

Physics 605

Physics Teaching Seminar/Practicum

Fall 2022

1 credit

Instructor: Michael M. Hull

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Office Hours:

Monday 4:15-5:00pm by Zoom

Wednesday 2:30-4:00pm by Zoom

Course Description

Course content:

This course will give science graduate students both lectures and hands on training in dealing with all aspects of teaching (focused on, but not exclusive to, the Teaching Assistant level and beyond). We will cover topics in teaching pedagogy, preparation strategies, student management, time management and learning assessment. The course will be approximately 50% interactive lecture/ discussion and 50% practical exercises. This course is intended to provide both basic introductory level science teacher training and guidance at the college level. The methodology discussed will be how to use active learning techniques and when these are appropriate or inappropriate.

Student learning outcomes:

After this course, students will know the basis of good practices in university level active science education, will be able to deliver clear presentations, both lecture style and in lab format, will have a variety of tools for classroom management and student encouragement and will have extensively discussed and practiced how to be a good science educator/communicator.

The lectures will be given by a variety of instructors with expertise in the specific areas being covered, as well as by the students themselves. The practical exercise part will consist of preparation and presentation

Time managementBalancing demands, short cuts, using your resources
Student/classroom managementstarting out right, engaging students, respect, dealing with
problems and student issues, cheating, being adaptable, using support
Lab preparation and demo developmentpreparing labs, preparing for the labs, presenting the
lab, grading the labs, developing demonstrations for specific topics, reading your audience,
encouraging active learning and student participation
Learning assessmentmaking quizzes (lab quizzes etc.), grading, encouraging feedback from
students, other forms of assessment
Cross cultural issues teachers from various cultures and students from various cultures,
what's acceptable under cultural differences and what is not, sensitivity to differences
Ethical issues plagiarism and other forms of cheating, respect relationships
Working with faculty getting the most from the experience, asking questions
Personal/Professional balance Being a student at and an employee of the University

Prerequisites: Graduate Standing in a Science Discipline or permission of instructor

Materials Needed:

Required Text: Five Easy Lessons, Author: R. D. Knight, Addison Wesley, 2004

