

Scientific Teaching for Graduate Teaching Assistants (GTAs)  
Fall 2009

**SYLLABUS**

**COURSE  
DESCRIPTION**

This is a seminar style course designed to help Graduate Teaching Assistants in the natural sciences and mathematics build a foundation of knowledge about teaching labs or discussion sections for college introductory level science courses. It is expected that the graduate students taking the course will be reasonably knowledgeable about the details, concepts and skills in their own disciplines, but will have had little or no formal training in *how to teach* undergraduates.

The goal of the course is to provide training in pedagogy beyond what GTAs typically receive in discipline specific TA meetings in order to

- better understand TA roles and responsibilities
- understand how people learn and how people teach
- understand the importance of student-centered teaching strategies and cooperative learning
- be able to apply student-centered teaching strategies and cooperative learning in the classroom
- build a community of support for GTAs
- begin a professional teaching portfolio

**INSTRUCTORS**

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**COURSE  
FORMAT**

The pedagogy used to teach this course is the pedagogy we teach about – a combination of active learning, practical experience, and personal reflection. Generally, each class session will consist of a short lecture along with student activities and discussion. Students will also maintain a significant presence in Blackboard discussion boards between class meetings. Typically one or two guest speakers with specialties in science teaching from different areas will join us for each session.

**PARTICIPATION  
AND GRADING**

While this pilot course is not currently offered for academic credit, *it is expected that students taking the class will participate fully in all in-class activities and out of class assignments.* All readings and assignments should be completed by the due date given, and students are expected to be an active presence in Blackboard discussion topics. Based on in-class and Blackboard participation and assignment completion, students will be assessed for each class session as having performed at outstanding, satisfactory, or unsatisfactory levels. At the end of the semester, students' success in the course will be reported to their department chairs. Those students who achieve outstanding or satisfactory performance will receive a certificate of recognition from the CNMS.

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**TEXTBOOK** Readings will be assigned at each class meeting. They will be provided either as a hardcopy or posted in Blackboard for students to access and download.

**COURSE WEBSITE** You can access the course site through Blackboard. After logging in to myUMBC, click on the “Blackboard” tab and then click on “Scientific Teaching for Graduate Teaching Assistants” in the “My Courses” area. You will use the website for:

- Accessing course materials
- Checking the course announcements, and
- Interacting with the instructors and other students using Discussion Board

### *Tentative Schedule*

*All classes after August 25<sup>th</sup> meet in Physics 111 (Science 100 Lab)*

Session	Date	Topics	Guest Speaker
1	Aug 24 (M) 5:30-8:30 pm	GTA: Role, responsibility, rewards and ethics	
2	Aug 25 (Tu) 5:30-8:30 pm	Preparing for the first day of class	Paul Corbitt (Physics) and Alex Harryman (Biology)
3	Sep 10 (Th) 5:30-7:30 pm	How do we teach?	Ms. Bonny Tighe Mathematics
4	Sep 24 (Th) 5:30-7:30 pm	How people learn	Dr. Jon Singer Education
5	Oct 08 (Th) 5:30-7:30 pm	Nature of science and mathematics <i>Guest Speaker: CNMS faculty</i>	Dr. Philip Rous Dean of CNMS
6	Oct 22 (Th) 5:30-7:30 pm	How can we better teach science and mathematics?	Dr. Mark Perks Chemistry
7	Nov 05 (Th) 5:30-7:30 pm	Balancing teaching, research, own study and personal life	Experienced TAs
8	Nov 19 (Th) 5:30-7:30 pm	Typical teaching challenges	Ms. Karin Readell Academic Conduct Committee
9	Dec 03 (Th) 5:30-7:30 pm	Professional Growth	Dr. Barry Casey Faculty Development Center