Teaching in the Laboratory
Responsibilities and Strategies for Laboratory TAs

Overview: The Laboratory TA
- Has a high level of personal interaction with students
- Uses teaching that involves “active” and “collaborative” learning
- Acts as a guide or facilitator of learning rather than a lecturer
- Teaches important skills needed in professional settings

Preparing for Lab:
Know Your Responsibilities
• Meeting with the Instructor and/or other TAs
• Attending the associated lab or course lecture
• Preparing equipment or other materials
• Giving a brief pre-lab lecture
• Maintaining safety standards

Preparing for Lab:
Know Policies and Procedures
- Where is the safety equipment? Procedures?
- Should I create a short syllabus for my lab?
- Can students make up labs?
- What if a student is behind?
- How do I handle an uncooperative student?
- What is the policy on collaboration?
- What are the grading policies? Office Hours policies?

Preparing for Lab:
Know the Content
- Perform the experiment yourself
- Review any important theory
- Think about underlying concepts that may be important (e.g., the scientific method, keeping a lab notebook, statistical analysis, scientific writing)
- Talk to other TAs who have taught the course previously
Preparing Your Students for the Lab

- Pre-lab
  - Instrument Operation
  - New procedures
  - Theory
- Let students practice if possible
- Safety
- Efficiency tips
- Vocabulary or Jargon

During the Lab

- Walk around the lab- Be Proactive!
  - Ask questions: “How is it going?”
  - Compliment good work
  - Correct mistakes (and learn from them)
- Be aware of time constraints
- Encourage multi-tasking
- Encourage good lab practices

During the lab (continued)

- Group effort
  - Comparing results
  - Discussing results
  - Learning by teaching
- Be on the lookout
  - Safety issues
  - Help students avoid errors
  - Help students deal with mistakes
- Enjoy individual interaction

After the lab

- Know what responsibilities you have for lab clean-up and shut down
- Be available for office hours or by email
- Fulfill responsibilities for grading and evaluating lab assignments in a timely manner
- Review administrative policies like FERPA, Academic Integrity, and Grading