

# PHYS 5104

## Fall 2008

**Instructor:** Dr. Soyeun Park  
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**Schedule:** for 1408 F 3:00 pm – 4:50 pm in SC 105 & for 2401 F 1:00 pm – 2:50 pm in SC 130

**Office Hours:** By appointment.

**Course Text:** Laboratory manual, Physics 1408, Principles of physics 1 (Stipes Publishing L.L.C., Champaign, IL) or Laboratory manual, Physics 2401, Principles of physics 2 (Stipes Publishing L.L.C., Champaign, IL). The text will be supplied for you.

**Course Coverage:** Teaching methods for physics laboratories and teaching pedagogy for teaching recitation sections. We will also discuss teaching methods in general, including working with groups, grading and other pedagogy.

**The Nature of the Course:** Students will work through the laboratory they will be teaching each week, discuss teaching methods relevant to the materials, work through the recitation portion of the laboratory and discuss teaching methods for the recitation portion of the laboratory. There will also be discussions about teaching in general and time allotted for discussion of issues of grading, course administration and other topics.

### **Expected Learning Outcomes:**

- 1) Students will be able to teach physics laboratories effectively.
- 2) Students will be able to demonstrate their understanding of the nature of the materials, including the use of a learning cycle, modeling, critical physics concepts, interpretation of data, both in class and teaching.
- 3) Students will understand various pedagogies, such as how to use interactive engagement, student-centered pedagogies and other teaching techniques.
- 4) Students will be able to grade physics problems that require students to explain their reasoning and physics problems that require both conceptual and quantitative responses effectively.

### **Methods for Assessing Expected Learning Outcomes:**

- 1) Students will be observed teaching introductory physics laboratories.
- 2) Students will be evaluated on their discussion of the nature of the materials in class.
- 3) Students will be evaluated on their discussion of different teaching techniques in class.
- 4) Students' grading of undergraduate students' physics papers will be evaluated.

**Grades:** The grades based on pass or fail will be granted.

Any student who because of a disability may require special arrangements in order to meet course requirements should contact the instructor as soon as possible to make any necessary accommodations. Student should present appropriate verification from AccessTECH. No requirement exists that accommodations be made prior to completion of this approved university procedure.