Teaching Responsibilities as a Graduate Student

Jeremy Dodd
T.A. Supervisor (2019-2020)
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
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 2\textsuperscript{nd} week of semester.

Busiest times are prior to exams.
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 2\textsuperscript{nd} 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](http://phys.columbia.edu/~preceptor) and Google Drive [https://drive.google.com/open?id=1IrnBGDg5S9oltlOiCslj7tizzfVupLqV](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/](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](https://gsas.columbia.edu/student-guide/teaching)

- and other useful information from the Graduate School:
  - [https://gsas.columbia.edu/student-guide/professional-development](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!