UT Physics
Graduate Teaching Assistants
Training: Responsibilities and Expectations

THE UNIVERSITY OF TENNESSEE
KNOXVILLE
Types of Labs and Classes
## Class Summary

<table>
<thead>
<tr>
<th>COURSE</th>
<th>PHYS 135</th>
<th>PHYS 136</th>
<th>PHYS 137</th>
<th>PHYS 221</th>
<th>PHYS 221</th>
<th>PHYS 222</th>
<th>PHYS 231</th>
<th>PHYS 251</th>
<th>PHYS 252</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Audience</strong></td>
<td>Physical Science &amp; Math Majors</td>
<td>Physical Science &amp; Math Majors</td>
<td>Physics Majors</td>
<td>Life Science Majors</td>
<td>Life Science Majors</td>
<td>Life Science Majors</td>
<td>Engineering Students</td>
<td>Physics Majors</td>
<td>Physics Majors</td>
</tr>
<tr>
<td><strong>Taught by</strong></td>
<td>Zhou &amp; Liu</td>
<td>Ko</td>
<td>Nattrass</td>
<td>Abdelrazek</td>
<td>Guerinot &amp; Steiner</td>
<td>Breinig &amp; Guerinot</td>
<td>Efremenko &amp; Kamyshkov</td>
<td>Holmes</td>
<td>Kokkas</td>
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<td><strong>Where</strong></td>
<td>207</td>
<td>510</td>
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<td>207</td>
<td>NEB 107</td>
<td>203/207</td>
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<tr>
<td><strong>Style</strong></td>
<td>Studio</td>
<td>Traditional</td>
<td>Traditional</td>
<td>Traditional</td>
<td>Hybrid &amp; Online</td>
<td>Hybrid &amp; Online</td>
<td>Traditional</td>
<td>Studio</td>
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<tr>
<td><strong>Calculus Based</strong></td>
<td>Yes</td>
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<td>Yes</td>
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<tr>
<td><strong>Algebra Based</strong></td>
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<tr>
<td><strong>Hybrid &amp; Online</strong></td>
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<tr>
<td><strong>Modern Physics</strong></td>
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<tr>
<td><strong>Students/section</strong></td>
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<td><strong>TAs/section</strong></td>
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<tr>
<td><strong>Recitation?</strong></td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
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</table>
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
The Laboratory Manual now in Achieve online

- Contemporary Introductory Physics Experiments 2nd Edition by Dr. James Parks
  - 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

- TA Laboratory Set-Up Manual

- Tutorial Center

- 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!!!!