same Friday; does not apply if the 3 finals are scheduled within a 24-hour period over adjacent days.)
- **If either of these situations applies to you, CONTACT [DR. LEININGER](#) AT LEAST 2 WEEKS BEFORE THE FINAL WEEK OF CLASSES** and she will schedule an alternate time for you to take the final exam. Requests made after this time will not be honored.
- Note: when a conflict as described above arises because of use of a common final (as in some multi-section chemistry courses), the course utilizing the common final will normally be responsible for scheduling an alternate for those students for whom conflicts arise (as per official MSU exam scheduling policy).

### ***Rules for the Unit Exams and Final Exam:***

- No questions on content will be answered during the exams.
- Exams are given and scored via D2L. Exam results will be released via D2L and grades will be posted to the D2L Gradebook usually within 1 week of the exam date. It is the responsibility of the student to assure that his/her exam was graded correctly.
- Any appeals for additional credit on an exam because of a scoring error or student appeal to re-evaluate individual questions must be submitted in writing (by email) to the relevant instructor and Dr. Leininger within 1 week of the time exam results are distributed. Appeals must provide justification for why the scoring issue or alternate answer deserves to receive credit. You cannot appeal a question that you failed to answer on the D2L exam.

### ***Accommodations for Students with Disabilities:***

- Michigan State University is committed to providing equal opportunity for participation in all programs, services and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities (RCPD) via the [RCPD website](#) or via phone (517-884-7273). Once your eligibility for an accommodation has been determined, you will be issued a verified individual services accommodation (“VISA”) form. Students **must** be registered with RCPD in order to obtain a VISA
- Students must inform [Dr. Leininger](#) regarding any accommodations needed at the start of the semester, and must provide their RCPD-issued VISA.
- Accommodation arrangements must be made at least 2 weeks prior to the exam or final. Requests received after this date will be honored whenever possible, but cannot be guaranteed.

### ***Accommodations for COVID-19 and other Serious Health Conditions***

- **COVID-19:** If you have been sick with COVID-19 [symptoms](#), have tested positive for COVID-19, or have been potentially [exposed](#) to someone with COVID-19 please follow CDC guidance to [self-isolate or stay home](#). Accommodations will be made for any student who must miss class due to COVID-19 illness or self-isolation so that it will not harm their performance or put them at a disadvantage in the class. Contact [Dr. Leininger](#) to arrange accommodations.
- **Other Serious Health Conditions:** Contact [Dr. Leininger](#) to discuss and arrange accommodations.

### ***Learning Continuity Statement***

Should you become unable to attend class for an extended period of time due to documented health or personal issues, contact [Dr. Leininger](#) to discuss accommodations.

### ***Course Continuity Statement***

Should a member of the PSL-431 Instructor team be required to be absent for an extended period of time, the other instructors will deliver their course content and cover their office hours. If this occurs, students will be notified of which Instructor is responsible for the content and should be contacted about it.



## **TIPS TO SUCCEED IN PSL 431 (aka how other students aced this class):**

- 1) **READ BEFORE EACH CLASS** so you are prepared for the lecture. Having some idea of the concepts will help you make the most of the lecture period.
- 2) **PUT IT INTO YOUR OWN WORDS.** Do not just passively look at lecture notes or listen to a lecture, that is not enough. **You** need to actively work with the material to learn it at a sophisticated level. Past students suggest the following techniques to master the material:
  - **After you have listened to lecture and reviewed it a few times, Re-write each lecture to explain concepts in your own words / pictures.** Do this within 1 week of the lecture. Handwriting works best for this because it gives your brain some time to synthesize what you are trying to learn. (*Seriously, re-writing / drawing out each lecture in your own words is Dr. L's #1 suggestion for PSL-431 success!!!*)
  - Then, test yourself by covering up everything but the title from a lecture slide: can you describe the main "point" or process on the slide? If not, re-write and study till you can!
  - Teach a concept to someone else (this will test if you really know it...).
- 3) **WRITE OUT ANSWERS TO THE LECTURE LEARNING OBJECTIVES.** We recommend doing this after you have re-written lecture notes in your own words. The lecture objectives identify the material that instructors are expecting you to understand for the exam, so you should know it!
- 4) **STAY CURRENT.** Each concept builds upon the one before, so you need to keep up with the material. DO NOT wait until the week before an exam to study - you will be lost. You should be spending at least an hour studying outside of class for each hour spent in lecture and recitation.
- 5) **INTEGRATE CONCEPTS.** Simply memorizing the notes will **not** enable you to pass this class. Really. You need to be able to deeply understand the pathways, mechanisms and **connect** them to other topics/mechanisms. Re-writing lectures and learning objectives will help.
- 6) **PRACTICE MULTIPLE CHOICE QUESTIONS.** The format of the exams/quizzes can trip students up. Practice with sample multiple choice questions in advance. Tips for this:
  - Carefully read the question. What is it asking for?
  - Next, look at each option as if it were a true / false question.
  - **Write out WHY each option is true or false. What makes it false, if anything?**
  - This process will help you identify the right option by *understanding why the other options are not right.*
- 7) **ASK QUESTIONS AND DO IT SOON!** Let your instructor or TA know if you are having trouble with a concept: we cannot help if we do not know that there is a problem.

## **Course and Instructor Evaluation:**

- The SIRS Online system will be used for evaluation of PSL 431
- Students are encouraged to submit their opinions of the course and individual instructors at the end of each semester via the [SIRS Online site](#)
- Students must complete the SIRS Online form or indicate within that form that they decline to participate. Otherwise, final grades will be sequestered for 7 days following the course.
- An "Opt Out" option is possible and student anonymity is carefully protected.

### **Academic Honesty Policy:**

You are expected to complete all quizzes, exams and the final without assistance from any source. Students who violate MSU rules (see below) may receive a penalty grade including, but not limited to, a failing grade on the quiz/exam/final or in the course

- All participants in this class are held to the standard set by **MSU's Policy on Integrity of Scholarship and Grades**. The policy can be read in full at the [MSU Ombudsperson's website](#).
- **The Spartan Code of Honor:** "As a Spartan, I will strive to uphold values of the highest ethical standard. I will practice honesty in my work, foster honesty in my peers, and take pride in knowing that honor is worth more than grades. I will carry these values beyond my time as a student at Michigan State University, continuing the endeavor to build personal integrity in all that I do."

### **Grief Absence Policy:**

Michigan State University is committed to ensuring that the bereavement process of a student who loses a family member during a semester does not put the student at an academic disadvantage in their classes. Students should file a Grief Absence Request Form no later than one week after knowledge of the circumstance. This can be found at <https://reg.msu.edu/Forms/StuInstr/Menu.aspx> under Student Resources → Forms → Grief Absence Request Form. Next, the college representative and student determine the expected period of absence. The college will then inform Dr. Leininger, who will then work with the student to make appropriate accommodations so that they are not penalized due to a verified grief absence.

Representative for the College of Natural Science: Heidi Purdy, [purdyh@msu.edu](mailto:purdyh@msu.edu)

Representative for the Lyman Briggs College: Amy Martin, [mart1742@msu.edu](mailto:mart1742@msu.edu)

**Importance of Diversity and Professionalism:** MSU welcomes a full spectrum of experiences, viewpoints, and intellectual approaches because they enrich the conversation, even as they challenge us to think differently and grow. However, we believe that expressions and actions that demean individuals or groups compromise the environment for intellectual growth and undermine the social fabric on which the community is based. To encourage a productive learning experience for all, please practice professionalism, accountability, and transparency with your fellow students and the Instructor team during PSL-431.

### **Exam Dates and Optional Exam Help Sessions:**

- Help Sessions are held prior to each exam and the final. Attendance is OPTIONAL.
- Instructors are present and can answer questions during that time, including questions regarding weekly practice or practice exam questions. Instructors will NOT lead a formal review of all lessons/concepts covered on the exam. It is up to you to come and ASK QUESTIONS.

EXAMS - MANDATORY – GIVEN VIA D2L Exams 1-4 occur during normal lecture time: 1:50 – 2:40 PM Final Exam: see date/time below		Exam Help Sessions (Attendance Optional)  Via Zoom: <a href="https://msu.zoom.us/j/98518339203">https://msu.zoom.us/j/98518339203</a> Passcode: 340256	
Exam	Exam Date	Help Session Date	Time
Exam 1	9/30/20 (WED)	9/25/20 (FRI)	3:30 - 5:00 PM
Exam 2	10/23/20 (FRI)	10/20/20 (TUES)	3:30 - 5:00 PM
Exam 3	11/9/20 (MON)	11/6/20 (FRI)	3:30 - 5:00 PM
Exam 4	11/30/20 (MON)	11/24/20 (TUES)	3:30 - 5:00 PM
Final Exam*	12/16/20 (WED), 5:45-7:45 PM	12/15/20 (TUES)	9:00 – 11:00 AM



## Course Schedule:

L # = Lecture Number

R # = Recitation Number: lectures from *previous week* may be covered in recitation

Thick Gray lines separate weeks

*Review Quizzes are indicated in Italic Blue Text. Exams are indicated in Blue Bold Text*

Date	L #	Lecture Title	Reading	Instructor	R #
<b>UNIT ON CELL PHYSIOLOGY: LECTURES 1 - 9</b>					
2-Sep	1	Syllabus Quiz Availability Begins, 2:40 PM <i>Syllabus Quiz Availability Begins, 2:40 PM</i>	Chapter 1	Leininger	No Rec.
4-Sep	2	Principles of Plasma Membrane Transport	Ch 3 - 3.5	Leininger	
7-Sep		Labor Day Break - NO LECTURE			
9-Sep	3	Membrane Potential and Protein Transport. <i>Syllabus Quiz Due, 11:59 PM</i>	Ch. 3.6 + 2.3-2.4	Leininger	1
11-Sep	4	Receptors <i>Review</i> <i>Quiz-1 Availability Begins, 2:40 PM</i>	Ch. 4.5 - 4.7	Leininger	
14-Sep	5	Epithelial Cells <i>Review Quiz-1 Due, 1:50 PM</i>	pg 6, 74-75, TBD	Leininger	2
16-Sep	6	Neurons: Structure and Excitability	Ch. 4 - 4.3	Leininger	
18-Sep	7	Neurons: Synaptic Mechanisms <i>Review Quiz-2 Availability Begins, 2:40 PM</i>	Ch 4.4	Leininger	
21-Sep	8	Muscles: Skeletal & Neuromuscular Junction <i>Review Quiz-2 Due, 1:50 PM</i>	Ch 8 - 8.3 + 7.2-7.3	Leininger	3
23-Sep	9	Muscles: Cardiac & Smooth Muscle	Ch 8.6	Leininger	
<b>UNIT ON NERVOUS SYSTEM: LECTURES 10 - 18</b>					
25-Sep	10	Vision	Ch 6.3	Leininger	4
28-Sep	11	Hearing	Ch 6.4	Leininger	
30-Sep		<b>EXAM 1 (Cell Phys): Covers Lectures 1-9</b>			
2-Oct	12	Intro to Nervous System Structure and Function <i>Review Quiz-3 Availability Begins, 2:40 PM</i>	Ch 5.1-5.6, 5.8-5.10	Wang	
5-Oct	13	Reflexes and Sensory Pathways <i>Review Quiz-3 Due, 1:50 PM</i>	Ch 5.10, Ch 6.1, 6.2	Wang	5
7-Oct	14	Sensory Pathways (continued)	Ch 6.1, 6.2	Wang	
9-Oct	15	Somatic Motor Pathways: Reflex and Voluntary <i>Review Quiz-4 Availability Begins, 2:40 PM</i>	Ch 7.3	Wang	
12-Oct	16	Autonomic Motor Pathways <i>Review Quiz-4 Due, 1:50 PM</i>	Ch 7	Wang	6
14-Oct	17	Autonomic Neuro-Effector Junction	Ch 7	Wang	
16-Oct	18	Clinical Apps: Receptor Agonists and Antagonists	Handout	Wang	

Date	L #	Lecture Title	Reading	Instructor	R #
<b>UNIT ON CARDIAC SYSTEM: LECTURES 19 - 25</b>					
19-Oct	19	Overview of the Circulatory System & Anatomy of the Heart	Ch 9.1, 9.5, p 344	Miksicek	7*
21-Oct	20	Properties of Cardiac Muscle; Cardiac Pacemaker	Ch 8.6, 9.2 (311-313)	Miksicek	
23-Oct		<b>EXAM 2 (Nervous System): Covers Lectures 10-18</b>			
<b>UNIT ON CARDIAC SYSTEM: LECTURES 19 - 25</b>					
26-Oct	21	Cardiac Conduction System & Cardiac Electrophysiology	Ch 9.2 (313-322)	Miksicek	8
28-Oct	22	ECG and Excitation-Contraction Coupling <i>Review Quiz-5 Availability Begins, 2:40 PM</i>	Ch 9.2; Suppl Slides	Miksicek	
30-Oct	23	The Cardiac Cycle and Cardiac Contractility	Ch 9.3	Miksicek	
<b>UNIT ON CARDIAC SYSTEM: LECTURES 19 - 25</b>					
2-Nov	24	Autonomic Control of the Heart <i>Review Quiz-5 Due, 1:50 PM</i> <i>Review Quiz-6 Availability Begins, 2:40 PM</i>	Ch 7.1 & 9.4	Miksicek	9
4-Nov	25	Overview of the Vascular System & the Flow Equation <i>Review Quiz-6 Due, 1:50 PM</i>	Ch 10.1 and pg 344	Miksicek	
<b>UNIT ON VASCULAR SYSTEM: LECTURES 26 - 31</b>					
6-Nov	26	Vascular System: Arteries and Veins	Ch 10.2, 10.3 & 10.5	Miksicek	10*
9-Nov		<b>EXAM 3 (Cardiac System): Covers Lectures 19-25</b>			
11-Nov	27	Regulation. of Peripheral Resistance - Extrinsic Control	Ch 10.3; Suppl Slides	Miksicek	
13-Nov	28	Control of Blood Pressure; Baroreceptors <i>Review Quiz-7 Availability Begins, 2:40 PM</i>	Ch 10.6	Miksicek	
<b>UNIT ON VASCULAR SYSTEM: LECTURES 26 - 31</b>					
16-Nov	29	Capillaries, Veins, and Lymphatics; Starling Forces <i>Review Quiz-7 Due, 1:50 PM</i>	Ch 10.4, 10.5	Miksicek	11
18-Nov	30	Internal and External Respiration; Gas Transport	Ch 11.1 and Pg 457	Miksicek	
20-Nov	31	Oxygen Transport and the Hb Saturation Curve <i>Review Quiz-8 Availability Begins, 2:40 PM</i>	Ch 13.4 (484-488)	Miksicek	

Date	L #	Lecture Title	Reading	Instructor	R #
<b>UNIT ON REPSIRATORY SYSTEM: LECTURES 32 - 38</b>					No Rec
23-Nov	32	Anatomy of the Respiratory Tree <i>Review Quiz-8 Due, 1:50 PM</i>	Ch 13.1	Miksicek	
25-Nov	33	Lung Mechanics and the Respiratory Cycle	Ch 13.2: 461-470		
27-Nov		Thanksgiving Break - NO CLASS			
30-Nov		<b>EXAM 4 (Vascular System): Covers Lectures 26 - 31</b>			12*
2-Dec	34	Expanding & Collapsing Forces; Lung Spirometry <i>Review Quiz-9 Availability Begins, 2:40 PM</i>	Ch 13.2: 470-473		
4-Dec	35	Inefficiencies of Breathing	Ch 13.2: 473-479	Miksicek	
7-Dec	36	Alveolar Ventilation and Pulmonary Perfusion <i>Review Quiz-9 Due, 1:50 PM</i> <i>Review Quiz-10 Availability Begins, 2:40 PM</i>	Suppl Slides	Miksicek	13
9-Dec	37	Control of Respiration, Chemoreceptors	Ch 13.5	Miksicek	
11-Dec	38	CO <sub>2</sub> and Bicarbonate Transport, Resp. Acid-Base Balance <i>Review Quiz-10 Due, 11:59 PM</i>	488-491; 563-570	Miksicek	
16-Dec		<b>FINAL EXAM</b> <b>Wednesday Dec 16 5:45 – 7:45 PM</b> <b>Covers Lectures 32 - 38 + Cumulative Material From Each Unit</b>			

# Detailed Zoom Information for Lectures, Recitations, Exam Help Sessions and Instructor Office Hours

## Lecture, all sections

Topic: PSL-431 Lecture, MWF, 1:50-2:40 PM

Time: This is a recurring webinar

Please click the link below to join the webinar:

<https://msu.zoom.us/j/91992475943>

Passcode: 383856

Or iPhone one-tap :

US: +13126266799,,91992475943# or +16468769923,,91992475943#

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Dial(for higher quality, dial a number based on your current location):

US: +1 312 626 6799 or +1 646 876 9923 or +1 301 715 8592 or +1 346 248 7799 or +1 669 900 6833  
or +1 253 215 8782

Webinar ID: 919 9247 5943

International numbers available: <https://msu.zoom.us/u/abd5DwYil>

Or an H.323/SIP room system:

H.323:

162.255.37.11 (US West)

162.255.36.11 (US East)

115.114.131.7 (India Mumbai)

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103.122.166.55 (Australia)

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Meeting ID: 919 9247 5943

Passcode: 383856

SIP: 91992475943@zoomcrc.com

Passcode: 383856

## Recitation Section 001

Topic: 1: PSL-431 Recitation

Time: Every week on Wed, until Dec 9, 2020

You must register in advance for EACH meeting:

<https://msu.zoom.us/meeting/register/tJAocevqT0rGNOvMnmCgvhXEDG7OKvTMiLb>

After registering, you will receive a confirmation email containing information about joining the meeting.

## Recitation Section 002

Topic: 2: PSL-431 Recitation

Time: Every week on Wed, until Dec 9, 2020

You must register in advance for EACH meeting:

[https://msu.zoom.us/meeting/register/tJ0vcuGtqD4uHdN\\_TLm\\_KSm1sK\\_MqgyRhAxW](https://msu.zoom.us/meeting/register/tJ0vcuGtqD4uHdN_TLm_KSm1sK_MqgyRhAxW)

After registering, you will receive a confirmation email containing information about joining the meeting.

### **Recitation Section 003**

Topic: 3: PSL-431 Recitation

Time: Every week on Wed, until Dec 9, 2020

You must register in advance for EACH meeting:

<https://msu.zoom.us/meeting/register/tJwlf-mtrzksHdReyksNlum8tKO0ccCJH0wI>

After registering, you will receive a confirmation email containing information about joining the meeting.

### **Recitation Section 004**

Topic: 4: PSL-431 Recitation

Time: Every week on Thu, until Dec 10, 2020

You must register in advance for EACH meeting:

<https://msu.zoom.us/meeting/register/tJYkdOipqDojGtRnEnNizOS6wSaWBSae1Nbl>

After registering, you will receive a confirmation email containing information about joining the meeting.

### **Recitation Section 005**

Topic: 5: PSL-431 Recitation

Time: Every week on Thu, until Dec 10, 2020

You must register in advance for EACH meeting:

<https://msu.zoom.us/meeting/register/tJcod-2hqzsiGdwqoON75UbBosGLE0QFnw5A>

After registering, you will receive a confirmation email containing information about joining the meeting.

### **Recitation Section 006**

Topic: 6: PSL-431 Recitation

Time: Every week on Thu, until Dec 10, 2020

You must register in advance for EACH meeting:

<https://msu.zoom.us/meeting/register/tJMucumupj8sHdHJomGAJ4JZ-EpJu8dg7stL>

After registering, you will receive a confirmation email containing information about joining the meeting.

## **Detailed Zoom Information for Exam Help Sessions**

Please click the link below to join the webinar:

<https://msu.zoom.us/j/98518339203>

Passcode: 340256

Or iPhone one-tap :

US: +13017158592,,98518339203# or +13126266799,,98518339203#

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Dial(for higher quality, dial a number based on your current location):

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Webinar ID: 985 1833 9203

International numbers available: <https://msu.zoom.us/u/abjVZAZFS7>

Or an H.323/SIP room system:

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103.122.166.55 (Australia)  
64.211.144.160 (Brazil)  
69.174.57.160 (Canada)  
207.226.132.110 (Japan)  
Meeting ID: 985 1833 9203  
Passcode: 340256  
SIP: 98518339203@zoomcrc.com  
Passcode: 340256

## Detailed Zoom Information for Instructor Office Hours

### Dr. Leininger

Join Zoom Meeting

<https://msu.zoom.us/j/92229551053>

Meeting ID: 922 2955 1053

Passcode: 593759

One tap mobile

+16468769923,,92229551053# US (New York)

+13017158592,,92229551053# US (Germantown)

Dial by your location

+1 646 876 9923 US (New York)

+1 301 715 8592 US (Germantown)

+1 312 626 6799 US (Chicago)

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

Meeting ID: 922 2955 1053

Find your local number: <https://msu.zoom.us/u/aAlJd2ux>

Join by SIP

92229551053@zoomcrc.com

Join by H.323

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103.122.166.55 (Australia)

64.211.144.160 (Brazil)

69.174.57.160 (Canada)

207.226.132.110 (Japan)

Meeting ID: 922 2955 1053

Passcode: 593759

Join by Skype for Business

<https://msu.zoom.us/skype/92229551053>



## **Dr. Wang**

Join Zoom Meeting

<https://msu.zoom.us/j/98989827139>

Meeting ID: 989 8982 7139

Passcode: 744136

One tap mobile

+16468769923,,98989827139# US (New York)

+13017158592,,98989827139# US (Germantown)

Dial by your location

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+1 301 715 8592 US (Germantown)

+1 312 626 6799 US (Chicago)

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

Meeting ID: 989 8982 7139

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Join by SIP

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Join by H.323

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103.122.166.55 (Australia)

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Meeting ID: 989 8982 7139

Passcode: 744136

Join by Skype for Business

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## **Dr. Miksicek**

Join Zoom Meeting

<https://msu.zoom.us/j/93160836619>

Meeting ID: 931 6083 6619

Passcode: 880808

One tap mobile

+16468769923,,93160836619# US (New York)

+13017158592,,93160836619# US (Germantown)

Dial by your location

- +1 646 876 9923 US (New York)
- +1 301 715 8592 US (Germantown)
- +1 312 626 6799 US (Chicago)
- +1 669 900 6833 US (San Jose)
- +1 253 215 8782 US (Tacoma)
- +1 346 248 7799 US (Houston)

Meeting ID: 931 6083 6619

Find your local number: <https://msu.zoom.us/j/93160836619>

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- 207.226.132.110 (Japan)

Meeting ID: 931 6083 6619

Passcode: 880808

Join by Skype for Business

<https://msu.zoom.us/j/93160836619>