

PSL 101: Frontiers in Physiology

Fridays 9:10-10:00 AM in 1255 Anthony Hall

Fall 2018

CONTACT INFORMATION for Dr. Lori Seischab

- **E-mail:** seischab@msu.edu
- **Phone:** 517-884-5200
- **Office:** 2201 Biomedical Physical Sciences Building
- **Walk-in office hours:** Please feel free to stop by my office, weekdays 9:00-12:00 and 1:00-5:00. If you do not have an appointment, you might have to wait.
- **To schedule appointments:** You may use the [Student Success Dashboard](#) to schedule an appointment. After logging in, click on the blue “Get Advising” button and follow the directions. You’ll need to know that I am in the College of Natural Science and the Department of Physiology.

EXPECTATIONS

- Your attendance and participation is expected at all classes. If you cannot attend a class, you are expected to discuss your absence with me. I will determine whether your absence will be excused and what you will need to do to make up the work. (See page 3 for a brief description of makeup assignments).
- All e-mail correspondence related to the course should adhere to the guidelines described in [this presentation from the University Of Maryland Baltimore County](#).

GRADING

- You will be graded on a pass / no-credit basis. To pass the course, you must receive a passing grade on **all** assignments. If you do not pass an assignment, you may repeat the assignment until you earn a passing grade.
- There will be approximately 1 assignment per week. All assignments should be typed, unless otherwise announced. Most assignments will be submitted through the Dropbox on D2L. Please allow 2 hours to complete each assignment (some assignments might be shorter).

COURSE ACCOMMODATIONS

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 <http://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 (assignment, discussion, etc). Requests received after this date will be honored whenever possible.

WEBSITE RESOURCES

You do not need to purchase a textbook. All resources will be posted on D2L. Below is a sample of the resources you may be using in the course, and hopefully throughout your undergraduate career and beyond.

- [AAMC core competencies for entering medical students](#)
- [Khan Academy](#)
- [AAMC postbaccalaureate premedical programs](#)
- [MIT Career Development Handbook](#)
- [Aspiring Docs](#)
- [American Physiological Society](#)
- [Explore Health Careers](#)
- [iBioSeminars](#)
- [Journal of Visualized Experiments](#)
- [MSU Career Services Network](#)
- [MSU Center for Service-Learning](#)
- [MSU Physiology research](#)
- [Pathways to Science](#)
- [USA Jobs](#)

BROAD GOALS

When I designed this course for juniors and seniors, I had several broad goals in mind. By the end of the semester, I want students to be able to

- Compare the possible career paths in physiology and the skills necessary for success in those paths.
- Develop a plan for acquiring those skills.
- Evaluate their progress towards their career goals.

COURSE FRAMEWORK

Most of your PSL courses explore the scientific concepts of physiology, including homeostasis, cell membrane, cell-cell communication, interdependence, flow down gradients, energy, and structure/function. In contrast, this course explores the professional skills of physiologists, including teamwork, communication, and navigating conflicts. Since medical education research has shown a relationship between reflection and professionalism, most of the homework assignments will be reflective essays.

Reference: [Hoffman LA, Shew RL, Vu TR, Brokaw JJ, Frankel RM. Is Reflective Ability Associated With Professionalism Lapses During Medical School? Academic Medicine. 2016 Jun;91\(6\):853-7.](#)

LEARNING OBJECTIVES & HOMEWORK ASSIGNMENTS

As much as possible, the homework assignments and in-class activities mimic things you will need to do as a working professional and/or as a successful applicant. In particular, we will focus on the skills that are important for applicants to health profession programs. Samples of some of the assignments are listed below.

By participating in class activities and completing assignments, students will be able to do the following:

Professional Communication

- Compose a resume that is consistent with expectations in scientific disciplines by following the guidelines in the [MIT Career Development Handbook](#).
- Correspond effectively with scientists by applying the [UMBC guidelines](#) to all e-mails that are related to the course.
- Apply a Reflective Ability Scoring Rubric to write and evaluate reflective essays.

Self-Evaluation

- Apply [SWOT analysis](#) to self-asses their progress towards a career goal.
- Develop an understanding of the [core competencies for entering medical students](#) by constructing a 4-year plan for enrichment activities, co-curricular activities, and gap year activities.
- Describe several career paths in physiology, including paths in various sectors (i.e. government, academia, and industry) and in different functions (ex. researcher, medical writer, healthcare administrator, and clinical trial manager).

Research-Related Skills

- Recognize the harms from research misconduct and describe the factors that can cause misconduct to occur by completing two modules of the CITI training course for Biomedical Responsible Conduct of Research.

MAKEUP ASSIGNMENTS

Students who miss a class are expected to attend one of the events listed below and to submit a reflective essay. For further instructions, discuss the assignment with Dr. Seischab.

- Department of Physiology seminar
- Mock interview at MSU Career Services
- A relevant MSU Career Fair
- The MSU Graduate School and Law School Fair

COURSE CALENDAR (tentative)

There will be two types of homework assignments: pre-assignments and post-assignments. Pre-assignments are designed to help you prepare for the class discussion. Thus, you will be learning some things on your own, before you come to class. Post-assignments are designed to help you apply what you learned in class. In general, only one assignment will be due each week. It might be a pre-assignment or it might be a post-assignment.

Week	Date	Topic	Related Assignment
1	Aug 31	Course goals & The reflective ability rubric	Post-assignment — Due 9/7 <ul style="list-style-type: none"> • Syllabus e-mail

Sept 5: Local Job & Internship Fair <http://careernetwork.msu.edu/jobs-internships/Career-Fairs/local-job-internship-fair.html>

2	Sept 7	Reflective writing	Pre-assignment — Due 9/7 <ul style="list-style-type: none"> • Score the sample essays
3	Sept 14	Retrieval and other study skills	Pre-assignment — Due 9/14 <ul style="list-style-type: none"> • How do you study? How's it working? Post-assignment — Due 9/21 <ul style="list-style-type: none"> • Do something new
4	Sept 21	Physiology careers and translational skills	Post-assignment — Due 9/28 <ul style="list-style-type: none"> • O-Net

Sept 26: MSU Fall Career Day https://app.joinhandshake.com/career_fairs/5518/student_preview

5	Sept 28	Resume writing	Pre-assignment — Due 9/28 <ul style="list-style-type: none"> • Resume first draft Post-assignment — Due 12/7 <ul style="list-style-type: none"> • Revised resume
6	Oct 5	Competencies for careers in health	Pre-assignment — Due 10/5 <ul style="list-style-type: none"> • Your career: 3 perspectives
7	Oct 12	Problem solving, navigating conflicts, and stress management	Pre-assignment — Due 10/12 <ul style="list-style-type: none"> • Stress management – part 1 Post-assignment — Due 10/19 <ul style="list-style-type: none"> • Stress management – part 2

8	Oct 19	Teamwork	Pre-assignment — Due 10/19 <ul style="list-style-type: none"> ● Pit crew video
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Oct 23: Graduate School Fair 3:00-6:00 PM, 4th floor Spartan Stadium
<http://careernetwork.msu.edu/jobs-internships/Career-Fairs/index.html>

9	Oct 26	Cultural competence	Pre-assignment — Due 10/26 <ul style="list-style-type: none"> ● To treat me, you have to know me Post-assignment <ul style="list-style-type: none"> ● 3 minute challenge
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10	Nov 2	Mistakes in medicine & Responsible conduct of research	Pre-assignment — Due 11/2 <ul style="list-style-type: none"> ● Mistake essay Post-assignment — Due 11/9 <ul style="list-style-type: none"> ● A communication failure Post-assignment — Due 11/16 <ul style="list-style-type: none"> ● CITI modules and quizzes
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11	Nov 9	Research careers	
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12	Nov 16	Gap year opportunities	Post-assignment — Due 11/30 <ul style="list-style-type: none"> ● SWOT and 4 year plans
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Thanksgiving break

13	Nov 30	Interviewing	
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14	Dec 7	Multiple Mini Interviews	
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15	Thurs Dec 13	Final discussion and in-class assignment; 7:45 – 9:45 AM in 118 Farrall Ag Eng Hall	
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I'm looking forward to spending the semester with you! I'm excited about the course. I hope you will be too.
—Dr. S