

# PSL 101: Frontiers in Physiology

Fridays 8:00-8:50 AM in 1200 Molecular Plant Sciences Building  
Spring 2020

*I'm looking forward to spending the semester with you! I'm excited about the course. I hope you are too.*

*–Dr. Seischab*

## 1. CONTACT INFORMATION for Dr. Lori Seischab

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- **Pronouns:** she/her/hers
- **E-mail:** [seischab@msu.edu](mailto:seischab@msu.edu)
- **Phone:** 517-884-5200
- **Office:** 2201 Biomedical Physical Sciences Building
- **To schedule appointments:** You may use the [Student Success Dashboard](#) to schedule an appointment.
- **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.

## 2. E-MAIL COMMUNICATION

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- Please include “PSL 101” in the subject of the message.
- Messages should be sent to [seischab@msu.edu](mailto:seischab@msu.edu). For your own privacy, please do not send messages through the Student Success Dashboard. Messages sent through the Dashboard can be seen by any advisor at MSU.

## 3. ATTENDANCE

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- **Attendance is required:** Class discussions and in-class activities are an important part of this course. As such, your attendance is required and will be recorded with [iClicker Cloud](#).
- **iClicker Cloud:** You are required to bring a device (smartphone, tablet, or laptop) to check in to my iClicker Attendance sessions. iClickers will not work. It is your responsibility to set up an iClicker Reef account and follow the steps listed in Appendix I (page 7) to properly register in my course. It is also your responsibility to regularly check your iClicker records for any discrepancies and bring them to my attention within 1 week.
- **3 absences maximum:** You can have three absences. For each absence, you must submit a make-up assignment.
  - 1) All make-up assignments must be submitted by the last day of classes, April 24<sup>th</sup>. Please see page 4 for a description of makeup assignments.
  - 2) Even if you miss a class, you are responsible for submitting, on-time, the homework assignment(s) related to the class that you missed.
- **More than 3 absences:** If you miss more than three classes, you may not be able to pass the course. Please make an appointment to speak with me as soon as possible.

## 4. COURSE ACCOMMODATIONS

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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. Requests received after this date will be honored whenever possible.

## 5. WEBSITE RESOURCES

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You do not need to purchase a textbook. All resources will be posted on D2L. Below are some of the websites you may be using in the course, and hopefully beyond the course.

- [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](#)
- [MSU Career Services Network](#)
- [MSU Center for Community and Engaged Learning](#)
- [MSU Physiology research](#)
- [Pathways to Science](#)
- [USA Jobs](#)

## 6. BROAD GOALS

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

- Compare 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.

## 7. COURSE FRAMEWORK

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Most PSL courses explore the **core 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. Please see Appendix II for a schematic of the course design.

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.](#)

## 8. LEARNING OBJECTIVES

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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 to a professional school. We will focus on the skills that are important for applicants to health profession schools.

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

### Reflection

- Apply a Reflective Ability Scoring Rubric to write and evaluate reflective essays.

Reference: O'Sullivan P, Aronson L, Chittenden E, Niehaus B, Learman L. Reflective ability rubric and user guide. MedEdPORTAL. 2010;6:8133. [https://doi.org/10.15766/mep\\_2374-8265.8133](https://doi.org/10.15766/mep_2374-8265.8133)

### 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.

### Responsible conduct of research

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

### Career preparation

- Describe the essential skills for 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).
- Compose a resume that is consistent with expectations in scientific disciplines by following the guidelines in the [MIT Career Development Handbook](#).

## 9. GRADING & HOMEWORK ASSIGNMENTS

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- There will be approximately 1 homework assignment per week. All assignments should be typed, and submitted as PDF, doc, or docx files. Most assignments will be submitted on D2L. Please allow 2 hours to complete each assignment (some assignments might be shorter).
- This is a Pass / No Grade course. As such, each assignment will be graded in a similar way; You will either pass the assignment or not. If you do not pass an assignment, you must repeat the assignment until you earn a passing grade. **To pass the course, you must receive a passing grade on all 17 assignments.**
- **To pass the course, no more than three assignments may be turned in late.**
- **To pass the course, you cannot have more than three absences.** For each absence, a satisfactory make-up assignment must be submitted by April 24.

## EXPLANATION OF HOMEWORK ASSIGNMENT GRADES

Assignment Grade	Description	Action
100	Assignment was satisfactory. Submitted on time.	This is a <b>passing grade</b> . No further action is necessary.
95	Assignment was satisfactory. Submitted late.	This is a <b>passing grade</b> . Please note, you are only allowed 3 late assignments.
50	Assignment was unsatisfactory. Submitted on time.	Check the feedback, <b>revise</b> the assignment, and <b>resubmit</b> it by April 24.
45	Assignment was unsatisfactory. Submitted late.	Check the feedback, <b>revise</b> the assignment, and <b>resubmit</b> it by April 24. Please note, you are only allowed 3 late assignments.
0	Assignment had not been submitted when I posted the grades.	<b>Submit</b> the assignment by April 24. Please note, you are only allowed 3 late assignments.
--	I have not yet posted grades for the assignment.	Please be patient. I try to grade the assignments within 1 week of the due date. Sometimes I fall behind.

## 10. MAKEUP ASSIGNMENTS (when you miss a class)

Students who miss a class are expected to **attend one of the events** listed below and **submit a reflective essay** to D2L by April 24 (You may submit the makeup assignment before or after your absence). The essay should describe what you learned from the event. The essay should follow the guidelines outlined in the Reflective Ability Rubric (See weeks 1 and 2). You may not use an event type more than once. For example, if you miss two classes, you cannot use two physiology seminars as your make-up assignments. Please plan ahead. Options are limited at the end of the semester.

- **Dept of Physiology seminar:** <https://physiology.natsci.msu.edu/> (Look for the events section)
- **Undergraduate research workshops:**
  - “Finding a Summer Research Opportunity” on Jan 14: <https://app.joinhandshake.com/events/405089>
  - “Learning About Undergraduate Research” on Jan 27: <https://app.joinhandshake.com/events/405089>
- **NatSci Career and Networking Symposium** on February 15
- **MSU career fairs**
  - MSU RHS Student Job Fair on Jan 16: [https://app.joinhandshake.com/events/408016/share\\_preview](https://app.joinhandshake.com/events/408016/share_preview)
  - MSU Diversity Career Fair on Jan 21: <https://careernetwork.msu.edu/jobs-internships/Career-Fairs/Diversity-Career-Fair/Diversity-Career-Fair-2020.html>
  - Spring Career Fair on March 11 and 12: <https://careernetwork.msu.edu/jobs-internships/Career-Fairs/Spring-Career-Fair-2020.html>
  - MSU RHS Student Job Fair on March 19: [https://app.joinhandshake.com/events/408031/share\\_preview](https://app.joinhandshake.com/events/408031/share_preview)
- **Mock interview at MSU Career Services:** <http://careernetwork.msu.edu> (Click on “Make an appointment” to schedule a mock interview)
- **Watch the video “Not Networking 101: Building Relationships for Success”:** <https://www.ibiology.org/professional-development/networking/>
- **Bioethics webinar – live or recorded:** <https://www.bioethics.msu.edu/brownbag-webinar>

## 11. 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. The **yellow highlighting** indicates an unusual due date.

Week	Date	Topic	Related Assignment
1	Jan 10	Course goals & The reflective ability rubric	Post-assignment — Due 1/17 <ul style="list-style-type: none"> <li>● #1 Syllabus review</li> </ul>
2	Jan 17	Reflective writing	Pre-assignment — Due 1/17 <ul style="list-style-type: none"> <li>● #2 Essay scoring</li> </ul>
3	Jan 24	Retrieval and other study skills	Pre-assignment — Due 1/24 <ul style="list-style-type: none"> <li>● #3 How do you study?</li> </ul> Post-assignment — Due 1/31 <ul style="list-style-type: none"> <li>● #4 Do something new</li> </ul>
4	Jan 31	What is physiology?	Post-assignment – Due 2/7 <ul style="list-style-type: none"> <li>● #5 Phys-MAPS</li> </ul>
5	Feb 7	Physiology careers and translational skills	Post-assignment — Due 2/14 <ul style="list-style-type: none"> <li>● #6 O-Net</li> </ul>
6	Feb 14	Resume writing	Pre-assignment — Due 2/14 <ul style="list-style-type: none"> <li>● #7 Resume first draft</li> </ul> Post-assignment — <b>Due 4/24</b> <ul style="list-style-type: none"> <li>● #8 Revised resume</li> </ul>
7	Feb 21	Competencies for careers in health	Pre-assignment — Due 2/21 <ul style="list-style-type: none"> <li>● #9 Your career: 3 perspectives</li> </ul>
8	Feb 28	Problem solving, navigating conflicts, and stress management	Pre-assignment — Due 2/28 <ul style="list-style-type: none"> <li>● #10 Stress management – part 1</li> </ul> Post-assignment — Due 3/13 <ul style="list-style-type: none"> <li>● #11 Stress management – part 2</li> </ul>
Spring Break			
9	Mar 13	Teamwork	Pre-assignment — Due 3/13 <ul style="list-style-type: none"> <li>● Pit crew video</li> </ul>

10	Mar 20	Cultural competence	Pre-assignment — Due 3/20 <ul style="list-style-type: none"> <li>● #12 To treat me</li> </ul> Post-assignment <ul style="list-style-type: none"> <li>● 3-minute challenge</li> </ul>
11	Mar 27	Mistakes in medicine & Responsible conduct of research	Pre-assignment — Due 3/27 <ul style="list-style-type: none"> <li>● #13 Mistake essay</li> </ul> Post-assignment — Due 4/3 <ul style="list-style-type: none"> <li>● #14 A communication failure</li> </ul>
12	April 3	Research careers	Post-assignment — Due 4/10 <ul style="list-style-type: none"> <li>● #15 CITI modules and quizzes</li> </ul>
13	April 10	Gap year opportunities	Post-assignment — Due 4/17 <ul style="list-style-type: none"> <li>● #16 SWOT and 4 year plan</li> </ul>
14	April 17	Interviewing	
15	April 24	Multiple Mini Interviews & Situational judgment tests	
Final	Monday April 27	#17 Final assignment; 7:45 – 9:45 AM in 1200 Molecular Plant Sciences Bldg	

## 12. And last, but certainly not least– INCLUSION

“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.” -MSU Faculty Senate 2017.

During all course activities (ex. discussions, small group activities, writing assignments, before class, after class, etc.), let us all strive to:

- **Include others.** Ask yourself, who has not spoken? How can I help them contribute?
- **Remain open.** Ask yourself, am I being judgmental? Have I stopped listening?
- **Be mindful of intent and impact.** Ask yourself, did they intend to hurt me? Was the impact of my words hurtful?

All skills can be practiced, and with practice we improve. Let’s dedicate this semester to intentionally practicing inclusion skills.

## APPENDIX I – iClicker attendance

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### iClicker Reef is free

You do not need to pay for access to iClicker Reef to use it just for attendance, so do not purchase a subscription or access code for this class.

### iClicker instructions

To participate in my iClicker Attendance sessions and ensure that your attendance record is accurate, you must follow the steps below:

1. If you do not already have an iClicker Reef account, [create one](#). It's free to create an account.
  - You can do this by downloading and opening the iClicker Reef mobile app via the App Store or Google Play, or by visiting [iclicker.com](http://iclicker.com).
  - If you already have an account, DO NOT create a new one; just proceed to step 2.
2. Add my iClicker Cloud course to your iClicker Reef account.
  - Log in to your iClicker Reef account and use the + sign to search for my course.
  - In the “Find Your Institution” field, enter **Michigan State University**
  - In the “Find Your Course” field, enter **PSL101 Frontiers in Physiology SS20**
  - Click “Add This Course” and it will be added to the main screen of your iClicker Reef account
3. Check-in to my course during every class.
  - You will need to allow the device you are using to reveal your location in order to successfully check in. It helps to be logged into MSU's WiFi.
  - Each time our class meets, make sure you **select** my course from the main screen of your iClicker Reef account. When I start a session, **Join** it. (You must do both steps: **Select the course and Join the session**.)
4. Keep track of your attendance in iClicker Reef.
  - After class, you can review your attendance record in iClicker Reef, making it easy for you to manage your course attendance.

### Academic Integrity Information

iClicker activities fall under the provisions of the MSU academic honesty policy. Students must not engage in academic dishonesty while participating in iClicker activities. This includes but is not limited to:

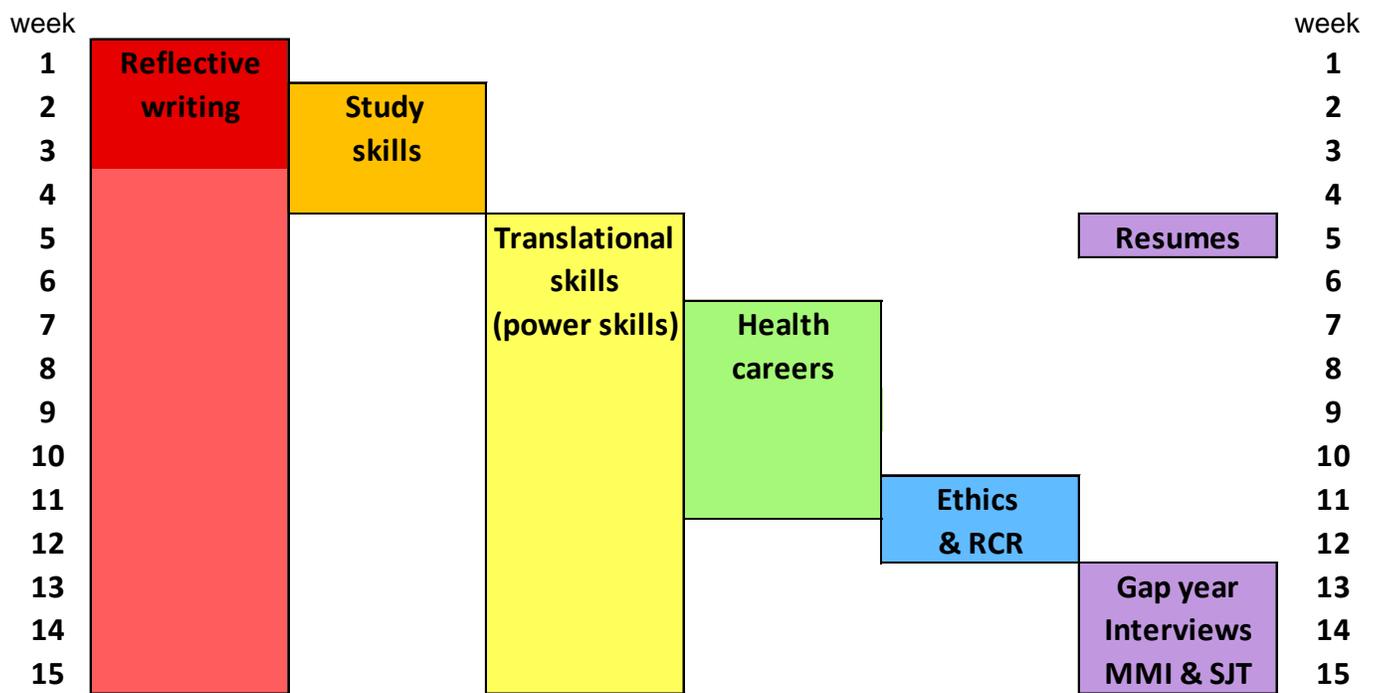
- Checking in while not physically in class
- Having another person check you into class

I may submit an Academic Dishonesty Report for any student found to be in violation of these rules.

### Reference

<https://www.iclicker.com/>

## APPENDIX II – Course design



**APPENDIX III – Table of due dates**

<b>Due date</b>	<b>Graded homework assignment</b>	<b>Non-graded assignment</b>
January 17	<b>#1</b> Syllabus review <b>#2</b> Essay scoring	
January 24	<b>#3</b> How do you study?	
January 31	<b>#4</b> Do something new	
February 7	<b>#5</b> Phys-MAPS	
February 14	<b>#6</b> O-Net <b>#7</b> Resume 1 <sup>st</sup> draft	
February 21	<b>#9</b> Your career – 3 perspectives	
February 28	<b>#10</b> Stress management – part 1	
<b>**Break**</b>		
March 13	<b>#11</b> Stress management – part 2	Pit crew video
March 20	<b>#12</b> To treat me	
March 27	<b>#13</b> Mistake essay	3-minute challenge
April 3	<b>#14</b> Communication failure	
April 10	<b>#15</b> CITI modules	
April 17	<b>#16</b> SWOT analysis and plan	
April 24	<b>#8</b> Revised resume All late homework assignments All revised homework assignments All make-up assignments (for missed classes)	
April 27 (Monday)	<b>#17</b> Final exam (In-person at 7:45 AM)	