Course Change Request

New Course Proposal

Date Submitted: 03/07/25 3:00 pm

Viewing: PHYS 671 : Physics Teaching Seminar II

Last edit: 03/13/25 9:13 am

Changes proposed by: paso

In Workflow

1. **PHYS GR Committee**
2. **PHYS Chair**
3. **SC Curriculum Committee**
4. SC Assistant Dean
5. Assoc Provost-Graduate
6. Registrar-Courses
7. Banner

Approval Path

1. 03/07/25 3:01 pm Paul So (paso): Approved for PHYS GR Committee
2. 03/07/25 3:03 pm Ernest Barreto (ebarreto): Approved for PHYS Chair

Are you completing this form on someone else's behalf?

No

Effective Term: Spring 2026

Subject Code: PHYS - Physics

Course Number: 671

Bundled Courses:

Is this course replacing another course? No

Equivalent Courses:

Catalog Title: Physics Teaching Seminar II

Banner Title: Physics Teaching Seminar II

Will section titles vary by semester? No

Credits: 0-1

Schedule Type: Seminar

Hours of Lecture or Seminar per week: 1

Repeatable: May only be taken once for credit (NR)
GRADUATE ONLY

Default Grade Mode: Satisfactory/No Credit

Recommended Prerequisite(s):
PHYS670

Recommended Corequisite(s):
Intended for first-year physics/astronomy GTAs

Required Prerequisite(s) / Corequisite(s) (Updates only):

Registrar's Office Use Only - Required Prerequisite(s)/Corequisite(s):

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?

Registration Restrictions (Updates only):

Registrar's Office Use Only - Registration Restrictions:

Field(s) of Study:

Class(es):

Level(s):

Degree(s):

School(s):

Catalog Description:
This is the second semester of the seminar for all first-time physics/astronomy GTAs. It provides opportunities to reflect on your teaching practices, develop new teaching practices, and learn to identify

and respond to student thinking in physics/astronomy. The course culminates in writing a teaching statement.

Justification:

What: Adding a new course, PHYS 671

Why: We have been running this seminar since 2019 and requiring it for all first-time physics/astronomy GTAs, but it hasn't been on the books as an official course. The proposal is to make it official so that it would appear on students' transcripts. Chemistry is offering a similar course for their GTAs (CHEM 670). The reason for the variable credit (similar to the Learning Assistant Seminar, COS 390) is that many first-year grad students are already taking the maximum number of credits for tuition remission, so the 0-credit option would enable them to take the course without enabling additional tuition.

We have been running this seminar as a two-semester sequence, and this is the second half (unlike chemistry, which is doing a single semester for 2 credits). The topics and assignments are different from the first semester, so that is the reason for proposing it as a separate course (rather than a single repeatable course).

Does this course cover material which crosses into another department? No

Learning Outcomes:

Students will be prepared to reflect on their teaching experiences and teaching methods, and to incorporate research-based strategies into their teaching. Specifically, by the end of this course, students will be able to:

- Identify and implement short-term and long-term goals and objectives for teaching
- Reflect critically on their pedagogical methods
- Identify and respond to student thinking in physics/astronomy
- Adapt their teaching to address student experiences

Students will produce a teaching statement that can be used for future job applications.

Will this course be scheduled as a cross-level cross listed section?

Attach Syllabus

PHYS671 sample syllabus.pdf

Additional Attachments

Staffing:

Ben Dreyfus is teaching the seminar currently, and Jessica Rosenberg has taught it in the past, but there are also multiple other faculty in the department who could teach it in the future.

Relationship to Existing Programs:

This would not be a requirement for any degree programs.

Relationship to Existing Courses:

Currently, P&A does not have a similar seminar course for our GTAs.

Have you reached out to the Libraries to determine whether there are adequate resources to support your course? If not, please email Meg Meiman, Associate University Librarian for Learning, Research, and Engagement at mmeiman2@gmu.edu.

Yes

Additional Comments:

Reviewer Comments

Key: 18925

PHYS671:
Physics Teaching Seminar II
Spring 20xx
Prof. Dreyfus

Instructor's Contact Info:
Dr. Benjamin Dreyfus [he/him]
bdreyfu2@gmu.edu
Office: Exploratory 1406

Overview: This seminar is for all first-year GTAs in physics and astronomy courses. This is a continuation of PHYS670 (but if you're a new GTA in the spring, you can still start in PHYS671).

This seminar is designed to help you...

- Reflect on your teaching practices and develop new teaching practices
- Learn to identify and respond to student thinking in physics/astronomy
- Get to know your fellow grad students and build a supportive community
- Integrate your teaching experiences into the rest of your graduate education

Learning Outcomes:

By the end of this course, students will be able to:

- Reflect critically on their pedagogical methods
- Identify and respond to student thinking in physics/astronomy
- Apply current physics education research to their teaching
- Write a teaching statement that synthesizes their approach to teaching

Course Meeting Times:

The GTA seminar will meet in person once a week (most weeks), on [DAY] at [TIME] in [LOCATION]. On some weeks, we will not meet during the regular time, and there will instead be an assignment for you to do at another time.

Course Requirements:

Reflections: There will be two reflection assignments during the semester: one on teaching goals for the semester, and one on one of the readings about using math in physics. The prompts and due dates for these reflections will be posted on Canvas.

Peer observations: You will visit one other GTA's class and write up supportive and constructive feedback, both to share with the other GTA and to hand in for credit.

Participation: You are expected to come prepared to the course by completing required readings and assignments, contribute to course discussions, asking questions, and interacting with peers. Attendance is required at each class.

Teaching statement: This course will culminate in writing a teaching statement, which you'll be able to save and then use (with edits) if you apply for faculty positions in the future. The idea is that you'll write it now while your teaching experiences are still fresh in your mind (before you shift gears to doing research full-time).

Grading:

This course is graded on a Satisfactory/No Credit scale. The minimum grade to earn a S (Satisfactory) is 70%.

The breakdown of the semester grade is:

Reflection assignments	20%
Peer observations	10%
Teaching statement	20%
Participation	50%
TOTAL	**100%**

SEMINAR SCHEDULE (See the Canvas site for a more detailed schedule)

Week	Date	In-person meeting?	Topic
1		Yes	Introduction; Your first day of class (again)
2		Yes	Research on instructional labs
3		Yes	Grading (revisited)
4		Yes	Guest presentation: Inclusive teaching (part 2)
5		No	Peer observations
6		Yes	Debrief peer observations
7		Yes	Students' ideas about physics: Forces and fields
8		Yes	Collecting feedback from students
9		Yes	Using math in physics
10		Yes	Introduction to teaching statements
11		No	Working on teaching statements (asynchronous)
12		Yes	Sharing and revising teaching statements
13		Yes	Research on physics students' experiences
14		Yes	Conclusion: Reflection, discussion, and planning next steps

Academic Standards:

Academic Standards exist to promote authentic scholarship, support the institution's goal of maintaining high standards of academic excellence, and encourage continued ethical behavior of faculty and students to cultivate an educational community which values integrity and produces graduates who carry this commitment forward into professional practice.

As members of the George Mason University community, we are committed to fostering an environment of trust, respect, and scholarly excellence. Our academic standards are the foundation of this commitment, guiding our behavior and interactions within this academic community. The practices for implementing these standards adapt to modern practices, disciplinary contexts, and technological advancements. Our standards are embodied in our courses, policies, and scholarship, and are upheld in the following principles:

- **Honesty:** Providing accurate information in all academic endeavors, including communications, assignments, and examinations.
- **Acknowledgement:** Giving proper credit for all contributions to one's work. This involves the use of accurate citations and references for any ideas, words, or materials created by others in the style appropriate to the discipline. It also includes acknowledging shared authorship in group projects, co-authored pieces, and project reports.
- **Uniqueness of Work:** Ensuring that all submitted work is the result of one's own effort and is original, including free from self-plagiarism. This principle extends to written assignments, code, presentations, exams, and all other forms of academic work.

Violations of these standards—including but not limited to plagiarism, fabrication, and cheating—are taken seriously and will be addressed in accordance with university policies. The process for reporting, investigating, and adjudicating violations is outlined in the university's procedures. Consequences of violations may include academic sanctions, disciplinary actions, and other measures necessary to uphold the integrity of our academic community.

The principles outlined in these academic standards reflect our collective commitment to upholding the highest standards of honesty, acknowledgement, and uniqueness of work. By adhering to these principles, we ensure the continued excellence and integrity of George Mason University's academic community.

Student responsibility: Students are responsible for understanding how these general expectations regarding academic standards apply to each course, assignment, or exam they participate in; students should ask their instructor for clarification on any aspect that is not clear to them.

Accommodations for students with disabilities: Disability Services at George Mason University is committed to upholding the letter and spirit of the laws that ensure equal treatment of people with disabilities. Under the administration of University Life, Disability Services implements and coordinates reasonable accommodations and disability-related services that afford equal access to university programs and activities. Students can begin the registration process with Disability Services at any time during their enrollment at George Mason University. If you are seeking accommodations, please visit https://ds.gmu.edu/ for detailed information about the Disability Services registration process. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email: ods@gmu.edu. Phone: (703) 993-2474.

Student responsibility: Students are responsible for registering with Disability Services and communicating about their approved accommodations with their instructor *in advance* of any relevant class meeting, assignment, or exam.

FERPA and use of GMU email addresses for course communication: Student privacy is governed by the Family Educational Rights and Privacy Act (FERPA) and is an essential aspect of any course. **Students must use their GMU email account** to receive important University information, including communications related to this class. Instructors will not respond to messages sent from or send messages regarding course content to a non-GMU email address.

Student responsibility: Students are responsible for checking their GMU email regularly for course-related information, and/or ensuring that GMU email messages are forwarded to an account they do check.

Title IX resources and required reporting: As a part of George Mason University's commitment to providing a safe and non-discriminatory learning, living, and working environment for all members of the University community, the University does not discriminate on the basis of sex or gender in any of its education or employment programs and activities. Accordingly, **all non-confidential employees, including your faculty member, have a legal requirement to report to the Title IX Coordinator, all relevant details obtained directly or indirectly about any incident of Prohibited Conduct** (such as sexual harassment, sexual assault, gender-based stalking, dating/domestic violence). Upon notifying the Title IX Coordinator of possible Prohibited Conduct, the Title IX Coordinator will assess the report and determine if outreach is required. If outreach is required, the individual the report is about (the "Complainant") will receive a communication, likely in the form of an email, offering that person the option to meet with a representative of the Title IX office.

For more information about non-confidential employees, resources, and Prohibited Conduct, please see University Policy 1202: Sexual and Gender-Based Misconduct and Other Forms of Interpersonal Violence. Questions regarding Title IX can be directed to the Title IX Coordinator via email to TitleIX@gmu.edu, by phone at 703-993-8730, or in person on the Fairfax campus in Aquia 373.

Student opportunity: If you prefer to speak to someone ***confidentially***, please contact one of Mason's confidential employees in Student Support and Advocacy (SSAC), Counseling and Psychological Services (CAPS), Student Health Services (SHS), and/or the Office of the University Ombudsperson.

Diversity and Inclusion: As part of the Mason community, we seek to create a learning environment that fosters respect for people across identities. We welcome and value individuals and their differences including race, economic status, gender expression and identity, sex, sexual orientation, ethnicity, national origin, first language, religion, age, and disability.

Student resources: For complete information and links to student support resources on campus, visit https://stearnscenter.gmu.edu/knowledge-center/knowing-mason-students/student-support-resources-on-campus/

In particular, please be aware of:

- **Learning Services** (learningservices.gmu.edu)
- **University Libraries** (library.gmu.edu)
- **Writing Center** (writingcenter.gmu.edu)
- **Counseling and Psychological Services** (caps.gmu.edu)
- **Student Support and Advocacy Center** (ssac.gmu.edu)
- **Center for Culture, Equity, and Empowerment** (ccee.gmu.edu)
- **LGBTQ+ Resources Center** (lgbtq.gmu.edu)