

# Seminar Physics 494 - 01

Spring 2015

**Instructor:** Dr. Jared Workman      **Classroom:** Wubben Hall 203  
**Office:** Wubben Hall 230c      **Time:** R 12:30-1:30 pm  
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## ***From the catalog...***

“A forum for topical physics. In this seminar, faculty and students of physics participate in both informal discussions and formal oral presentations of selected topics of scientific interest, including significant current advances and crucial historical developments. The course may be repeated for a maximum of four semester hours of credit.

Prerequisite: upper division standing and consent of instructor.”

Source: 2013-2014 CMU Catalog, pp. 202

## **Course Requirements:**

### *Attendance:*

- Attendance is *mandatory* for all physics seminars.

### *Presentation:*

- You will give one presentation during the semester. On the first pass through PHYS 494, the content of the presentation can be on the physics topic of your choice, provided that the topic is approved by the instructor. For the student repeating the course, the content of the presentation *must* be on your senior research, which is carried out in PHYS 482. The length of the presentation must exceed 30 minutes with 10 minutes left for questions. A typical slide generally requires 1 min to cover so expect 30-40 slides as a standard length.

## **Grading:**

Your grade for this course is based on the following activities, weighted as shown. A sign up sheet will be distributed and must be completed before or during the first class period. After this you are responsible for remembering your talk date and completing the following requirements. I will not be reminding you. The onus of timeliness is on you.

### Attendance - 25%

### Preliminary Abstract – 5%

A one paragraph description of the topic you will be presenting which may be delivered in Microsoft Word format via email but is due by class time two weeks before you are scheduled to present. Full credit for this will require corrections to the abstract be made prior to your first practice presentation.

### First Practice Presentation – 10%

You will be required to perform a practice presentation for the course instructor no less than one week before your scheduled presentation date. Your grade for this portion will be based on your level of preparedness to discuss this topic. For each day after the deadline you are late your grade for this portion will be penalized by 50%. Arrangements for times should be made far in advance with the instructor.

### Revised Presentation- 10%

You will be required submit, electronically, a revised presentation no less than three days before your seminar. You will be required to schedule a 50 minute session during which you will be tested on your understanding of the revised presentation. You may also be required to present a complete second practice presentation during this time frame. For each day after the deadline you are late your grade for this portion will be penalized by 50%. Arrangements for times should be made far in advance with the instructor. If the instructor deems your revision unsatisfactory you may be disallowed from presenting which results in an automatic failing grade for the course.

### Presentation – 50%

Your presentation will be graded according to the following rubric and will be the average of all of the attending professors scores.

#### **Physics Seminar**

**Presenter** \_\_\_\_\_

**Score** \_\_\_\_\_/10

**Evaluator** \_\_\_\_\_

**Date** \_\_\_\_\_

\_\_\_\_\_ Scientific depth and correctness of presentation (up to 5 points)

- Physics is accurate and precise (on slides and in oral presentation)
- Appropriate terminology and notation is utilized (on slides and in oral presentation)
- Presentation demonstrates a deep understanding of the researched topic with appropriate explanations
- Material is well-motivated

\_\_\_\_\_ Ability to communicate physical and mathematical concepts (up to 4 points)

- Order and style of presentation makes sense
- Physics is presented for appropriate audience (junior/ senior physics major)
- Appropriate amount of material presented for time allotted
- Explanations are clear; talk is practiced
- Mechanics: slides/computer projection, volume, articulation, legibility, addressing audience, meets time requirements, etc.)

\_\_\_\_\_ Student demeanor and professionalism of presentation (up to 1 point)

- Speaker is generally comfortable with the physics being presented
- Responses to questions/ requests for clarification are correct and adequate

### **Grading Scale:**

- All graded work will be assigned a numerical score. You may estimate your letter grade by computing a percentage score and comparing it with the table below:

Percentage Score	Letter Grade	Percentage Score	Letter Grade
90-100	A	60-69	D
80-89	B	Below 60	F
70-79	C		

**Accommodation for Students with Physical and Learning Disabilities:**

In coordination with Educational Access Services, reasonable accommodations will be provided for qualified students with disabilities. Please meet with the instructor the first week of class to make arrangements. Nancy Conklin, the Coordinator of Educational Access Services, can be contacted at 248-1826, or in person in Houston Hall, Suite 108.

**Academic Integrity:**

- For CMU policy on such matters, please refer to 2013-2014 CMU Catalog, pp. 45-46.

**Course Learning Objectives:**

A student who has taken this course will demonstrate the ability to:

1. Deliver the chosen presentation topic in a clear and concise manner.
2. Communicate physical and mathematical concepts at a level consistent with that of an upper-level undergraduate science seminar.
3. Demonstrate appropriate student demeanor and professionalism while presenting the chosen presentation topic.

**Program-Level Student Learning Objectives:**

This course satisfies the following Physics-degree student learning objectives:

1. Communicate effectively about topics in physics verbally and in writing.