

UT Physics Graduate Teaching Assistants Training: Responsibilities and Expectations



THE UNIVERSITY OF
TENNESSEE
KNOXVILLE

Types of Labs and Classes

Class Summary

	PHYS 135	PHYS 136	PHYS 137	PHYS 221	PHYS 221	PHYS 222	PHYS 231	PHYS 251	PHYS 252
Audience	Physical Science & Math Majors	Physical Science & Math Majors	Physics Majors	Life Science Majors	Life Science Majors	Life Science Majors	Engineering Students	Physics Majors	Physics Majors
Taught by	Zhou & Liu	Ko	Nattrass	Abdelrazek	Guerinot & Steiner	Breinig & Guerinot	Efremenko & Kamyshkov	Holmes	Kokkas
Where	207	510	508	508	203	207	NEB 107	203/207	203
Style	Studio	Traditional	Traditional	Traditional	Hybrid & Online	Hybrid & Online	Traditional	Studio	Studio
	Calculus Based	Calculus Based	Calculus Based	Algebra Based	Algebra Based	Algebra Based	Calculus Based	Modern Physics	Modern Physics
Students/section	30	20	25	20	22	30	20	28	28
TAs/section	1	1	1	1	1	2	1	1	1
Recitation?	No	No	Yes	Yes	No	No	No	No	No

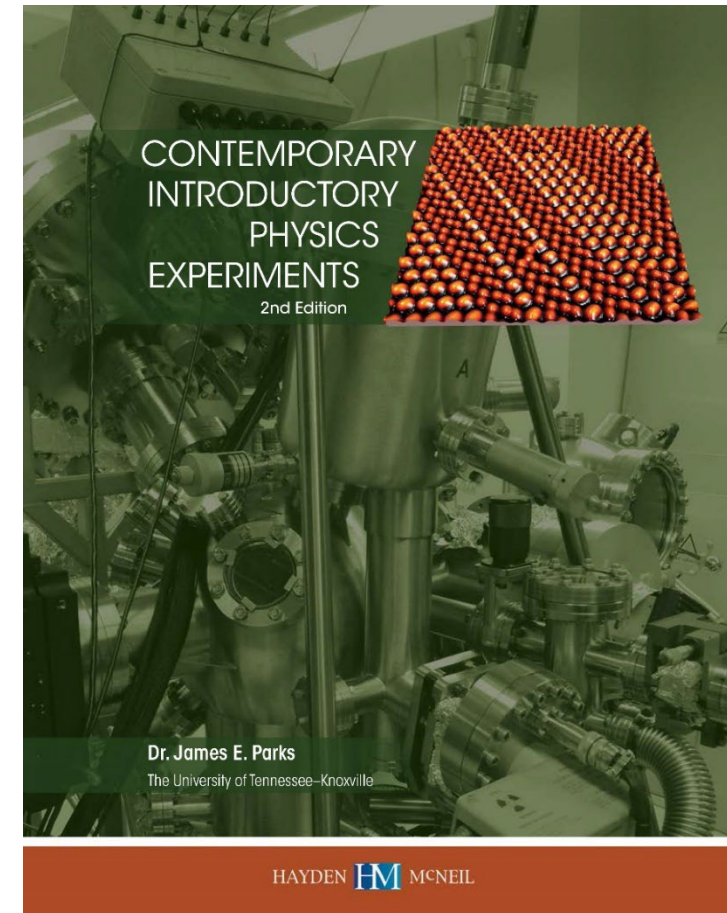
Astronomy Labs

- **A153 (goes with A151 course taught by Dr. Pokhrel, Dr. Abdelrazek, and Dr. Lindsay) A Journey through the Solar System Lab**
- **A154 (goes with A152 course taught by Dr. Pokhrel and Dr. Lindsay) Stars, Galaxies, and Cosmology Lab**
- **A217 (Spring A218) Honors Astronomy Lab (lecture taught by Dr. Richers)**
- **General Education Course to help fulfill Science Requirements**
- **Minimal Math Required**
- **Traditional lectures with traditional 2 hour labs**
- **Incorporates planetarium instruction**
- **Requires roof-top telescope observation sessions at night**
- **Several sections with about 16 students/section**

Resources

The Laboratory Manual now in Achieve online

- Contemporary Introductory Physics Experiments 2nd Edition by Dr. James Parks
 - ISBN: 978-0-7380-6168-9, Hayden-McNeil Publishing, available at the UT Book and Supply Store
 - For use in Physics 136, 137, 221, and 231 courses
- Errors and suggestions need to be reported



Hybrid Studio Physics 221 and 222 Labs

- <https://labs.phys.utk.edu/mbreinig/phys221core/>
- <https://labs.phys.utk.edu/mbreinig/phys222core/>

References

- Department Home Page
 - <http://www.phys.utk.edu/>
- Labs and Demos
 - <https://labs.phys.utk.edu/ccheney/demos/>
- Teaching Assistants' Manual
 - <http://www.phys.utk.edu/physlabs/ta/tamannual.pdf>
- TA Laboratory Set-Up Manual
 - <http://www.phys.utk.edu/physlabs/ta/setup-manual.html>
- Tutorial Center
 - <http://www.phys.utk.edu/physlabs/tutorial-center/index.html>
- Schedules
 - <http://www.phys.utk.edu/physlabs/schedules.html>

Responsibilities

Responsibilities

- Teach 2 labs (may include recitation).
- **Be prepared** by doing the lab ahead of time and sending me the data.
- Grade laboratory reports. **Do not have more than 2 outstanding lab reports to return to the students.**
- Take one time slot for the tutorial center (office hours).
- Proctor and grade tests for PHYS 231.
- READ and RESPOND to my emails in a timely manner.
- **Talk to you fellow TAs to find out who can substitute for you in an emergency! It is not my job to find your substitute at the last minute!**

Proctoring and Grading Procedures

- Report to your assigned professor at the beginning of the semester to receive instructions
- Adhere to appointments
- Unreasonable requests should be brought to my attention
- Lack of work should be brought to my attention

Syllabus

- Laboratory syllabi for each course will be formulated by the lecturers for that course and the GTAs assigned to teach the laboratory sections.
- GTAs should submit syllabi to Catherine Longmire for institutional records.

Attitudes and Professional Conduct

Preparation

- Be prepared!!
 - Don't blame the equipment!
 - It is good equipment!
- Complete every experiment before class

Professional Conduct

- Treat students the way you would like to be treated.
- Be respectful! **Do not be condescending.**
- Be punctual, courteous, understanding, helpful, and forgiving.
- Do not cheat the students – provide them with the education that they are paying for.
- Maintain your office hours and be available!

Professional Conduct (cont.)

- Sexual harassment: Don't do it!
 - If you are being harassed or one of your students is being harassed by another student, come talk to me.
 - **You are a Mandatory Reporter. Make sure you have listened to that training!**
- Be aware of your behavior and attitude toward others.
- Do not talk about other TAs or professors in front of the students.

FERPA

- Do not share grades among students.
- Protect the students' privacy.
- Return papers without the grade showing.
- Do not have students pick up reports from a box.
- Do not make comments degrading the students!

Tutorial Center Conduct

- Maintain a professional demeanor during the tutorial center.
- Make yourself available.
- Look for students who need help.
- Wear your name tag.

Recitation Guidelines

Recitation Procedures

- Survey of current status and experience
- Grading procedures
- Attendance requirements
- Do not shorten recitation!!!
- Do not use it to lecture on the lab procedure.

Teaching Attitude

- Teaching is a business
- The student is our customer
- Teach problem solving skills as opposed to working the problem

Salesman's Attitude

- Have a good product and believe in it
- Be enthusiastic about the recitation sections
- Make the recitation sections attractive to the student
- Encourage the students to seek your help

Team Attitude

- Communicate with the lecture professor
- Coordinate your activities with the lecture
- TA should know the topics being studied

Problem Solving

- Read the problem
- Extract the given information
- Make a realistic diagram
- Determine the correct dimensions and units
- Determine the applicable physics principle(s)
- Write the applicable equations

Problem Solving (cont'd)

- State the unknown parameters to be solved
- Organize the problem neatly and logically
- Process/calculate the information
- Perform a reality check
- Perform a dimensional analysis
- Teach the methods and organization

Laboratory Equipment



Laboratory Equipment

- Do not change the equipment.
- Do not move equipment from table the table.
- Make sure each table is left the way you found it. Check that all the equipment is there.
- Have students recycle their paper.
- If equipment gets broken, place it on the front table with a note stating the problem.
- If there are computer and data acquisition issues, let me know!
- Do not take things without letting me know!

Laboratory Equipment (cont'd)

- Needs for additional supplies and equipment should be reported to Dr. Cheney
- Needs for computer supplies including paper (available outside my office) and printer cartridges should be reported to Brad.

Computers and Data Acquisition

- Opportunities for improving communication and instruction
- Adhere to all copyright laws
- Use care in connecting external sources to PASCO box
- Report any malfunctions or software problems to Dr. Cheney

General Information

Student Responsibility

- Absolutely no gum in lab!!!!!!
- No food or drink.
- Wear closed-toed shoes.
- Do not mix equipment from table to table.

The Laboratory Report

- Use guidelines in lab manual: grade carefully
- Return graded labs at next lab period
- Grading of first two lab reports is important
- Coordinate grading scale with lecture professor
 - Maintain a uniform and consistent grading procedure

Attendance

- Maintain attendance records: long-term absences will be handled differently
- Lab is a “hands-on” experience
 - DO NOT cancel lab or experiments!
 - Avoid a stated policy where students can miss one lab

Laboratory Make-Ups

- Try to get the students to make up the lab in a timely manner.
- Labs can be made up the same week in another section if arrangements are made by the student's TA with another TA

TA Feedback

- Your input is appreciated and considered
- You are on the front line and are best informed
- Share your information
- NOW IS AS GOOD A TIME AS ANY!

TA Feedback (cont'd)

- My Contact Information:
 - Office: Room 404B Physics
 - Office Phone: 974-9811
 - Cell Phone: 705-3356
 - E-mail: ccheney@utk.edu

Thinking Ahead to Spring

- We will have a meeting about a week before classes start in January to finalize schedules!!!! BE THERE!
- Please register and answer my email about scheduling in a timely manner!!!!