

Undergraduate Seminar: PHYS 212 Spring 2024

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Contact details

Course Instructor Prof. Chris Monahan. My pronouns are he/his/him. Email is the best way to contact me.

Contact email cjmonahan@wm.edu.

Course webpage is cjmonahan.net/phys212_2024.

College dates Add/Drop deadline is Friday February 2 and the withdrawal deadline is Monday March 25.

Be aware This syllabus is subject to change during the semester. I will announce changes in class, but you are responsible for keeping up to date with the latest version on the course webpage.

Course overview

Class schedule This course will be delivered in person in Small Hall 122 at **02:00 to 03:20 pm** on Thursdays.

This one credit course will feature faculty giving short presentations on their work followed by discussions on their work. You will be grouped with other students who will summarise the presentation and discussion if you are unable to attend class. You do not need to inform me if you cannot make class, although if you find that you need to miss a significant number of classes, it is probably in your interest to contact me, so that we can make sure you are able to catch up with the material.

If I am not able to be present in-person, then the class will be led by the faculty presenting their work. If that is not possible, then we will switch to Zoom presentations and discussions.

Prerequisites There are no prerequisites.

Assessments Assessment will be based on your in-class contributions and a short presentation. You will have an opportunity to practice your presentation and provide and receive feedback on others' presentation. You will read a short introductory article in preparation for each week. There are neither problem sets nor exams; we will not have office hours.

Office hours There are no office hours.

Problem sets and exams There are no problem sets and no exams.

Recommended textbook There is no recommended textbook. You will read a short introductory article or two in preparation for each week.

Course description

This one credit course will meet weekly to discuss the latest research in different fields of physics, led by our expert faculty here in the Department of Physics.

Each week we will read an introductory or popular science article and then a different faculty member will give an overview of their research, which we will discuss during the seminar. The course will introduce you to different research areas in contemporary physics and help you find research opportunities within the department.

Course schedule

The preliminary course schedule is:

- February 1: Prof. Jackura [nuclear and hadronic theory].
- February 15: Prof. Armstrong [nuclear and hadronic experiment].
- February 22: Prof. Novikova [atomic, molecular and optical physics].
- April 25: Prof. Stark [plasma physics].

Accommodations and Student Accessibility Services

William and Mary accommodates students with disabilities in accordance with federal laws and university policy. Any student who feels they may need an accommodation based on the impact of a learning, psychiatric, physical, or chronic health diagnosis should contact Student Accessibility Services staff at 757-221-2512 or at sas@wm.edu to determine if accommodations are warranted and to obtain an official letter of accommodation. For more information, please see the Student Accommodation Services [website](#).

Course policies

The following policies are founded on two tenets:

1. You are responsible for your own learning.
2. You have agreed to abide by the Honor Code.

Some aspects or details of these policies are open for revision during the semester, if we, as a class, feel that they are not working. These two tenets, however, are not.

Honor Code

As students at William and Mary you have agreed to abide by the [Honor Code](#). You are responsible for your behaviour in class and are expected to uphold the Honor Code.

Responsibility for learning

You are responsible for your own understanding of the course material. We may all learn in different ways, and I aim to foster an environment that allows us all to learn effectively. Taking responsibility for your own learning guides the following policies.

Attendance Attendance does not form part of the grade for this class, although prolonged absence without informing me will be noted and may affect your participation grade.

Laptops and mobile devices You are welcome to bring laptops and mobile devices to class and are responsible for their appropriate use. Please note, however, that there is significant evidence (see, for example, [here](#), [here](#), and [here](#)) that using your device for tasks that are not related to in-class activities will (significantly) impinge on your understanding of what is going on.

Typewriters Typewriters are not permitted in the classroom.

Artificial Intelligence Artificial Intelligence (AI) or machine learning (ML)—think ChatGPT, Dall-e etc.—is a reference tool like any other. Well, not quite like any other, but ML is like other references and tools in the important sense that ML can be used well or ML can be used poorly. Based on the principle that you are responsible for your own learning, you may choose to use ML-based tools, such as ChatGPT, in this course if you wish, but be aware that they are known to *confabulate* (or “hallucinate”) and basically just make up stuff and present it as true.

Student resources

I recognise that, as students, you juggle different responsibilities and can face challenges that make learning difficult. There are many University resources available to help you navigate emotional, psychological, physical, medical, material and accessibility concerns. Asking for help is a sign of courage and strength. If you or someone you know is experiencing any of these challenges, I really encourage you to reach out to the following offices:

- For psychological/emotional stress, please consider reaching out to the [W&M Counseling Center](#); or (757) 221-3620, 240 Gooch Drive, 2nd floor. Services are free and confidential.
- For physical/medical concerns, please consider reaching out to the [W&M Health Center](#); or (757) 221-4386, 240 Gooch Drive.
- For additional support or resources, please contact the Dean of Students by submitting a [Care Report](#); or by calling 757-221-2510, or by emailing deanofstudents@wm.edu.

Please reach out to me if you are facing challenges inside or outside the classroom; I will guide you to appropriate resources on campus, some of which are listed below (links in online PDF):

- The Dean of Students and the Student Success office.
- Student Accessibility Services
- Writing Resource Center
- Equity program
- LGBTQ resources
- Neurodiversity Initiative
- Health and Wellness, mental health resources and the Counseling Center
- The Haven
- Lifeline
- Options for reporting Discrimination, Harassment, Retaliation and Sexual Misconduct.

The full policy of the College on Discrimination, Harassment and Retaliation is [here](#).