



Incoming Student Orientation

Teaching Responsibilities as a Graduate Student

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T.A. Supervisor (2019-2020)



Introduction

- Welcome!
- Teaching is a very important aspect of your graduate education:
 - It will help prepare those of you who go on to careers in academia/teaching
 - It will provide excellent experience in giving oral presentations (good practice for seminars, conferences,...)
 - It will help you gain a deeper understanding of fundamental physics, through interactions with students
 - It can be tremendously rewarding and enjoyable
- The Teaching Assistants (T.A.s) provide very important assistance to the Department, through their various teaching roles
- These contributions are valuable and valued!



Overview

- 1st year graduate students usually have the following teaching duties during each semester:
 - Teaching a lab section for the introductory undergraduate labs (3 hours/week), plus preparation (~1 hour/week)
 - Grading lab reports (~3 hours/week)
 - Staffing the Physics Help Room and Lab Library (2 hours/week)
 - Proctoring lecture course examinations (~3 times/semester)
 - Grading lecture course examinations (~15 hours/semester)
 - Teaching Assistants (also known as Teaching Fellows) attend regular TA meetings, usually held on Friday lunchtimes, to discuss the upcoming lab experiments, and other T.A. duties



Overview

- In addition (optional, for pay):
 - Staffing of Lab Library; (possibly) weekly recitation and grading work for Physics courses
- Typically, these responsibilities represent a commitment of about 10-12 hours/week in total
- International students who are required to take an American Language Program course in the fall of 1st year are excused from some teaching duties:
 - This usually means excused from conducting lab sections, but required to grade, proctor and staff the Help Room
 - International students attend the T.A. meetings
 - Start teaching lab sections in spring of 1st year



The Laboratory Experiments (Labs)

- In the 1st year, you will be teaching sections for the 1291-1292 introductory lab sequence (2 semesters)
- This accompanies the 1201-1202 General Physics lecture course, largely for pre-medical students (2 semesters)
- Sections typically have 14-15 students
- Experiments are intended to reinforce and supplement material from lectures:
 - Mechanics
 - Waves
 - Thermodynamics
 - Electricity and Magnetism
 - Optics
 - Modern Physics



The Laboratory Experiments (Labs)

- Running a good lab section requires advanced preparation (T.A. meetings, plus time spent doing the experiments ahead of time)
 - You should perform all of the experiments yourself in advance
 - (Most) experiments will be set up in the Lab Library, 506 Pupin
 - Labs will start in mid-September (week of 9/9 or 9/16)
- A disciplined and professional attitude at all times is important
- You will be grading the lab reports from your section – to be returned to students the following week
- T.A.s are responsible for assigning grades at the end of the semester, with guidance from the T.A. supervisor



Help Room

- The Department offers a Help Room (413 Pupin), staffed by T.A.s, to provide help for undergraduates with physics questions, homework, etc.
- Every T.A. is expected to staff the Help Room for 1 hour/week, giving hints for problem-solving, asking questions to guide students,...
- T.A.s should not answer homework problems directly, but rather provide suggestions and guidance, perhaps by discussing a similar problem
- You may need to manage several students, or groups of students, simultaneously
- Help Room will typically start in the 2nd week of semester
- Busiest times are prior to exams



Lab Library

- The Department also offers a Lab Library (506 Pupin), staffed by T.A.s, to provide help for undergraduates as they prepare for their lab experiments
- Every T.A. is expected to staff the Lab Library for 1 hour/week – this tends to be more “hands-off” than Help Room, with students exploring equipment setups independently
- Your role is to answer limited questions, and to insure safety and security of equipment
- Students are not permitted to take extensive data in Lab Library
- You may need to manage several students, or groups of students, simultaneously
- Lab Library will typically start in the 2nd week of semester



Proctoring and Grading

- Grading the lecture course examinations is a very important T.A. role
- Most undergraduate courses will have 1 or 2 Midterm exams plus a Final exam
- Timely, accurate and consistent grading is very important
 - Usually exams are graded and returned within 1 week
- Proctoring (monitoring) of the exams is also required
- We will go into more detail on proctoring and grading later in the semester



Preceptors

- Two of the 2nd year graduate students are assigned as Preceptors for the year
 - For 2019-2020: Elena Busch and Ioanna Kourkoulou (729 Pupin)
- Elena and Ioanna will coordinate and oversee the assignments of T.A.s to the various roles, advise on any TA issues, participate in the T.A. meetings,...
- The website <http://phys.columbia.edu/~preceptor> and Google Drive <https://drive.google.com/open?id=1IrnBGDg5S9oltlOiCslj7tizzfVupLqV> will soon have a lot of useful information from the Preceptors
- They are here to help you, and the Department
- Please give them your support and cooperation!



More information

- Physics Department Teaching Assistant Manual:
 - Hard copies now
 - Soon available also on the Preceptor website
 - Now is a good time to read the TA Manual carefully
 - (Please note that we are currently deciding on when we will ask lab students to submit their weekly reports – stay tuned on this!)
- The Center for Teaching and Learning is a great resource:
 - <https://ctl.columbia.edu/graduate-instructors/>
- You are also encouraged to read the GSAS Teaching Manual and related materials for all graduate students:
 - <https://gsas.columbia.edu/student-guide/teaching>
- and other useful information from the Graduate School:
 - <https://gsas.columbia.edu/student-guide/professional-development>



People to know

- Your Preceptors: Elena and Ioanna (729 Pupin)
- The Undergraduate Assistant: Joey Cambareri (704)
- The Introductory Lab Technician: Jocelyn Rosenfeld (510)
- The T.A. Supervisor: Jeremy Dodd (924)
- Check out the Preceptor website and Google Drive frequently
- Also, be sure to check bulletin boards on both the 5th and 7th floors on a regular basis



Next meetings...

- Tomorrow: from 9:00am-11:00am in 428 Pupin
 - Active learning session with CTL
- Thursday: from 12:00pm-2:00pm in 705 Pupin
 - first 1st-year TA meeting
- Friday: from 9:30am-3:00pm in 203 Butler
 - Intro. to teaching, and inclusive teaching workshop with CTL
- Early next week: date/time TBD
 - second 1st-year TA meeting
- Friday 9/6: from 11:00-1:00, location TBD
 - first “full” TA meeting
- We look forward to working with you!