

FS 2019 SYLLABUS: CAPSTONE LABORATORY IN PHYSIOLOGY (PSL 475L)

Section 001: 3:00 – 5:50 PM, Monday

Section 002: 9:10 AM – 12:00 PM, Tuesday

Section 003: 1:50 – 4:40 PM, Wednesday

Room 2164 Biomedical and Physical Sciences Building

<u>Month</u>	<u>Week Of</u>	<u>Lab Number</u>	<u>Topic</u>	<u>Capstone Projects</u>
August	26	1	Sec 001 ONLY: Introduction to PSL 475L and Lab Equipment (Mon section meets 8/28)	
September	2	1	Sec 002 and 003: Introduction to PSL 475L and Lab Equipment	
	9	2	Respiratory Sinus Arrhythmia	
	16	3	Pulmonary	
	23	4	Electrocardiogram	Capstone Survey
	30	5	Blood Pressure	Announce Teams
October	7	6	Exercise Physiology	Idea Meetings
	14	7	Glucose	Idea Meetings
	21	8	Systemic Reflexes	Outline Due
	28	9	Renal	Rough Draft Due
November	4	Week 1	Student Designed Experiments	
	11	Week 2	Student Designed Experiments	Final Draft Due
	18	Week 3	Student Designed Experiments	
(THANKSGIVING)	25	Week 4	Student Designed Experiments	
December	2		_____	Poster Presentation
	9		Final Exam on 12/11, 3-5pm	

Additional Important Dates:

Classes Begin	Wednesday, 8/28
Holiday-University Closed	Monday, 9/2
End of Tuition Refund	Monday, 9/23
Middle of Semester	Wednesday, 10/16
Thanksgiving–University Closed	Thursday, 11/28 - Friday, 11/29
Classes End	Friday, 12/6

I. COURSE DESCRIPTION: 2 Credits

Laboratory exercises in human integrative physiology. Students will perform weekly experiments on various aspects of human body function and complete a group Capstone project of their own design. Weekly assignments will include data analysis, statistics, clinical correlates, and relevant physiological principles.

II. COURSE OBJECTIVES

1. Integrate physiological concepts to understand whole body function.
2. Think critically to generate weekly experimental hypotheses and perform appropriate data analysis and statistics.
3. Design and complete a novel Capstone experiment in physiology.
4. Practice professional skills.

III. TYPICAL WEEK

1. Prelab reading assigned before class (generally the protocol and occasionally journal articles)
2. Prelab quiz (first 5 minutes of class) on the assigned reading
3. Physiology in the News presentation
4. Announcements
5. Lecture
6. Hypotheses check off with instructor
7. Lab Activity
8. Figure Legend and Data Check off with instructor
9. Submission of data to class Google Spreadsheet
10. Lab report/homework completed after class at home, due before the start of class the following week

IV. COURSE STAFF

Course Director	Erica Wehrwein, Ph. D. Associate Professor of Physiology, 2201J BPS wehrwei7@msu.edu
*Office hours are available via email appointment request	
Teaching Assistants (TAs)	Kait Durga (Mon/Wed sections: 001 and 003) durgakai@msu.edu
*Office hours are available by appointment and your TA's are always available by email (allow 24 hours response time)	Yvonne Ogradzinski (Tues section: 002) Ogradzi2@msu.edu
Assistant Instructor and Lab Manager	Yvonne Ogradzinski
Prep and D2L Learning Assistant (LA) (behind the scenes)	Hannah Zawisa
Section Learning Assistant (assisting during class)	CJ Mcdonell (section 001)
	Jake Canfield (section 002)
	Keeler Steele (section 003)

V. ASSIGNMENTS AND GRADING

Grades in these sections of PSL 475L will be determined from scores on:

Weekly: (990 pts)

9 Pre-Lab Quizzes (10 pts each, 90 points total)

9 Weekly Laboratory Assignments (100 pts each, 900 points total)

Capstone Project: (500 pts)

A. Grant Proposal (200 points total)

- Idea Meeting (20 pts)
- Team Contract (5 pts)
- Outline (100 points)
- Rough Draft (50 points)
- Final Draft (25 points)

B. Poster Presentation (300 points)

Exams: (300 pts)

Final examination (300 pts)

Other: (20 pts)

1 “Physiology in the News” Assignment (10 points)

1 Professional-Skills survey (10 pts (5 pts each for pre and post survey))

Maximum Total Points: 1810

Grade	4.0	3.5	3.0	2.5
%	100-95	94.9-90	89.9-85	84.9 - 80
Points	1810-1720	1719-1629	1628-1539	1538-1448

Grade	2.0	1.5	1.0	0.0
%	79.9 - 75	74.9 – 70	69.9 - 65	64.9 - 0
Points	1447-1358	1357-1267	1266-1177	1176-0

***Late assignments and plagiarism will result in a penalty grade as described in the code of conduct below. You must attend class (or a make up lab) in order to get credit for the weekly assignment.**

VI. ASSIGNMENT RESOURCES (provided on D2L)

1. Provided background reading
2. PSL 475L Lab Manual
3. PSL 475L Lecture slides and notes

Supplementary Resources to aid with weekly assignment questions

1. Human Physiology: From Cells to Systems by L. Sherwood textbook (PSL310/431/432)
2. Fundamentals of Human Physiology by L. Sherwood textbook (PSL250)
3. Course-packs, slides and notes from the PSL lecture courses

VII. QUIZZES

There will be a quiz at the beginning of each class that will cover the basic material relating to EXPERIMENTAL OBJECTIVES section for the current laboratory experiment. Quizzes will be used as incentive to show up to class ON TIME and PREPARED. You have a 5 min grace period to start the quiz but if you are more than 5 min late you cannot take the quiz. Please refer to the **CODE OF CONDUCT** for further instructions on expectations, as *attendance is not optional*.

VIII. ATTENDANCE

You need to make arrangements at least 24 hours in advance if you know you will miss laboratory exercise. If you miss a class, you will need to provide documentation for your absence to be excused. **Missed classes without an *approved* excuse will not be granted a make up. Make up labs should be completed within 7 days of the missed lab.** Please refer to the **CODE OF CONDUCT** for further instructions on expectations.

IX. HOW DO I GET HELP? WHO SHOULD I CONTACT?

The instructors for PSL 475 are always happy to help you. **Your TA is your main contact for this course. For issues with class, physiology content, or grading, contact your TA by email. For other issues regarding absences, other personal matters, or if you have any issues with your lab partner or TA, Dr Wehrwein would be glad to help you and you should email her anytime.** There are not fixed office hours because junior/senior students are very busy with different schedules. Therefore, we have email availability or will gladly will meet with you before or after class, or set up a custom office hour for your needs. You can contact your TA or Prof Wehrwein at any time. We encourage this.

X. FINAL EXAMINATION

The final exam will be comprehensive and will consist of short essay questions based on materials from laboratory readings, lectures, and general physiological concepts. You will be given a detailed review guide to help you prepare.

XI. PARTICIPATION IN HUMAN SUBJECTS RESEARCH

This class uses non-invasive methods in humans that are considered safe. As is the case for all studies involving human subjects, you are not required to participate as a subject. **If you are in any way uncomfortable about a particular experiment, you can opt out of being the subject without penalty.** If you opt out, you will still need to be in class and will serve as the researcher/observer so that you have data for your lab report. This does not relieve you of obligations to participate in class, take the quiz, write the lab report, or participate in class discussions.

XII. HONORS OPTION

Honors options are offered in this course. If you are interested in fulfilling your requirements for your program, please talk to Dr. Wehrwein at the beginning of the semester.

XIII. PROFESSIONALISM

A goal of this course is to aid in your personal development in order to promote success in a professional career. The learning objectives, structure and assignments of this course have been tailored to align with MSU Career Network's, "12 Essentials for Success" that outline core competencies that employers are looking for.

<https://careernetwork.msu.edu/files/PDF/12%20Essentials%20List.pdf>

XIV. PLAGIARISM

Plagiarism is ALWAYS UNACCEPTABLE and will result in action taken against you. Please refer to the following links for further information:

MSU policy on plagiarism: <https://www.msu.edu/unit/ombud/academic-integrity/plagiarism-policy.html>

MSU policy on academic dishonesty: <http://splife.studentlife.msu.edu/regulations/student-group-regulations-administrative-rulings-all-university-policies-and-selected-ordinances/integrity-of-scholarship-and-grades>

Use of Turn It In

Consistent with MSU's efforts to enhance student learning, foster honesty, and maintain integrity in our academic processes, instructors may use a tool called Turnitin to compare a student's work with multiple sources. The tool compares each student's work with an extensive database of prior publications and papers, providing links to possible matches and a 'similarity score'. The tool does not determine whether plagiarism has occurred or not. Instead, the instructor must make a complete assessment and judge the originality of the student's work. All submissions to this course may be checked using this tool.

Students should submit papers to Turnitin assignment submission folder without identifying information included in the paper (e.g. name or student number), the system will automatically show this info to faculty in your course when viewing the submission, but the information will not be retained by Turnitin. Student submissions will be retained only in the MSU repository hosted by Turnitin.

XV. SIRS EVALUATIONS

Michigan State University takes seriously the opinion of students in the evaluation of the effectiveness of instruction, and has implemented the SIRS (Student Instructional Rating System) process to gather student feedback. This course utilizes the "online SIRS" system. You will receive an e-mail sometime during the last two weeks of class asking you to fill out the SIRS online form at your convenience. Please note the final grade for this course will not be accessible on STUINFO during the week following the submission of grades for this course unless the SIRS online form has been filled out. You will have the option on the online SIRS form to decline to participate in the evaluation of the course by clicking on the "decline" choice at the bottom of the SIRS online form and your grade will not be held – we hope, however, that you will be willing to give us your frank and constructive feedback so that we may instruct students even better in the future.

XVI. GRIEF ABSENCE POLICY

<http://splife.studentlife.msu.edu/regulations/student-group-regulations-administrative-rulings-all-university-policies-and-selected-ordinances/grief-absence-policy>

The goal of this policy is to provide a mechanism to standardize, monitor, and accommodate students who request temporary absence from a course, or special accommodations for a quiz or an exam as a result of loss or serious injury of a family member (parent, grandparent, sibling, spouse, or child). **Students are directed to notify the Assoc Dean of their college and document the reason for the grief absence, and the Assoc Dean in turn is charged with notifying the student's instructors that the bereavement event has been verified.** Ultimately, it is the student's responsibility to make up any missed work.

XVII. INCOMPLETE (I) POLICY

<https://reg.msu.edu/academicprograms/Print.asp?Section=528>

When special or unusual circumstances occur, the instructor may postpone assignment of the student's final grade in a course by use of an I-Incomplete. The I-Incomplete may be given only when: the student (a) **has completed at least 6/7 of the term of instruction**, but is unable to complete the class work and/or take the final examination *because of illness or other compelling reason*; **and** (b) has **done satisfactory work** in the course; **and** (c) in the *instructor's judgment can complete the required work without repeating the course*.

Provided these conditions are met, the instructor electing to give an I-Incomplete files an Agreement for Completion of (I) Incomplete at the time course grades are due. This agreement specifies what the student must do, and when, to remove the I-Incomplete. The department or school office gives a copy to the student, and retains a copy for at least one year.

XVIII. ACCOMODATION STATEMENT

COURSE ACCOMMODATION

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.

RCPD is located in 120 Bessey Hall, near the center of the Michigan State University campus, on the southwest corner of Farm Lane and Auditorium Road.

CODE OF CONDUCT

- I. CLASS ATTENDANCE:** By being on time to all lab periods, students may earn up to 100 points toward their final grade through the quizzes given at the beginning of class. Since PSL475 is a “hands on” course where the primary benefit is gained through carrying out laboratory procedures, attendance is mandatory. **If you are absent and do not makeup 2 or more labs, you will fail the class.**
- BE ON TIME:** I agree that it is unacceptable to show up to class late. Not only does this disrupt my professor and fellow students, but it puts my lab partner at a disadvantage. I understand that in order to be “on time,” it is best to show up a few minutes early to class. I agree to be ON TIME to class, unless I contact Dr Wehrwein, my TA, and my lab partner ahead of time OR due to extenuating circumstances. **I also understand that it is unacceptable to leave class early unless I am finished with the exercise/presentation/problem set. Points will be deducted from my assignment if I leave without completing the daily activity.**
 - BEING LATE:** I understand that I will not be able to make up the quiz at the beginning of class, and therefore will forfeit the quiz points for that lab period, if I am more than 5 minutes late to class. If I am less than 5 min late, I can have the remaining time until the 5 min timer goes off to attempt my quiz.
 - MISSING LAB:** I understand that I can make up a missed lab ONLY if I have a legitimate excuse as determined by the professor and let Dr Wehrwein know at least 24 hours before the lab. I must have appropriate written documentation (e.g. a doctor’s note, medical school interview) that has been approved by Dr. Wehrwein and **I must do** the make-up lab within 7 days in order to receive the possibility of earning the maximum points. An assignment *cannot* be turned in without completing the make-up lab. I understand that I must make the lab up within 7 days of the missed lab, preferably by attending another section of the course but also can be made up in an individually scheduled appointment with the course Learning Assistant. The 24-hr advanced notice also applies to missing a scheduled make-up lab. A missed make-up will result in a zero. You will have 7 days from the makeup day to email the weekly assignment to your TA.
- II. CLASS WORK ETHIC:**
- BE PREPARED:** I agree to have read the lab ahead of time so that I am prepared during my scheduled class period.
 - WORK AS A TEAM:** I agree to work as an equal team with my lab partner, and that I will show up on time and prepared for class, as to not negatively affect their grade. If a problem arises, I promise to contact my instructor as soon as possible. It is acceptable and encouraged to work together; however, all assignments MUST to unique to me and any plagiarism or copying form my partner will NOT be tolerated.
 - LATE ASSIGNMENTS:** Lab reports are due at the BEGINNING of the next lab period (Fall and Spring semesters) or at the BEGINNING of the lab period on the same day of the following week (Summer semester). Late means any time after the assignment submission folder closes, which will be at the start of the class period. If you miss the assignment submission folder deadline, there are TWO things you should do: 1) Submit your assignment to late assignment submission folder **AND** 2) you should also email your TA to notify them. An assignment one day late will receive 80% of earned points; 2-7 days late will result in 50% of earned points; after 7 days no points will be awarded. No assignments will be accepted if they are more than 7 days late. *To avoid any technical issues causing a late assignment (such as a D2L issue), I can also email directly to my TA by the assignment due date/time.*
- III. MUTUAL RESPECT:**
- CELL PHONES:** I agree that the use of a cell phone and/or other internet device for non-academic reasons during class is unacceptable. I agree to not use such things during my class period.
 - LECTURE:** I agree to give my full attention during the lecture at the beginning of class, and that side conversations are not only inappropriate, but disrespectful.
- IV. ACADEMIC INTEGRITY:**
- DEFINITION:** “**Plagiarism copying another person’s text or ideas and passing the copied material as your own. It is your responsibility to make certain that you understand the difference between quoting and paraphrasing, as well as the proper way to cite and delineate quoted material.**” <https://ombud.msu.edu/academic-integrity/plagiarism-policy.html>
 - GENERAL:** I understand that PSL475 holds a no tolerance policy to 250academic dishonesty (which includes plagiarism). This will result in action taken against me: from a penalty grade to failing the course.
 - CITING:** Direct quotes from articles, websites, peers or other sources will be considered as plagiarism and will not be accepted – *even if in quotation marks and followed by a citation.* **All answers submitted must be in your own words.**
 - ASSIGNMENTS:** I agree that all forms of academic dishonesty, including but not limited to cheating, copying the work of authors and inappropriately sourcing information on any in/out of class assignments is unacceptable and will result in action taken against me. If you turn in any work (ranging from a sentence to a full answer to a full report) from another individual (a current student, former student, academic, etc), you will get a zero on that assignment, have to write a reflective essay, will be reported to the academic integrity office and will need to take an online course on academic honesty. Turning in the work on another as you own in considered a serious offense by the university and will not be tolerated.

Print Name: _____ Section and Semester (ex: Monday SS19): _____

Signature: _____ Date: _____