

# Teaching in the Laboratory

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Center for the  
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Teaching and  
Learning

## Responsibilities and Strategies for Laboratory TAs



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## 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

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## 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



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## Preparing for Lab: Know Your Responsibilities (continued)



- Cleaning up the lab
- Holding Office Hours or Help Sessions
- Grading and Evaluating Students' Work



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## 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?



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## 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



<http://olga.tumblr.com/edu/10ppKf0tnebackinellcagpooat.73m>



## During the lab

- 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

