ASTR 192: Pre-Major in Astronomy Research Seminar (Pre-MAP)
Course Syllabus

Class Times: MWF 11:00-12:20pm
Classroom: PAB B360 (undergraduate computer lab)
Materials: Notebook, pen/pencil, access to a computer outside of class (speak to the instructor if this is an issue). You will have access to a desktop computer during class. There are no required texts for this course.

Instructor: Margaret Lazzarini
Email: mlazz@uw.edu
Office/Office Hours: PAB B323, times listed on course website first week of class

Academic Mentor: Nicole Sanchez
Email: sanchenn@uw.edu
Office/Office Hours: PAB B337, times listed on course website first week of class

Course Description
The goal of the Pre-MAP program is to provide students with the most essential tools to get started in real scientific research. Pre-MAP is designed specifically for students from groups that are traditionally underrepresented in astronomy. After you have completed your project for Pre-MAP, you will have the skills, experience, and network of contacts necessary to continue in science research if you wish. Many Pre-MAP students continue working on their research projects after the fall quarter for research credits. In any case, we hope you gain a clear idea of how science is done and the perspective to communicate it well to others.

Classroom Environment
I strive to make Pre-MAP a place where you will be treated with respect, and I welcome individuals of all ages, backgrounds, beliefs, ethnicities, social classes, genders, gender identities, gender expressions, national origins, documentation statuses, religious affiliations, sexual orientations, abilities – and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful and inclusive environment for every other member of the class. This does not mean we cannot disagree or have different ideas. It does mean we try to consider perspectives other than our own, though they may differ from our own beliefs/experiences. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference whenever you feel comfortable this quarter so that I may make appropriate changes to my language or records.

Disability Accommodations
If you need an accommodation for a disability, please let me know at your earliest convenience. Some aspects of this course, such as assignments, in-class activities, or the way I teach may be modified to facilitate your participation and progress. As soon as you make me aware of your needs, I can work with

you and the [Disability Resources for Students](#) (DRS) to help determine appropriate accommodations. We will treat any information about your disability with the utmost discretion.

Religious Accommodations

Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at Faculty Syllabus Guidelines and Resources. Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request form available [here](#).

Academic Mentor

In addition to the instructor for this class, there will also be an academic mentor, Nicole Sanchez. The academic mentor's job is to be a resource for you throughout the academic year—that means she is available even after fall quarter is over! She can help you with homework, picking out which classes to take, or even just general advice about how to navigate your undergrad. In addition to being present for many of the class sessions to help with in-class assignments, the mentor will also hold regular office hours *throughout the 2019-2020 academic year* where you are free to drop in with any questions. Think of the mentor as an all-purpose TA for your undergrad career—feel free to chat about anything!

Class Structure

The first half of the seminar will consist primarily of developing the skills necessary to begin research. These skills include:

- **Computer Programming**: Introduction to working in a UNIX-based environment, and introduction to programming in Python.
- **Understanding Science and Reading Scientific Papers**: We will read peer-reviewed articles in scientific journals. Through these readings we will become familiar with the methods and results of some recently published astronomical research.

The second half of the seminar will be guided research with your research mentor and your class partner(s).

- **Research Projects**: There are several projects proposed by UW Astronomy/ Astrobiology/Physics faculty, post-docs, and graduate students. You will rank the projects that interest you most, and will be assigned to projects in teams of two or three. Your research mentor will lead one-on-one, hands-on lessons for you and your partner(s) throughout the second half of the quarter.
- **Research Presentations**: One of your most important roles as a scientist is to communicate your research to your colleagues and the broader public. At the end of the quarter, each research team will give a 10-minute presentation to the UW Astronomy Department. You will receive public speaking training from a professional in class.
- **Professional Development**: We will cover a variety of topics, including career paths in astronomy, speaking skills, and how to apply for internships. This will give you a head start on pursuing opportunities after the fall quarter is over. We will also do lab tours to show you some opportunities for undergraduate research on campus.

Grading

- **Homework Assignments:** All work must be completed and turned in on time. For reading/writing portions of homework assignments, you will turn them in directly on Google drive. For coding portions of homework assignments, please follow the directions on the homework assignment for how to turn it in.
- **Research Work:** Your mentor will primarily decide what you will be graded on and what grade you receive. Here is a link to the rubric your research mentor will be using to determine your grade. The rubric is also linked from the class calendar on the course website. You will receive a copy of your rubric at the end of the quarter.
- **Research Presentation:** You will give an 8-10 minute presentation on your research project on the last day of instruction for the quarter (December 6) during normal class time. If you are working with a partner on your project, you will give the presentation together. Here is a link to the final research presentation rubric. This rubric is also linked from the class calendar on the course website.

Item	Percentage of Grade
Homework Assignments	40%
Research Work (based off of evaluation by research mentor)	40%
Research Presentations	20%

"Final Exam"
There is no final exam in this class, just a final presentation on the last day of class. However, you are <mark>required</mark> to attend an end-of-course evaluation that will take place during the scheduled final exam for this course, **Wednesday, December 11 2:30-4:20pm** in our normal classroom (B356A). Your feedback will allow us to continue to improve Pre-MAP next year!

Late Policy/Extra Credit: No late homework will be accepted or graded. No extra credit will be given. In case of a medical or other emergency, please let me know if you anticipate being unable to complete an assignment on time before the assignment is due. I understand that life happens. I just ask that if something big comes up, ***please contact me beforehand or as soon as you can rather than after the fact.***

Plagiarism: You're encouraged to collaborate and help each other on assignments, but all submitted work must be in your own words. Any plagiarized, cheated, or improperly collaborated work submitted will receive a zero. Any person involved with such a submission may also automatically fail the course. Please read the University of Washington's Plagiarism and Student Writing Statement.