Prep for “Engaging Students Through Interactive Lessons”

Prior to the session, please do all required reading and viewing.

**Required Reading**
The Torch or the Firehose: A Guide for Teaching Assistants

- **Section 1**: The Glass Wall: Encouraging Interaction
- **Section 2**: Questions: Theirs and Yours
- **Section 3**: Before You Walk In…
- **Section 4**: A Word About Pedagogy
- **Section 5**: In the Classroom
- **Section 6**: Getting Off to a Good Start
- **Section 7**: Basic Communication Skills
- **Section 8**: Seeing is Understanding: Using the Blackboard

Review the summary sheet called “The Basics of Giving a Good Lesson.”

**Required Viewing** (about 20 minutes)

*In this lesson on the chain rule, the instructor asks a lot of different questions and a lot of different types of questions.*

- View segment 6:53 to 13:11.
  - https://www.youtube.com/watch?v=8dr1dZjhmc

*This biology instructor starts the first class of the semester with three specific questions to check students’ pre-knowledge of the subject matter. (And she’s engaging, too!)*

- View segment 0:01 to 4:26.
  - https://www.youtube.com/watch?v=S9WtBRRydso

*This programming instructor positively reinforces students when they ask questions. (And he uses humor really well!)*

- View segment 0:01 to 10:12.
  - https://www.youtube.com/watch?v=C5HeRiiZ0Ns

**Optional Reading**

Interactive Teaching Methods Double Learning in Undergraduate Physics Class

*ScienceDaily (May 12, 2011)*

http://www.sciencedaily.com/releases/2011/05/110512150817.htm

Undergraduate Science and Engineering Teaching Needs Improvement

*ScienceDaily (May 21, 2012)*

http://www.sciencedaily.com/releases/2012/05/120521115702.htm

This article provides a good example of an interactive biochemistry classroom. While as TAs you will not be able to determine how a class runs, this piece might help to give you a sense of some things that you do to make your work with students more interactive:

http://seattletimes.com/html/seattleuniversity/2016784402_seattleu17m.html

Engaging students in conducting Socratic dialogues: Suggestions for science teachers

*Journal of Physics Teacher Education Online, 4(1) Autumn 2006*

http://www2.phy.ilstu.edu/~wenning/jpteo/issues/jpteo4(1)aut06.pdf (Scroll to p. 10 to get to the article. Link does not work consistently, but typing address into browser does work consistently.)

**Questions?** Contact Paula Quinn: 508-831-6836 or pquinn@wpi.edu