

Course Syllabus for  
***Contemporary Issues in Physical Science Education***  
PHY 1910

This course is designed to be an inquiry based learning experience. These are some of the questions which will guide our inquiry:

- What does it mean to say that the Tutorials in Introductory Physics are a ‘research based’ curriculum? Is this a good thing?
- What are some of the general strategies you can use to be an effective Learning Assistant?
- What types of challenges are faced by science educators in America today?
- What are the goals of the National Science Foundation grants that your physics professors are working on?
- What does it feel like to go back and observe an 8<sup>th</sup> grade science course for a day?
- Is God calling you to engage the scientific minds of the next generation?

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There are no prerequisites for this course.

**Credits:** 1

**Meeting Times:** Monday Evenings TBD (probably 5:00 -6:00 or 5:30 - 6:30)

**Instructors:** Eleanor Close, Lezlie DeWater, John Lindberg, Stamatis Vokos, Lane Seeley

**Course Assignments:**

❖ Course Journal

- You will be expected to write critical reflections on the articles that we read for this class.
- You will also be expected to write a short reflection on your LA experiences each week.
- You will also be expected to respond to homework questions presented in class.

❖ Classroom Visit

- You will be expected to visit a local science classroom as an observer. You will turn in a typed observation report based on this classroom visit.

## Course Sessions:

- 9/25** Organization Session (Lane)  
We will try to get everyone scheduled for teaching sessions, training sessions and homework grading.  
Attitudes Pre-Survey  
*Private Universe Video*
- 10/2** Open and Closed Questions (Stamatis)  
Knuth-Peressini article for next class.
- 10/9** Dialogic vs. Univocal Discourse (Lane)  
Redish article for next class.
- 10/16** Implications of Prior Knowledge (Stamatis)  
One diagnoser set will be assigned for next class.  
McDermott article for next week.
- 10/23** Diagnostic Assessment (John)  
TPC Project Overview  
Diagnoser - Matching student answers with facets.
- 10/30** Meeting with Teachers Advisory Group (Lezlie)  
Discuss challenges and rewards of teaching.  
Set up classroom visits (students will need to come prepared with possible classroom visit dates.)  
*Physics Teacher* article for next week.
- 11/6** Classroom Observations (Eleanor)  
Introduction to Reformed Teaching Observation Protocol (RTOP)  
Practice RTOP on classroom video.
- 11/13** Debriefing on Classroom Observations (Eleanor)  
*Rising Above the Gathering Storm* reading for next week.
- 11/20** Issues in Secondary Science Education (John)  
Teacher Preparedness  
National Statistics  
Noyce Scholarship Program  
Equity (Bainbridge Island Activity)  
*Shame of a Nation* reading for next week.
- 11/27** Paths to a Classroom of Your Own (Sharon Hartnett and Andrew Lumpe?)  
Certification Program  
Noyce Scholarships  
Attitude Post-Survey