 Physiology Department

**Physiology for Pre-Health Professionals (Sections 740-749)**

**Spring 2021 Syllabus**

Course Number - PSL 310

Credit Hours - 4

Course meeting days and time - Online lectures and Zoom Case Study meetings

Course location - D2L

Course website address - https://d2l.msu.edu

Course Modality - Online

Exams - Unit 1-4 Exams (for ALL sections) are MONDAY EVENINGS at 6:00-6:50 pm ONLINE (via D2L) on the following dates: February 1, February 22, March 22, and April 12, 2021. Exam times were posted on the Schedule of Courses before you enrolled and, as it states at the Schedule of Courses: “STUDENTS MUST ARRANGE THEIR SCHEDULES TO TAKE PSL 310 EXAMS AT 6-6:50 pm ON THE DATES LISTED”. The last (Unit 5) exam will be over only Unit 5 (not cumulative), will be 50 minutes (during the time scheduled for the PSL 310 final exam) and will be ONLINE (via D2L). The Unit 5 Exam is Tuesday, April 27, 2021 from 8:40-9:30 pm.

## Instructors

Instructor Information

| **Instructor (she/her/hers)** | **Undergraduate Learning Assistants (she/her/hers)** |
| --- | --- |
| Name: Adele L. Denison, PhD | Names: Madison Noom and Hannah Blauw |
| Office: online | Office: online |
| Office hours: On Zoom on Tues, Wed, Thurs from 12:00-1:30 pm. Office hour link is in a module on D2L. Other office hours are gladly arranged by email. | Office hours: Email to arrange a Zoom office hour |
| Phone: please contact by email | Phone: please contact by email  |
| E-mail: denison4@msu.edu | E-mail: noommadi@msu.edu; blauwhan@msu.edu |

## Course Information

### Course Description

As stated in the University Online Catalog, the PSL 310 Course Description is “Human organ system physiology with clinical applications for students entering health care fields”.

Lecture material is applied to clinically related questions during each Unit’s Case Study meetings to help students understand how PSL 310 Lectures relate to their future health care careers. In-class discussions during Case Study meetings allow students to practice communication and team work skills employers deem essential.

### Course Overview

The Lectures for this course are all available online (on D2L). There are detailed Learning Objectives and Practice Questions to help students work with the material and understand Lectures.

The week before each Unit Exam\*, there is an 80 minute Zoom Case Study class meeting for each of the 10 sections in the course. Students are assigned Case Study Questions to do on their own before their scheduled Case Study Zoom time. During the meeting, Case Study Questions are discussed in small groups and in the entire 50 person class to explain reasoning for correct answers. After their Case Study session, students use the Case Study Assignment on D2L to submit their answers. \*Except for Unit 5 – Case Study 5 had to be cancelled due to changes in the Spring 2021 calendar.

There will be a recorded Unit Review available and a Question and Answer Session at 4-5 pm on Fridays before the exam and Wed 4-5 pm before the last (Unit 5) exam.

### Tips for Success

* **This is very important: don’t let the course get ahead of you** because it can severely affect your grade. Always keep up with the material in the course by following the “Recommended Daily Schedule” on the last pages of this Syllabus. Do your Case Study Questions early. These are ways to keep up and help you do well in the class!
* Do all Practice Questions\* to help you understand the material and to help prepare you for exams. Figure out why the right answers are right and **FIGURE OUT WHY THE WRONG ANSWERS ARE WRONG.**  This can be huge; “memorizing” the right answers can be a recipe for failing exams.

**\*WHAT ARE THE “PRACTICE QUESTIONS”**? The practice questions include the Comprehension Checks (answered in videos posted on D2L), the Study Questions (after the Learning Objectives in the Course Pack), Extra Study Questions (in the Appendix of the Course Pack), Challenge Questions and Reading Questions and the ANSWERS to those questions (in the Appendix of the Course Pack), and Case Study Assignment on D2L (with Case Study answers explained in the “Study Guide for the Case Studies” posted on D2L).

* **DO THE STUDY QUESTIONS IN “ROUNDS”. THE QUESTIONS WILL BE MORE EFFECTIVE IF YOU DO SOME AND COME BACK LATER AND DO MORE.** Research has shown that you will learn the most if you come back later and have to retrieve what you learned earlier. The Study Questions are written in rounds; you can easily do some and then some later and then some later (it’s much less effective if you do them all at once and only once). **You should also come back and re-do the other Practice Questions many times to enhance your learning**.
* **Use the Practice Exams available on D2L to help you prepare for the Spring 2021 “Infrequently or Sparingly Used” Notes Exams**\*. Students should use these Practice Exams to test themselves on the material and to help practice their timing (to learn how to pace themselves and use the 50 minutes allowed for the exams most effectively). Students sometimes get the wrong idea about these exams and the long title for exams is to alert students to this fact: **the less you need to look up in your notes, the higher grade you will earn.** DO NOT ASSUME YOU ARE ABLE TO LOOK UP THE ANSWER TO MORE THAN A FEW QUESTIONS – THE EXAM IS TIMED AT 50 MINUTES (just like an in-class exam). **Students who do the best on exams treat exams as closed notes exams.** You are allowed to look at your notes because we are not using a camera during exams (this is to decrease your stress and to be less intrusive or invasive). Treat the exam this way – study the way you normally would for a closed notes exam assuming you won’t have any time to look at your notes. If it works out (due to careful planning and practicing) that you do have time to look up something in your notes, that effective use of time will help you do even better on the exam.

\*the long title for PSL 310 Exams will be used to remind students to treat the exam as a closed notes exam (with the bonus of being able to look at notes if it works out you have time)

* ***Write out in your OWN words* and understand (don’t just try to memorize) the Learning Objectives**. Results of a survey from previous students: 80% agreed that doing the Learning Objectives made the material “stick with them” (75% strongly agreed, 5% agreed). People are different but it is very likely that doing the Objectives will help you **a lot**. They are time consuming, but are a very important way most students really understand lecture material. **All exams count** – **don’t make the mistake of failing an exam to learn you need to do the Objectives**.
* **DO THE LEARNING OBJECTIVES IN SMALL DOSES!** You should do the Objectives after watching the videos listed for each day in the Recommended Daily Schedule. This is the best way for students because 1) you know more going forward and 2) it also keeps you from being overwhelmed. This tip is very important because if you save the Objectives you can get in the situation where you can’t finish them, and therefore, do poorly on the exam.

* One mistake students can make is to treat the “Challenge Questions and Reading Questions” (in the Appendix of the Course Pack) as only an assignment and not as an important LEARNING tool. YOU SHOULD NOT IGNORE ANSWERS to the Challenge Questions and Reading Questions. The Challenge Questions and Reading Questions and the ANSWERS to the Challenge Questions and Reading Questions contain NEW material that students are responsible for on exams. **Important message! Several questions on each Unit Exam are likely to come from the Challenge Questions and Reading Questions and the ANSWERS to those questions!** You shouldwork through and understand the Challenge Questions and Reading Questions, including the textbook readings assigned with those questions, and read and understand the ANSWERS to the Challenge Questions and Reading Questions **–** all are fair game for exams.
* Realize that for almost all students, physiology is one of their most challenging courses and that it is the kind of course which requires at least 2-3 hours of studying a week for each hour of lecture. **Make sure you devote enough time to studying the material and enough time for it to “sink in”; allow enough time for the “light bulb to come on”.**
* For some students, try writing out your responses to the Objectives while watching the Lecture videos again. It can be a real effective way to remain engaged and attentive, and therefore, learn the material more quickly.
* If you have not taken Chemistry or Biology within the last few years and need some brushing up, you should read Appendix A in the ebook before the Membrane Transport Lecture (and use it for reference during the semester).
* Use Review recordings, attend Question and Answer Sessions and office hours (Professor’s office hours and/or undergraduate learning assistant office hours) if you need extra help.
* If you are unhappy with how you are doing in the course (and need ideas about ways to study the material), or, for example, if you are a transfer student (and need extra guidance), contact the Professor early in the semester. If you wait too long it may be impossible to increase your grade as much as you want. **Let the Professor know of any problems or difficulties you are having with the course. *She wants to help! Don't hesitate to ask!***

### Tips for Exams

* THE FOLLOWING PARAGRAPH IS ALSO ABOVE IN “TIPS FOR SUCCESS”, IT IS REPEATED SO STUDENTS DO NOT MISS THESE IMPORTANT INSTRUCTIONS. **Use the Practice Exams available on D2L to help you prepare for the Spring 2021 “Infrequently or Sparingly Used” Notes Exams**\*. Students should use these Practice Exams to test themselves on the material and to help practice their timing (to learn how to pace themselves and use the 50 minutes allowed for the exams most effectively). Students sometimes get the wrong idea about these exams and the long title for exams is to alert students to this fact: **the less you need to look up in your notes, the higher grade you will earn.** DO NOT ASSUME YOU ARE ABLE TO LOOK UP THE ANSWER TO MORE THAN A FEW QUESTIONS – THE EXAM IS TIMED AT 50 MINUTES (just like an in-class exam). **Students who do the best on exams treat exams as closed notes exams.** You are allowed to look at your notes because we are not using a camera during exams (this is to decrease your stress and to be less intrusive or invasive). Treat the exam this way – study the way you normally would for a closed notes exam assuming you won’t have any time to look at your notes. If it works out (due to careful planning and practicing) that you do have time to look up something in your notes, that effective use of time will help you do even better on the exam.

\*the long title for PSL 310 Exams will be used to remind students to treat the exam as a closed notes exam (with the bonus of being able to look at notes if it works out you have time)

* You should study just as much for your “Infrequently or Sparingly Used” Notes Exams as you do for an in-class exam (because, as previously stated, you should treat it as a closed notes exam with the bonus of being able to use your notes if you have time).
* Realize that almost all exam questions will NOT be ones in which you could directly find an answer in the Course Pack, so your focus should be on understanding concepts, not something like recall of a name of a structure.
* The PSL 310 Practice Exams and all the Practice Questions will help you understand concepts (and are VERY important to use) but will not often directly give you an answer to an exam question.
* You may want to create a well thought out document that describes the most important concepts of the Unit to be able to use in case you have time. (Also, creation of this document will help you prepare for the exam even if you don’t have time to look at it.)

### Required Textbook & Course Materials:

Course Pack – PSL 310 Course Pack Part 1 and Part 2 is required. The two parts of the Course Pack are shrink-wrapped together. The Course Pack Part 1 comes with an access code printed on the back of the front cover (a few students may have the access code printed on a card-if you have a card use the code on the card). The access code gives access to an ebook (essentially free). The Course Pack was written by your Professor. It includes partial Lecture Notes (you complete while watching lecture videos), Learning Objectives for each Lecture Topic, Comprehension Checks (questions answered during videos), Study Questions (which you do on your own), and more Practice Questions (Extra Study Questions and Challenge Questions and Reading Questions) in the Appendix.

Textbook – is an ebook. PSL 310 changed to an ebook to save students money. The ebook is Human Physiology: From Cells to Systems, 9th edition, by Lauralee Sherwood. Nothing you are tested on comes directly from the ebook (unless it is specifically assigned reading – i.e. CNS reading, readings for the Challenge Questions and Reading Questions, or readings for the Case Studies – for your convenience, all readings are included in the Readings Appendix in the Course Pack but it is good to have a digital book to be able to see figures in color, which you can enlarge, and to have as a reference). There are learning tools on the publisher’s site called “MindTap” that we do NOT use in PSL 310, and no material that is only on MindTap is required for the class. A good way to think about how we use the MindTap website is we only use the ebook for color figures that can be enlarged. After you create an account at login.cengagebrain.com, click on “Enter access code / Course Key” on the right and top of the web page. Type in the code that is on the back of the front cover of Course Pack Part 1. You may be asked to type in a course key – which is MTPP-4XPQ-L98C. Once in MindTap, you can see the icon for the ebook is on the far right side (and looks like a book). Again, to prevent any confusion, we use the MindTap website only for the ebook (to be able to enlarge figures and to see them in color). All readings are included in the Readings Appendix of the Course Pack.

### Required Technologies:

As posted in the Schedule of Courses “Textbooks and Supplemental Materials” a laptop with working webcam (camera) is required for the course. Click on the following link for [MSU's laptop requirement](https://tech.msu.edu/about/guidelines-policies/computer-requirement/). There are relatively inexpensive (some under $50) web cams available if your laptop does not have one. Access to a high speed internet connection is required for course website use and for Zoom meetings.

You may want to use the following links for information about browsers [D2L browser support](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm) internet speed [how much internet speed do I need](https://broadbandnow.com/guides/how-much-internet-speed-do-i-need) or information about internet access away from campus [finding internet access](https://remote.msu.edu/learning/internet.html)

Students should have consulted this google doc [PSL 310 Technical Requirements Google link](https://docs.google.com/document/d/1TiSn4NwSHkIY0_3CSUJmgjIh7zh1BU2H4ErnzS4q5oE/edit#heading=h.5kpm45d1h9d) which is posted at the Schedule of Course and details technical requirements for the class.

What to do if there is a technical problem during an Exam or class Zoom meeting: If students have an internet problem or other technical problem during an Exam, it is their responsibility to contact Dr. Denison (preferably via the Zoom room that will be open during Exams, but by email if a Zoom room visit is not possible) and call the D2L helpdesk. IF YOU HAVE A SIGNIFICANT TECHNICAL PROBLEM DURING AN EXAM YOU MUST REPORT THAT PROBLEM DURING THE EXAM (AFTER THE EXAM THERE IS NO LONGER A WAY TO RESOLVE THE PROBLEM). If students have an internet problem during a Zoom Case Study session (and are not able to quickly return to the Zoom meeting) they should request to attend the Makeup Case Study session and describe the internet problem as their reason for their Makeup request.

### Course platforms/Structure:

The lectures for this course are all available online. Students will access the lectures through D2L (Michigan State University’s course management system). Lectures will be delivered by streaming video (lectures cannot be downloaded and saved due to copyright restrictions). Students will watch the online lectures and will simultaneously complete partial Lecture Notes which are included in the PSL 310 Course Pack. (You will need to have a comfortable place to write while you are watching the lectures.) Type in d2l.msu.edu, then login with your MSU netID and password, then click on SS21-PSL-310-All Sections - Physiology Pre-Health Prof. Students should be aware that the Professor may follow the activity of students on D2L.

Additional resources will be posted on D2L including Case Study Assignments, Study Guides to the Case Studies, Practice Exams, Discussion Forums for each Unit for questions about course material, recordings of Review Sessions, Zoom links for Dr. Denison’s scheduled Office Hours and Question and Answer Sessions (before exams).

There will be synchronous Zoom Case Study meetings at the time listed in the Schedule of Courses for your section. The Case Study meetings occur the week before each Unit Exam (except for Unit 5 – this Case Study had to be cancelled due to the “Break Day” on April 22, 2021). Case Study meetings will be listed in the D2L calendar and are listed in this Syllabus (on the last pages) in the “Recommended Daily Schedule”.

Learning Continuity Statement

If a student is unable to attend class for a long period of time and the absence is excused (use the same examples given for a makeup exam excuse), they should contact Dr. Denison by email as soon as possible. If the student’s excused absence includes the time of an Exam and a Makeup exam, an oral Makeup exam will be arranged.

There will be a “Case Study 5 for students who missed a Case Study” during the last week of class\* (for students who missed submitting a Case Study Assignment on D2L for any reason – e.g. not attending a Zoom meeting or forgetting to submit their answers on D2L).

\*Note: students who cannot attend either scheduled “Case Study 5 for students who missed a Case Study” can request to cover the material in Case Study 5 with one of the undergraduate learning assistants (ULAs) – this must be arranged with the ULA by April 14, 2021. The meeting with the ULA will be equivalent to (will count as) attendance at Case Study 5.

Students who missed submitting more than one Case Study Assignment on D2L can request a Makeup Assignment consisting of short answer questions covering all five (5) Units of the course. This request must be made by April 14, 2021 and will be due (submitted via D2L) on Tuesday, April 27, 2021 before noon (at noon the area on D2L to submit will be hidden). After 12:00 pm on April 27, 2021 no Makeup Assignments will be accepted unless the student has a valid excuse (use the same examples given for a makeup exam excuse).

Course Continuity Statement

If the Professor somehow is absent for a long period (though this is unlikely, I have only missed one class in my decades of teaching!), there will be information posted in D2L in Announcements about how the class will progress. Students can email the undergraduate learning assistants (whose contact information is listed on page 1 of this Syllabus) who will relay information from Dr. Denison.

## Instructional Objectives

### Overall Objective of the Course and Professor’s Goal:

Pre-health professional students need an especially strong foundation in physiology because successful later course work, and indeed, a successful profession requires it. It’s like building the foundation for a house out of strong material (cement, not rotten wood) before you build the house and decorate the rooms. Finishing the house and decorating the rooms makes sense only if you know you are on good footing. Also true is that no matter how good you are at decorating, if the foundation is not sound, your house has serious problems. Physiology will build the foundation, upon which you may build a large, lavish structure which you can then ornately decorate (i.e. your health profession and then your specialty). My overall goal as your Professor is to help you build this solid foundation. We have a very limited amount of time, and can’t cover everything I’d like to (everything about how the body works is interesting, almost always fascinating), but I hope to give you the tools (information, concepts, principles, and the thinking skills) to build the strong foundation you need to put that lavish, ornate house on.

## Learning Outcomes

Students who have completed PSL 310 should be able to:

explain the function of each human organ system.

explain the interrelationships of organ systems required to maintain homeostasis.

use models of normal function to predict responses.

predict the effect of a change in one or more variables on other variables in the body.

predict the effect of disease states on body system function.

identify normal and abnormal body functions.

interpret graphical representations of data and selected clinical data.

explain the derivation of mathematical formulas used in physiology.

apply concepts learned in lecture to clinical (real world) examples.

use clinical descriptions of diseases or symptoms to analyze their causes.

decide appropriate treatments for hypothetical diseases and/or symptoms.

describe common normal ranges of major physiologically controlled variables such as blood pressure, plasma glucose, body temperature, etc.

Students will practice (via in-class discussions) employability skills and after completion of PSL 310 should be able to:

work with people with different ideas.

evaluate evidence.

construct reasoned arguments.

draw possible conclusions based on the situation.

communicate interpretations and conclusions.

work effectively as a collaborative member of a group.

communicate effectively within a group.

communicate effectively to the class the conclusions of the group.

Specific, detailed Learning Objectives are included in the Course Pack (after each Lecture Notes topic).

## Course Objectives

### Core Concepts or “Big Ideas” in PSL 310

Students who have completed PSL 310 should be able to explain these core concepts:

| **Core Concept** | Description of the Core Concept |
| --- | --- |
| **Homeostasis** | The internal environment is maintained relatively constant by negative feedback control. |
| **Cell membranes** | Cell membranes allow certain substances to enter or leave the cell. Transport through the membrane is a function of cell membrane structure and electrochemical differences. |
| **Organ systems** | Each organ system preforms an essential function for the body. |
| **Structure/Function** | Structure of an organ or organ system determines its function. Disruption in structure can lead to dysfunction. |
| **Cause and Effect** | The body acts as a biological machine governed by the principle of cause and effect. |
| **Laws of Science**  | The functions of the body can be explained by laws of science (e.g. chemistry, physics). |
| **Interaction** | Organ systems interact with each other to contribute to and maintain homeostasis. |
| **Communication** | Cells in the body communicate with other cells. The nervous system, endocrine system, and locally produced chemicals are important means of communication. |

The Core Concepts (“Big Ideas”) above have been modified from: Michael J, McFarland J. The core principles ("big ideas") of

physiology: results of faculty surveys. Adv Physiol Educ. 2011 Dec; 35(4):336-41. doi: 10.1152/advan.00004.2011.

## Grading Policy

### Grading Scale:

The table below describes the relationships between grades, percentage, and points. The first column is the grade. The second column is the percentage range associated with that grade, and the third column is the points associated with that grade.

| **Grade** | **Percentage**(percentage is to allow estimation of grades during the semester) | **Points**  (points are used to assign course grades at semester end) |
| --- | --- | --- |
| 4.0 | (90% or above) | 900 or above |
| 3.5 | (85 - 89.99%) | 850-899 |
| 3.0  | (80 - 84.99%) | 800-849 |
| 2.5 | (75 - 79.99%) | 750-799 |
| 2.0 | (70 - 74.99%) | 700-749 |
| 1.5 | (65 - 69.99%) | 650-699 |
| 1.0 | (60 - 64.99%) | 600-649 |
| 0.0 | (59.99% or below) | 599 or below |

The grading scale above will be used to determine PSL 310 grades WITHOUT EXCEPTION -

**it will apply to all students** (all students will be treated the same).

Grades and grade cutoffs are fair if you know from the outset exactly how you and all other students will be treated. The Grading Scale above shows how EVERY student will be graded in PSL 310. You should understand that if you get 899 points it will NOT be “bumped up” to give you a 4.0, nor will another student with a 849 get a 3.5, nor will another student with a 799 get a 3.0, and so on (meaning there will be no rounding or “bumping” up of any grade), that is, all grade cut offs above will be used, and a student with 599 points will receive a 0.0. Students should be able to earn many Case Study session points (the Case Study points are “free points” if you attend the class Zoom sessions, pay attention, participate, and are careful to record correct answers on D2L). At the end of the course, all students will be assigned grades according to the points they have earned in the class using the above Grading Scale. There will be no special treatment for any individual students. In a class as large as PSL 310, this is the only fair way to assign grades.

You can determine your percent grade at any time by dividing the points you’ve earned by the total number of points possible in the course at that time. Contact the Professor if you have any questions about course grading. Notice: points (not percent) will be used to assign course grades at semester end (see the above table).

### Graded Course Activities:

The table below describes the graded course activities including points and activity description. The first column includes the points possible, and the second column includes a description for the activity.

| **Points**  | **Description** |
| --- | --- |
| 160 points/ 1000 total points(16% of total grade) | Case Study Assignments (submitted on D2L)Four 40 point Case Study Assignments |
| 840 points/ 1000 total points(84% of total grade) | Unit Exams Five 168 point (42 question, 4 points per question) Unit Exams (no Exam scores are dropped because there is no cumulative Final Exam) |
| 1000 points | Total Points Possible |

NOTE: the Course Schedule is located near the last pages of this Syllabus (so you can easily find it). There is a one page summary titled “Course Schedule for PSL 310 Spring Semester 2021” and then a detailed “Recommended Daily Schedule”. **It is very important to closely follow the Recommended Daily Schedule** – if you follow it each day you will keep up in the course and you are much more likely to succeed and earn a high grade!

### Grade Dissemination:

Case Study Assignment and Exam grades will be available on D2L.

### **Exam Procedure**

A document titled “PSL 310 Spring 2021 (All Sections) Exam Procedure” will be posted on D2L. It is the responsibility of all students to read and understand the entire Exam Procedure document before the Unit 1 Exam. The Exam Procedure document describes how the online exam will be conducted (including start time at 6:00 pm, at 6:15 you will not be able to enter the exam, it’s a 50 minute exam with a 5 minute grace period, notes are allowed, questions will be slightly changed (with different answers) and it will be random which questions are included in a student’s exam, collaboration with other people is not allowed, students are NOT able to make changes after the 5 minute grace period ends and must submit their exam, and rules about what to do if you have technical difficulty). The Exam Procedure document also lists the tips for studying for “Infrequently or Sparingly Used” Notes Exams.

### **Makeup Exams**

Makeup exams (consisting of different questions than the original exam) are allowed if a student provides documentation of one the following: an illness that requires treatment (just “not feeling well” without a doctor’s note won’t work), an injury that requires treatment, a University approved Grief Absence, or an unexpected emergency. Examples of instances in which a makeup exam would be allowed are listed below.

1. Illness requiring treatment
2. Injury requiring treatment
3. Surgery
4. Hospitalization
5. Grief absence
6. Religious observance
7. Unexpected emergency or unexpected problem (for example, loss of internet just before the exam due to a storm, tornado, earthquake…it is impossible to list all emergencies that would qualify but it would be something you cannot prepare for and affects your ability to take the exam).

All instances above except #6 require documentation. For #1-4 a letter (often called a “doctor’s note) on a health provider’s letterhead and signed by the health provider is required. For a grief absence, you must follow the MSU [Grief Absence Policy](https://reg.msu.edu/roinfo/notices/griefabsence.aspx). Students with a religious observance request can consult the Office of the Registrar’s website on [Religious Observance Policy](https://reg.msu.edu/ROInfo/Notices/ReligiousPolicy.aspx). Students are expected to notify the Professor in advance if they intend to miss an exam due to a holy day of their religious faith. Information about religious holidays can be found at the [Office of Inclusion and Intercultural Initiatives](http://www.inclusion.msu.edu/). For #7, find the most appropriate documentation you can (it will vary for different circumstances but you will need to provide evidence that the event occurred). The Professor can help you decide what may work for appropriate documentation for an emergency.

The student must contact the Professor no later than 24 hours after the time of the missed scheduled exam regarding a makeup exam unless special circumstances arise (e.g. hospitalization). If possible, it is best to contact the Professor before the missed exam to be sure your excuse will be acceptable; there may be special instances not listed above in which a makeup exam would be allowed. Required documentation must be submitted to the Professor within 48 hours after the missed exam unless special circumstances arise (e.g. hospitalization). Makeup exams are given on Friday evening at 9 pm during the week of the missed exam date. If the student does not contact and present the required documentation to the Professor within the allotted times, the missed examination score will be recorded as 0 points (zero points). Students should arrange their schedules to take the 9 pm Friday evening makeup exam, but if it is impossible, they can request an oral makeup exam given at a time arranged with the Professor.

### **Attendance Policy for Case Study Meetings and Makeup Case Study**:

Students are expected to attend the Case Study Zoom meeting for the section for which they are enrolled. It is strongly encouraged that all students to use their webcam so they can discuss most effectively (as they would in a typical classroom). Attendance will be verified three (3) different ways, including by poll questions at different times during the Zoom meeting (including near the end of the meeting). Just as in a physical classroom, students must wear appropriate clothing and must treat everyone in the meeting respectfully. Students who are unable to attend all of the Zoom meeting due to technical problems or some other reason should email Dr. Denison immediately to resolve whether their attendance requirement is met or they should attend the Makeup Case Study (described below).

If a student has not attended their section’s entire Case Study (due to technical or other issues) or has an important reason to miss their scheduled Case Study Zoom meeting, they can request (via a link in the calendar on D2L) to attend the Makeup Case Study Zoom meeting which occurs on Thursday of the Case Study week at 8:00-9:20 pm. Students can check if their request is approved or not by going to the same area on D2L that they submitted their request (in the Assignment area of D2L).

Your participation in your section’s or a Makeup Case Study Zoom meeting is REQUIRED to receive ANY points on the D2L Case Study Assignment. STUDENTS WHO DO NOT ATTEND THEIR SCHEDULED CASE STUDY ZOOM SESSION OR THE MAKEUP CASE STUDY ZOOM SESSION ARE NOT ALLOWED TO SUBMIT ANY ANSWERS FOR THAT CASE STUDY ON D2L (this attendance requirement will be noted – students will be reminded they must have attended an entire Case Study Zoom meeting at the beginning of the Case Study Assignment on D2L). Case Study points are attendance and participation points. If a student does not attend an entire Case Study but still submits answers in the Case Study Assignment on D2L, those answers (those points or that grade) will be removed (replaced with 0 points or zero points). This answer submission policy is similar to students only being able to turn in an answer sheet if they attended an entire class. You are earning points for attending the session and participating in small group and larger group discussions. If you do not attend the session to participate (as noted above, attendance will be verified 3 different ways), you should not receive any of those participation points and any points on D2L for that Case Study Assignment will be replaced with zero (0) points.

Note: we are using D2L as means of submitting answers rather than creating another method to prevent students having to buy a device and/or learn more technology.

## Other Course Policies and Information

### Important Policies Regarding Dates and Communication:

Important dates are listed on the “Course Schedule for PSL 310 Spring Semester 2021” and the “Recommended Daily Schedule” at the end of this Syllabus. Please note that there could be changes in course protocol or the course schedule. It is the responsibility of all students to be aware of all Announcements and calendar events posted on D2L about PSL 310. Other communications about the class may be by email. It is the responsibility of all students to regularly (every weekday) check their MSU email account (msu.edu email) for any communication about PSL 310.

### Unit Reviews and Question and Answer Sessions before Exams

Unit Review recordings will be posted on D2L and can be used for a summary of important and challenging material in the Unit. There will also be a Zoom Question and Answer Session at 4-5 pm on Fridays before the exam or Wednesday at 4-5 pm before the last exam.

### Communication about Course Material and Personal issues

Questions about course content can be posted on the Discussion Forums in D2L. Each Unit of material will have a Discussion Forum. Try to be as clear as you can when posting a question, e.g. citing the page in the Course Pack or the Study Question number. Dr. Denison will try to check and respond to questions on the Discussion Forum at least every 48 hours (excluding weekends and holidays). The last time Dr. Denison will reliably check the Discussion Forum before an exam will be the day before the exam at 5 pm.

Personal questions regarding the class should be emailed to Dr. Denison (not posted on D2L).

### Honors Option

Honors students in PSL 310 should read all the material in the “Honors Option” module on D2L to decide whether they are interested in pursuing an Honors Option in PSL 310. Students must complete an online Honors Option Agreement before 5 pm on Feb 24, 2021 and sign up for an Honors Option presentation time (sign up is via a discussion forum in the Honors Option module on D2L). **MAKE SURE YOU DO BOTH – SUBMIT THE HO AGREEMENT AND SIGN UP FOR A PRESENTATION TIME BEFORE Feb 24, 2021 AT 5 PM**. Because scheduling for a certain number of people is required (we can’t keep changing numbers), students that miss the sign up deadline may not be able to complete an Honors Option in PSL 310 (we may not be able to fit you in). **PLEASE NOTICE AS STATED ON THE D2L SIGN UP DISCUSSION FORUM: THERE CANNOT BE MORE TIMES ADDED - THESE ARE THE ONLY TIMES AVAILABLE, SO YOU SHOULD SIGN UP EARLY IF YOU NEED AN HONORS OPTION IN PSL 310. The maximum Honors Option times possible are offered on D2L.**

**Grades of "Incomplete"**

Incomplete grades can only be given when 6/7 of course work is completed by the student and University policy is followed, which can be found at [MSU's incomplete grade policy](https://reg.msu.edu/AcademicPrograms/Print.aspx?Section=528).

**Group Work Policy**

All students are expected to attend the Case Studies with their own answers to all questions to share their thinking with the rest of their group. All students are expected to contribute to their small group discussions. Undergraduate Learning Assistants or your Professor will move into Zoom groups to see if there are questions and to promote group productivity. If a student was not contributing in your group please email Dr. Denison to describe what happened. Dr. Denison will contact the student to discuss the issue with them (but will not use your name).

**Class** **Etiquette and Helping Each Other**

All students’ ideas and contributions to group discussions should be considered valuable. All students should be treated with respect. Your grade is assigned by the number of points you earn. There is no curve in this class; there is no limit to the number of students who can get high grades. So help each other! The goal is learning and working together (e.g. in Case Study meetings and study groups) can help many students learn. (You may really learn it if you teach it to someone else. If you are in a study group, take turns teaching.) PSL 310 is meant to be a collaborative, supportive environment – we want everyone to learn as much as they can and all to help each other as much as they can.

## Technology and Media

### **Phone Usage**

Students should stay off phones during Case Study Zoom meetings. If you have an emergency you have to respond to, please briefly turn off your microphone and video and return as soon as possible. Students who miss a substantial amount of the Zoom meeting will need to attend the Makeup Case Study Zoom meeting as described above.

### Backup Plan if there are severe problems with D2L before Exams

If D2L is completely down for more than 8 hours during the two days before an exam, email Dr. Denison about the problem. (Note: this applies to SEVERE problems with D2L, not an individual connection problem). Dr. Denison will try to check email once in late morning and the evening on each of the two days before an exam. If Dr. Denison determines there is a severe problem with D2L that affects your ability to study, she will send emails to the class (using the Registrar’s site). These emails will have the links for lecture videos for the Unit and other posted files attached. The Registrar’s site only allows 2 attachments – so there may be multiple emails. So, if there is a D2L catastrophe during the two days before an exam, you should check your MSU email account. Barring other catastrophes (e.g. the Registrar’s site not working or the video server going down), this should be a good backup plan.

## Student Expectations

### The All-University Policy on Integrity of Scholarship and Grades

As stated in Spartan Life Student Handbook under Student Rights and Responsibilities "the student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards". Your professor will adhere to the All-University Policy on Integrity of Scholarship and Grades in Spartan Life. Students should understand the consequences for cheating outlined in the All-University Policy, including that students who commit an act of academic dishonesty will have an Academic Dishonesty Report submitted which is added to the student’s academic record and may receive a 0.0 in the course. MSU’s Policy is found here: [Integrity of Scholarship and Grades](http://splife.studentlife.msu.edu/regulations/selected/integrity-of-scholarship-and-grades).

### **Disability Access**

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 at 517-884-RCPD or on the web at rcpd.msu.edu. Once your eligibility for an accommodation has been determined, you will be issued a verified individual services accommodation (“VISA”) form. Please present this form to me at the start of the term and/or two weeks prior to the accommodation date (test, project, etc). Requests received after this date will be honored whenever possible. (This paragraph is from the Model Statements section of the RCPD website.)

## Course Schedule for PSL 310 Spring Semester 2021\*

| **Dates** | **Lecture Topic (or Introductory material)** | **Zoom meeting/Exam** | **Ebook Readings\*\*** |
| --- | --- | --- | --- |
| 1/12 | Course Introduction 1 and 2 videos |  |  |
| 1/13 | CNS Reading\*\*\* |  |  |
| 1/19 | Homeostasis, Membrane Transport |  | Chapter 1, Chapter 3 to pg 77 |
| 1/20 | Membrane Transport |   |  |
| 1/20,21  | Membrane Potentials |  |  77-84, Chapter 4 to pg 102 |
| 1/25 | Membrane Potentials |  |  |
| 1/26-28 | Receptors | *1/26-1/28 Case Studies* | Chapter 6 |
|  | **(end of Unit 1 material)** |  |  |
| **2/1/21** | EXAM **6:00-6:50 pm on D2L** | **Unit 1 Exam** |  |
| 2/2,3 | Synapses |  | 102-115 |
| 2/3,4 | Reflexes andANS |  | 281-286, Chapter 7 to pg 242 |
| 2/8 | Reflexes andANS |  |  |
| 2/9-11 | Muscle |  | 242-248, Chapter 8 to pg 281 |
| 2/15 | Smooth and Cardiac Muscle |  | 286-294 |
| 2/16,17 | Blood | *2/16-2/18 Case Studies* | Chapter 11, Chapter 12 to pg 415 |
|  | **(end of Unit 2 material)** |  |  |
| **2/22/21** | EXAM **6:00-6:50 pm on D2L** | **Unit 2 Exam** |  |
| 2/23,24 | Immunity-B and T Cells |  | Chapter 12 from pg 415 |
| 2/24,25 | Cardiac Physiology |  | Chapter 9 |
| 3/1,4  | Cardiac Physiology |  |  |
| 3/8 | Cardiac Physiology |  |  |
| 3/8-11 | Vascular Physiology |  | Chapter 10 |
| 3/15 | Vascular Physiology | *3/16-3/18 Case Studies* |  |
|  | **(end of Unit 3 material)** |  |  |
| **3/22/21** | EXAM **6:00-6:50 pm on D2L** | **Unit 3 Exam** |  |
| 3/23-25 | Respiratory Physiology |  | Chapter 13 |
| 3/29 | Respiratory Physiology |  |  |
| 3/30-4/1 | Renal Physiology |  | Chapter 14 |
| 4/1 | Fluid and Ion Balance |  | Chapter 15 |
| 4/5,6 | Fluid and Ion Balance  | *4/6-4/8 Case Studies* |  |
|  | **(end of Unit 4 material)** |  |  |
| 4/7,8 | Digestive Physiology (begins Unit 5) |  | Chapter 16 |
| **4/12/21** | EXAM **6:00-6:50 pm on D2L** | **Unit 4 Exam** |  |
| 4/13 | Digestive Physiology |  |  |
| 4/14,15 | Metabolism |  | 685-701 |
| 4/15 | Endocrine System |  | 115-129, Chapter 18, Chapter 19 |
| 4/19,20 | Endocrine System |  |  |
| 4/20,21 | Reproductive Physiology |  | Chapter 20 |
| **4/27/21** | EXAM Tues **8:40-9:30 pm on D2L** | **Unit 5 Exam**  |  |

\* **This Schedule is approximate.** There is also a **Recommended Daily Schedule on the following pages** that lists the specific Lecture recordings you should finish each day to help you keep up with the class (to help keep you from falling behind).

\*\* Helpful note: you are NOT directly tested on ebook readings unless it is assigned (e.g. CNS reading or an assigned reading in the Challenge Questions and Reading Questions or reading with Case Study Questions)

\*\*\*Students learn about the CNS (which is on the Unit 1 Exam) by reading pages 142-155, 163, 166-169 of the ebook (also found in the “Readings Appendix” but figures are not in color). Learning Objectives for this reading are in Objective #12 in Membrane Potentials Objectives on page 63 of the Course Pack. The CNS Reading Study Guide and video that describes the CNS Study Guide are posted in Announcements on D2L to help you with the CNS Reading.

**PSL 310 Recommended Daily Schedule Spring 2021**

Use this Recommended Daily Schedule when you are watching the Lectures, so you know which Lecture videos to finish each day. Monday-Thursday schedule was used. Comprehension Checks videos are not listed since they are short and they are learning tools – most students should use them the way they are posted, right after the material was covered. **YOU SHOULD FINISH THE LEARNING OBJECTIVES FOR THE VIDEOS ON THE SAME DAY!!!**

|  |  |  |  |
| --- | --- | --- | --- |
| Monday | Tuesday | Wednesday | Thursday |
| January 11Reading, reviewing, and reflection week begins | January 12Course Introduction 1 and 2 videos (Syllabus and Course Pack + D2L) and Extra Credit Quizzes (Extra Credit Quizzes available until Jan 20 at 10pm) – see Announcements on D2L | January 13Central Nervous System (CNS) Reading – use the CNS Reading Study Guide and video describing the Study Guide to help you – see Announcements on D2L | January 14Alternate day for CNS Reading- CNS Reading is on Unit 1 Exam – see bottom of page 15 of the Syllabus. |
| January 18NO CLASS | January 19Homeostasis 1-3Membrane Transport 1 | January 20Membrane Transport 2-5Membrane Potentials 1 | January 21Membrane Potentials 2-5 |
| January 25Membrane Potentials 6-10 | January 26Receptors 1-3**Case Study Sessions****Section 740 – 3:00 pm Zoom****Section 741 – 4:40 pm Zoom****Section 742 – 6:20 pm Zoom****Section 743 – 8:00 pm Zoom****Have with you printed Case Study Questions with your answers!** | January 27Receptors 4-7**Case Study Sessions****Section 744 – 3:00 pm Zoom** **Section 745 – 4:40 pm Zoom****Section 746 – 6:20 pm Zoom****Have with you printed Case Study Questions with your answers!** | January 28Receptors 8-10***end of Unit 1 Lectures*****Case Study Sessions****Section 747 – 3:00 pm Zoom** **Section 748 – 4:40 pm Zoom****Section 749 – 6:20 pm Zoom****Makeup – 8:00 pm Zoom****Have with you printed Case Study Questions with your answers!****CASE STUDY ASSIGNMENT DUE ON D2L BEFORE 3 PM ON 1/29!** |
| February 1**Unit 1 Exam****6:00-6:50 pm****(on D2L)** | February 2Synapses 1-3 | February 3Synapses 4,5 Reflexes and ANS 1,2 | February 4Reflexes and ANS 3-5 |
| Monday | Tuesday | Wednesday | Thursday |
| February 8Reflexes and ANS 6-9 | February 9Muscle 1-4 | February 10Muscle 5-7 | February 11Muscle 8-13 |
| February 15Smooth and Cardiac Muscle 1-5  | February 16Blood 1-3**Case Study Sessions****Section 740 – 3:00 pm Zoom** **Section 741 – 4:40 pm Zoom****Section 742 – 6:20 pm Zoom****Section 743 – 8:00 pm Zoom****Have with you printed Case Study Questions with your answers!** | February 17Blood 4-7***end of Unit 2 Lectures*****Case Study Sessions****Section 744 – 3:00 pm Zoom** **Section 745 – 4:40 pm Zoom****Section 746 – 6:20 pm Zoom****Have with you printed Case Study Questions with your answers!** | February 18No Lecture! Study Day!**Case Study Sessions****Section 747 – 3:00 pm Zoom** **Section 748 – 4:40 pm Zoom****Section 749 – 6:20 pm Zoom****Makeup – 8:00 pm Zoom****Have with you printed Case Study Questions with your answers!****CASE STUDY ASSIGNMENT DUE ON D2L BEFORE 3 PM ON 2/19!** |
| February 22**Unit 2 Exam****6:00-6:50 pm****(on D2L)** | February 23B + T Cells 1-3Honors Option Agreement and presentation sign up on D2L due before 5 pm TOMORROW for interested Honors College students (unless all 45 possible places have already been taken). | February 24B + T Cells 4,5Cardiac Physiology 1 | February 25Cardiac Physiology 2-4 |

|  |  |  |  |
| --- | --- | --- | --- |
| Monday | Tuesday | Wednesday | Thursday |
| March 1Cardiac Physiology 5-7 | March 2BREAK DAY | March 3BREAK DAY | March 4Cardiac Physiology 8-11 |
| March 8Cardiac Physiology 12,13Vascular Physiology 1,2 | March 9Vascular Physiology 3-6 | March 10Vascular Physiology 7-9 | March 11Vascular Physiology 10,11 |
| March 15Vascular Physiology 12,13***end of Unit 3 Lectures*** | March 16No Lecture! Study Day!**Case Study Sessions****Section 740 – 3:00 pm Zoom** **Section 741 – 4:40 pm Zoom****Section 742 – 6:20 pm Zoom****Section 743 – 8:00 pm Zoom****Have with you printed Case Study Questions with your answers!** | March 17No Lecture! Study Day!**Case Study Sessions****Section 744 – 3:00 pm Zoom** **Section 745 – 4:40 pm Zoom****Section 746 – 6:20 pm Zoom****Have with you printed Case Study Questions with your answers!** | March 18No Lecture! Study Day!**Case Study Sessions****Section 747 – 3:00 pm Zoom** **Section 748 – 4:40 pm Zoom****Section 749 – 6:20 pm Zoom****Makeup – 8:00 pm Zoom****Have with you printed Case Study Questions with your answers!****CASE STUDY ASSIGNMENT DUE ON D2L BEFORE 3 PM ON 3/19!** |
| March 22**Unit 3 Exam****6:00-6:50 pm****(on D2L)** | March 23Respiratory Physiology 1-4 | March 24Respiratory Physiology 5-8 | March 25Respiratory Physiology 9-12 |

|  |  |  |  |
| --- | --- | --- | --- |
| Monday | Tuesday | Wednesday | Thursday |
| March 29Respiratory Physiology 13-16 | March 30Renal Physiology 1-4 | March 31Renal Physiology 5-7 | April 1Renal Physiology 8Fluid + Ion Balance 1-3 |
| April 5 Fluid + Ion Balance 4-8 | April 6Fluid + Ion Balance 9***end of Unit 4 Lectures*****Case Study Sessions****Section 740 – 3:00 pm Zoom** **Section 741 – 4:40 pm Zoom****Section 742 – 6:20 pm Zoom****Section 743 – 8:00 pm Zoom****Have with you printed Case Study Questions with your answers!** | April 7Digestive Physiology 1-3***Unit 5 Lectures start*****Case Study Sessions****Section 744 – 3:00 pm Zoom** **Section 745 – 4:40 pm Zoom****Section 746 – 6:20 pm Zoom****Have with you printed Case Study Questions with your answers!** | April 8Digestive Physiology 4-7**Case Study Sessions****Section 747 – 3:00 pm Zoom** **Section 748 – 4:40 pm Zoom****Section 749 – 6:20 pm Zoom****Makeup – 8:00 pm Zoom****Have with you printed Case Study Questions with your answers!****CASE STUDY ASSIGNMENT DUE ON D2L BEFORE 3 PM ON 4/9!** |
| April 12**Unit 4 Exam****6:00-6:50 pm** **(on D2L)** | April 13Digestive Physiology 8-12 | April 14Metabolism 1-4 | April15Metabolism 5Endocrine 1-3 |

|  |  |  |  |
| --- | --- | --- | --- |
| Monday | Tuesday | Wednesday | Thursday |
| April 19Endocrine 4-6*NOTE-CASE STUDIES 5 HAD TO BE CANCELLED (except for students who missed a Case Study) DUE TO CHANGES IN THE ACADEMIC CALENDAR for Spring 2021*Case Study 5 for Students who missed a Case Study 8-9:20 pm (you can request to attend via a link in the calendar on D2L) | April 20Endocrine 7-9Reproductive 1 Case Study 5 for Students who missed a Case Study 8-9:20 pm(you can request to attend via a link in the calendar on D2L)**CASE STUDY 5 ASSIGNMENT DUE ON D2L BEFORE 3 PM ON ON 4/21!** | April 21Reproductive 2-6 ***end of Unit 5 Lectures***Last day of classes | April 22BREAK / STUDY DAY |
| April 26**FINALS WEEK BEGINS** | April 27**Unit 5 Exam****8:40pm – 9:30 pm****(on D2L)** | April 28 | April 29 |

Important Reminder: One of the most important things you can do to succeed in the course is to very closely follow the “Recommended Daily Schedule” on the previous pages!

It is the responsibility of all students in PSL 310 to understand this entire Syllabus.