

Course Syllabus

Physics 389: Junior Seminar

Spring Semester, 2024

Instructor: Dr. Steven Sahyun
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E-mail: sahyuns@uww.edu **Web Site:** <http://sahyun.net>
Course WWW: <http://sahyun.net/courses/physcs389>
Office Hours: M T W 1:00 am – 1:50 am; M 3:30 – 4:30 pm and 3:00 – 4:00 pm
or by appointment.
Class Meetings: F 12:00 noon – 1:00 pm, UH 166
Required Texts: *OpenStax University Physics*, Ling, Sanny, and Moebis. Vols. 1, 2,
and 3. Free PDF available on the course D2L and at
<https://openstax.org/details/books/university-physics-volume-1>
<https://openstax.org/details/books/university-physics-volume-2>
<https://openstax.org/details/books/university-physics-volume-3>

You should also have your introductory physics text available to review and compare material (to OpenStax).

Pre-requisites: Junior Standing as Physics Major OR consent of instructor.

Course Description:

The course will train students in making scientific presentations, summarize the concepts and methods taught in the physics major curriculum. Students will become familiar with physics literature and learn to write abstracts and project proposals. They will demonstrate proper methods of verbal and visual presentation by delivering a graded series of talks, concluding with a satisfactory colloquium on a physics topic.

Course Objectives:

This course has the following objectives:

- *Hone public presentation and scientific communication skills.* We will have a workshop on how to give effective presentations and to prepare talks. Every student will present in class and also give a short public talk at the Physics 190 class (Fridays 12:00 – 12:50 pm).
- *Prepare for post graduate professionalization* (job hunting, proposal writing to access resources, improve reading skills from professional physics journals).

These objectives will be reached by assigning research work, making and evaluating presentations and proposals.

Course Structure:

Grading:

Course grades will be determined by the percentage of total points assigned for the course. A tentative grading table is the following:

A	92-100
A-	83-92
B+	75-83
B	67-75
F	<67

Item	Points
REU List	10
Careers List	10
Grad School list	10
Resume & Cover Letter	10
Journals	10
Ethics 1	10
Ethics 2	10
Physics Proposal	10
Presentation	10
Attendance	15
Total:	105

If you miss a class or turn in your assignment late, you need to provide an official documentation (doctor's note, etc.) in order to claim your missed credits/points.

The **approximate** distribution of points will be as follows.

Tentative Physics 389 Schedule				Spring 2024	1/17/24	
Class	Day	Date	Topic	Reading	Homework DUE	
1	Fri	26-Jan	Course Overview			
2	Fri	2-Feb	REU Programs			
3	Fri	9-Feb	Physics Careers and Jobs	APS Careers in Physics	List of REU Programs to Apply to.	
4	Fri	16-Feb	Grad School Options	AIP Graduate Programs	List of Interesting Physics Careers	
5	Fri	23-Feb	Resume and Cover Letters		List of Interesting Grad Schools	
6	Fri	1-Mar	Scientific Presentations	Scientific Presentations: A cheat sheet		
7	Fri	8-Mar	Scientific Literature	How to read a scientific paper	Updated Resume and Cover Letter Draft	
8	Fri	15-Mar	Scientific Literature cont.			
9	Fri	22-Mar	Ethics in Physics	APS Ethics Case Studies	Physics Journal article and summary.	
10	Fri	29-Mar	Spring Break			
11	Fri	5-Apr	Ethics in Physics cont.		Physics Ethics Homework I	
12	Fri	12-Apr	Scientific Proposals	Elements of the research proposal	Physics Ethics Homework II	
13	Fri	19-Apr	Scientific Proposals cont.			
14	Fri	26-Apr	Physics Literature Review		Physics Proposal	
15	Fri	3-May	About the Physics GRE		Physics Literature Review	
16	Fri	10-May	12:15 - 2:15 Final		Turn in final papers.	

Workload: The University sets a minimum level of effort that each student must devote per credit earned for all courses at the university, a minimum found in Section V-C, page 1 (revised 1992 August 1), of the University Handbook. Effectively, you should be spending two to three times as much time on this course outside of class as you do in class, this is approximately four to six hours of work for this two credit class. If you find that you are spending significantly more than that, please discuss it with me to see if I can help you study more effectively.

Special needs statement: Students with special needs should contact the instructor to make appropriate arrangements.

The University of Wisconsin-Whitewater is dedicated to a safe, supportive and non-discriminatory learning environment. It is the responsibility of all undergraduate and graduate students to familiarize themselves with University policies regarding [Special Accommodations](#), [Misconduct](#), [Religious Beliefs Accommodation](#), [Discrimination](#) and [Absence for University Sponsored Events](#). (For details please refer to the Undergraduate and Graduate Timetables; the [Rights and Responsibilities](#) section of the [Undergraduate Catalog](#); the [Academic Requirements and Policies](#) and the [Facilities and Services](#) sections of the [Graduate Catalog](#); and the [Student Academic Disciplinary Procedures](#) [UWS Chapter 14]; and the [Student Nonacademic Disciplinary Procedures](#) [UWS Chapter 17].)