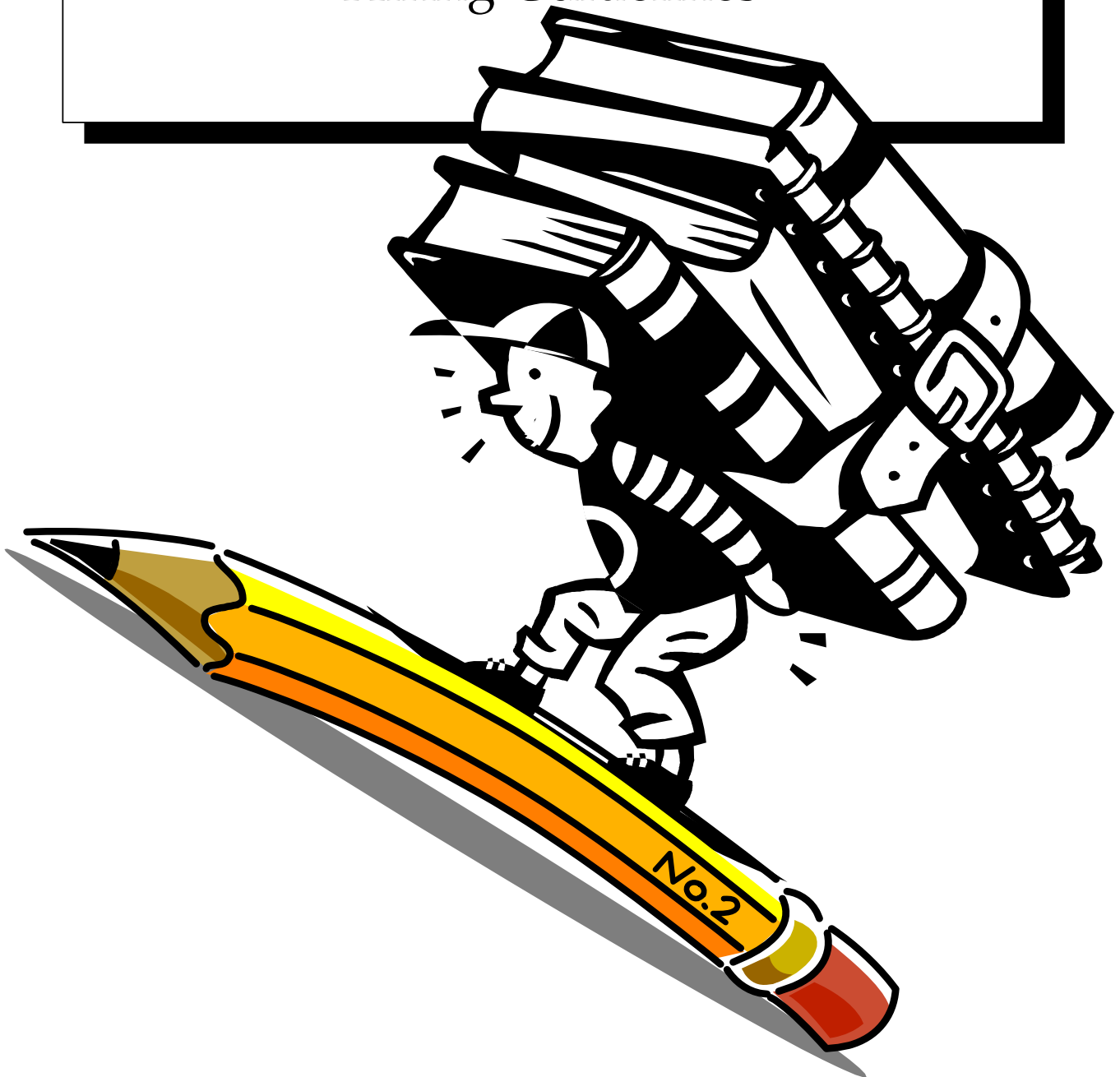


# Teaching Assistantships in the Physics Department: Responsibilities & Hiring Guidelines



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## ***INTRODUCTION***

The Physics Department believes that teaching is an important part of a graduate level education in Physics. Consequently, three quarters of teaching are a requirement for the Ph.D. in physics. Teaching duties vary from course to course but can include leading discussion sections, laboratory sections, meeting with students informally through office hours, and grading homework and exams.

A TA application form must be completed before any quarter in which a student wishes to teach. The form is available on the Physics Department website:

<https://www.stanford.edu/dept/physics/academics/TA/index.html>. See the table below for TA application availability and due dates.

<b>QUARTER</b>	<b>TA APPLICATION ONLINE</b>	<b>DEADLINE TO APPLY</b>
AUTUMN	August 16, 2011	NOON August 31, 2011
WINTER	November 4, 2011	NOON November 18, 2011
SPRING	February 13, 2012	NOON February 29, 2012
SUMMER	May 8, 2012	NOON May 23, 2012

The Undergraduate Student Services Officer notifies students of application availability and deadlines, and makes TA assignments based on input from the assigned instructors, the Graduate Student Services Officer, the Graduate Studies Director, Physics Education Specialist Chaya Nanavati, and Advanced Lab Manager and Instructor Rick Pam. Assignments are contingent on positive feedback on performance in prior TA assignments and timely correction of any deficiencies.

### **Priority in hiring Teaching Assistants:**

The following prioritization assumes satisfactory performance in previous teaching assistantships. The following prioritization assumes satisfactory performance in previous teaching assistantships. **Students who are not graduate students in Physics are strongly encouraged to take Physics 294 before applying for a Teaching Assistantship or concurrently with a first teaching assistantship in the fall or winter quarter. Preference will be given to students who have taken Physics 294 (Teaching of Physics, offered in Autumn and Winter quarters only) or who will take it concurrently in the Autumn or Winter quarter.** Placement for students who have not taken Physics 294 will be evaluated on a case-by-case basis:

1. Physics Graduate Students
  - a. Students about to graduate who have not satisfied TA requirements.
  - b. Students whose advisor cannot support 50% RA AND first-year graduate students without a voucher.
2. Applied Physics Graduate Students
3. Co-term Physics Majors (requirements for Physics Bachelors degree are complete & they are working on requirements for the Masters degree)
4. Senior Physics Majors or Engineering Physics
5. Other graduate students (outside Physics and Applied Physics)

## ***REQUIREMENTS FOR EMPLOYMENT AS A TA***

You will not get paid for your work unless a number of requirements have been met. If you are not paid when you expect to be, the problem may be that you have failed to meet one of these conditions:

### **1) Full Time Enrollment**

*In order to receive pay from the university you must be registered as a full-time graduate student.* This means that you must enroll in courses and/or research totaling **10** units each quarter during the academic year or for the zero unit TGR course PH 802 if you are on TGR status. Enrollment levels for summer quarter will vary according to your total RA/TA appointment percentage.

### **2) Eligibility to work in the United States**

- All students, scholars and fellows receiving financial support or wages from Stanford must have a U.S. social security number or ITIN (Individual Taxpayer Identification Number) on file with the University
- All students must have an I-9 form on file at Payroll
- Foreign students must have a current visa and passport

### **3) English Proficiency for Teaching Assistants (International Students Only)**

The University requires that International graduate students who wish to be appointed as TAs must first be screened by proficiency in the English language. The screening is conducted by the English for Foreign Students Program in the Stanford Language Center. More information on the screening exam can be found at <http://www.stanford.edu/group/efs/tascreen.html>. We strongly recommend that students get screened at least one quarter prior to the quarter in which they wish to TA.

### **4) Tax declaration**

All students must have submitted a form SU-32 Employee's Tax Data (includes federal and state withholding certificate).

### **5) Performance Expectations**

A Physics Department Teaching Assistantship, like any other form of employment, has required duties that must be fulfilled. Employees must have a positive attitude and performance must meet or exceed expectations or the employment may be terminated, even if in the middle of a term.

**Please take a moment to review the points below.** If you wish to discuss any of the issues addressed please contact Student Services Officer Maria Frank and she will be happy to address any questions or concerns you may have.

### **In Addition to All other Assigned Duties and Responsibilities, Teaching Assistants Agree To:**

-Attend all regularly scheduled meetings and grading sessions. Absences allowed only under extreme circumstances. **Do not plan to leave campus for a vacation or other activity before the final exam for your course is graded.**

-Show up for section/lab at least 5 minutes prior to the start of the meeting and make certain you are ready to facilitate the section.

-Follow instructions given by your course Instructor, Head TA (if applicable) or Physics Staff. If you feel you are being asked to do something unreasonable or are being given inconsistent instructions, talk to Student Services Officer Maria Frank so we can resolve the issue.

-Do the lab prior to the lab meeting (if a Lab TA).

-Respond to Head TA's requests for information, whether verbally or through e-mail.

-Convey information to students in section or lab in a timely manner.

-Grade and return problems sets and/or labs no later than one week after the due date.

## 6) Evaluations

TA performance is evaluated on an on-going basis throughout the quarter. Feedback regarding TA performance will be compiled from mid- and end-quarter evaluations, and from student, course instructor and Head TA feedback (if the course has a Head TA). **Continued employment as a TA with the Physics Department is contingent upon positive feedback and timely correction of any deficiencies.**

## MISCELLANEOUS TA ISSUES

- Physics graduate students do not serve as TAs in Autumn quarter of their first year.
- First-year Physics graduate students attend Physics 294 (Teaching of Physics) in the Autumn quarter. Meetings are held once a week.
- All courses use mailboxes in Hewlett Teaching Center, 2<sup>nd</sup> floor, for homework submission. Head TAs (20 and 40 series courses) and TAs for all other courses should see Undergraduate Program Coordinator Elva Carbajal for box assignment and key.

## GETTING PAID

Teaching assistants are paid as University employees. Pay is direct-deposited on the 7th and the 22nd of the month or on the preceding Friday if one of those dates falls on a weekend or holiday. The first paycheck in Autumn Quarter arrives on 10/22 for the period from 10/1 to 10/15. The 11/7 paycheck covers the period from 10/16 to 10/31. The last paycheck of the academic year comes on 7/7 for the period from 6/16 to 6/30.

## 2011/2012 Teaching Assistant Salary and Tuition Allowance

Type of Appointment	Quarterly Salary	Per Pay Period Salary	H&S Tuition Allowance
25% TA	\$4082.04	\$680.34	\$4340*
30% TA	\$4898.40	\$816.40	\$5208*
30% Head TA 20 Series	\$5606.00	\$934.33	\$5208*
30% Head TA 40 Series	\$6156.00	1026.00	\$5208*

\*If your tuition status is TGR, you receive TGR tuition allowance, currently \$2604.

Note: Appointment percentages equate to the following average hours of work per week:

25% - 10 hours/week

30% - 12 hours/week

Note that when a 30% TA appt. is paired with a 20% RA appt, the student is paid a higher total salary than that of a 50% RA appt. For example:

1<sup>st</sup> year student **20% RA** salary \$4131 + **30% TA** salary \$4898 = **\$9029** quarterly salary  
 1<sup>st</sup> year student **25% RA** salary \$4131 + **25% TA** salary \$4082 = **\$8213** quarterly salary

**Students are strongly encouraged to have paychecks deposited directly to an individual bank account. You can apply for direct deposit via Axess. Note that students that have a Research Assistantship paid by SLAC may be subject to different rules and procedures. Check with the SLAC Human Resources Department if you have any questions.** If you opt not to sign up for direct deposit, you can pick your check up from the main office receptionist during regular office hours (10 a.m. - 12:00 noon and 1 p.m. - 4:30 p.m.).

## GRADERS

Occasionally the department needs graders for courses. Grading positions provide an hourly wage, do not pay any tuition allowance and cannot be used to fulfill the teaching requirement. Graders may work a maximum of 8 hours per week. **International students may not work as a grader during the academic year if they have a 50% RA, TA or combined RA/TA appointment.** Rules are slightly different for summer quarter. See Maria Frank or Elva Carbajal if you have further questions about grading positions.

Grader Salary - \$14/hour (maximum of 8 hours per week)

## SECTION SIZES

All undergraduate physics courses have discussion sections.

Student:TA Ratios

20 & 40 Series 21, 23, 25, 41, 43, 45 Discussion TA (16 students per Section, 18 max., two sections per TA)	32:1
22, 24, 26, 42, 44, 46 Lab TA (16 students per section, 17 max., two sections per TA)	32:1
60 Series 61, 63, 65 Discussion TA (one section per TA) 62, 64, 67 Lab TA (one or two sections per TA)	16-18:1 16:1
Intro Non-Major Courses (11, 15, 19, etc.)	20:1
Astro 50, 100	15:1
59	No TA
70	20:1
105 (Intermediate Lab)	8:1
107 (Intermediate Lab, <i>Writing in the Major</i> course)	6:1
108 (Intermediate Lab)	4:1
Major Courses, Upper Division	20:1

## ***CA/TA/GRADER – DUTIES AND RESPONSIBILITIES***

### Course Assistant (25 or 30%)

Assists a faculty member who has primary responsibility for a course. Duties vary, but may include:

- Writing solutions, grading and returning problem sets and exams in a timely manner.
- Assisting in the preparation of lecture materials and running laboratory sessions.
- Holding office hours.

### Teaching Assistant (25 or 30%)

The TA works with a faculty member who has primary responsibility for a course. Duties vary and may include:

- Preparing for discussion sections or laboratories.
- Running discussion sections or labs.
- Grading problem sets or labs in a timely manner.
- Grading some portion or all of the exams (but not independently assigning the final grade).
- Holding regular office hours.
- Staffing the Physics Tutoring Center (20, 40, 60 series).
- See Tables on p. 8-10 for specific duties of TAs in 20, 40 and 60 series.

### Head Teaching Assistant

See the section on Head TA duties for a detailed description of Head TA responsibilities.

### Grader (Paid Hourly - Currently \$14/hr)

May not work more than 8 hours per week.

- Grades problem sets and exams for courses.
- May be required to write solutions.
- Primarily used for graduate courses.

Limit on hours – Students on 50% assistantships may not be employed more than an additional eight hours a week; those eight hours cannot be in assistantship positions.

International students on F-1 and J-1 visas are limited to a total of 20 hours of employment per week, including their assistantship appointment(s). For further information regarding regulations for international students, contact the Bechtel International Center.

## ***GRADUATE COURSES - TA/CA/Grader Hiring Guidelines\****

<b>If number of students enrolled is:</b>	<b>0-10</b>	<b>11-20</b>	<b>20-40</b>	<b>40 or more</b>
<b>AND Solutions provided by instructor, hire:</b>	Grader	Grader	Grader(s)	Course Assistant
<b>AND Solutions NOT provided by instructor, hire:</b>	<u>If &lt; 10, Prof. must provide solutions</u>	Course Assistant	Teaching Assistant(s)	Teaching Assistant(s)

\*Assume there are no sections for graduate courses. If a graduate course section is required by the professor the course automatically gets a Course Assistant (possibly a TA depending upon enrollment)

## ***TEACHING ASSISTANTS for Physics 20 and 40 Series Courses***

### Weekly Tasks & Approximate Time Spent on Each (30% Teaching Assistantship for 10 weeks in Autumn, Winter and Spring Terms)

<p style="text-align: center;">Lab TAs <i>(Physics Courses 22, 24, 26, 42, 44, 46)</i></p>	<p style="text-align: center;">Discussion Section TAs <i>(Physics Courses 21, 23, 25, 41, 43, 45)</i></p>
<p>4 hours – Two 2-hour labs 2 hours – <a href="#">PTC (Physics Tutoring Center)</a> 2 hours – Preparation 2 hours – Grading 2 hours – Miscellaneous tasks**</p> <p>TOTAL = Average of 12 hours per week for 10 weeks</p>	<p>2 hours – Two 1-hour discussion sections* 2 hours – <a href="#">PTC (Physics Tutoring Center)</a> 1 hour – Office hours in PTC 2 hours – Preparation 3 hours – Grading 2 hours – Miscellaneous tasks**</p> <p>TOTAL = Average of 12 hours per week for 10 weeks</p>

### (25% Teaching Assistantships for 5 Weeks Summer Term)

<p style="text-align: center;"><b>PHYSICS 28(21 S) and Physics 29(25 S)</b> <b>LAB and Discussion Section TAs</b></p>
<p>4 hours – Two 2-hour labs 2 hours – Preparation 4 hours – Office Hours 6 hours – Grading 2 hours – Discussion Section* 2 hours – Mandatory Exam Grading 2 hours – Miscellaneous Tasks**</p> <p>TOTAL = Average of 22 hours per week for 5 weeks</p>

Physics 28 and 29 are 5 weeks each in the summer. They are taught consecutively.

TAs are responsible for teaching BOTH a discussion section and lab for each class.

***Physics 21S is the same course as Physics 28. Physics 25S is the same course as Physics 29***

If you find it takes more than the average amount of time to complete all duties, talk to your Head TA and Rick Pam because you may need help streamlining work practices.

\* Discussion sections in the Ph 20, 40 and 60 are based on interactive learning techniques. See p. 11 for details.

\*\*Miscellaneous administrative task load shared by all Lab and Discussion TAs throughout the quarter include conducting review sessions, grading midterm and final exams, writing homework solutions, writing exam solutions, proctoring exams, scanning lecture notes, etc.

## **TEACHING ASSISTANTS for Physics 20 and 40 Series Courses**

### **Weekly Tasks & Approximate Time Spent on Each**

(25% Teaching Assistantships for 8 Weeks Summer Term)

Lab TAs (Physics 45)	Discussion Section TAs (Physics 46)
2 hours – Labs 1 hour – <a href="#">PTC (Physics Tutoring Center)</a> 1 hour – Office Hours 3 hours – Preparation 3 hours – Grading 1 hour – Miscellaneous Tasks** 1 hour – Mandatory Exam grading TOTAL = Average of 12 - 13 hours per week	1.5 hours – 1.5-hour Discussion Sections* 2 hours – <a href="#">PTC (Physics Tutoring Center)</a> 1 hour – Office Hours 3 hours – Preparation 3 hours – Grading 1 hour – Miscellaneous Tasks** 1 hour – Mandatory Exam Grading TOTAL = Average of 12-13 hours per week

Physics 45 and 46 during the Summer term are each 8 weeks and are offered concurrently. TA responsibilities average 12-13 hours per week for **8** weeks.

\* Discussion sections in the Ph 20, 40 and 60 series courses are based on interactive learning techniques. See p. 11 for details.

\*\*Miscellaneous administrative task load shared by all TAs throughout the quarter include conducting review sessions, writing homework solutions, writing exam solutions, exam proctoring, scanning lecture notes, etc.

#### Lab Schedule / [PhysicsTutoring Center](#) Staffing / Homework Due

	Monday	Tuesday	Wednesday	Thursday	Friday
<b>20 Series</b>	Lab  Primary staff for PTC	Lab  Primary staff for PTC	Lab <small>(if enrollment in course is high enough)</small>  Some staff PTC  <b>Problem Sets Due</b>	Discussion  Office Hours	Discussion  Office Hours
<b>40 Series</b>	Discussion  Office Hours	Discussion  Office Hours	Lab  Primary staff for PTC	Lab  Primary staff for PTC	Primary staff for PTC  <b>Problem Sets Due</b>

60 Series Courses hold Office Hours in contiguous time slots in PTC.  
Quarterly schedule depends upon instructor.

## ***TEACHING ASSISTANTS for Physics 20 and 40 Series Courses***

### Physics Tutoring Center

The Physics Tutoring Center, or PTC, located in Room S17 in the subbasement of the PAB (Physics/Astrophysics Building), is open M-Th 4-9 pm and F 2-5 pm. It is staffed by TAs from the 20s and 40s series courses. TAs nominally staff the PTC in the two days before the homework due date in their course (see table immediately above). However, depending on enrollment and usage patterns, TAs from any course can be assigned to any of the available times. While a TA may not be immediately familiar with the material from a course other than their own, they are expected to help all students on a “best efforts” basis.

Ph 60 series TAs do not formally staff the PTC, however, they hold their office hours in the PTC or in the adjoining lab, S12, which provides a common meeting place for Ph60 series students to meet and study as a group.

An additional University-wide resource for students is the [Peer Tutoring Program](#) run by the [Center for Teaching and Learning](#). These are undergraduate tutors in various subjects who have “office hours” in dorm lounges, or are available by appointment. This program is completely independent of the Physics Tutoring Center and Physics TA’s do not participate. You should, however, be aware of this resource for your students.

### Weekly Staff Meetings for Physics 20 and 40 Series Courses

Discussion and Lab sections use their own common curriculum each week. The head TA schedules one mandatory meeting per week for the Discussion Section TAs and one for the Lab TAs. There are several purposes for these meetings:

- Instructor introduces the TAs to material being covered in lecture that week.
- TAs provide feedback to the instructor on student understanding.
- Head TA discusses logistical information on exams/review sessions, student issues, etc.
- TAs share ideas on solving difficulties (“I have a group that... how has somebody else solved this?”).
- Discussion TAs work through the following week's discussion section problems and identify areas where students might have conceptual difficulties.
- Lab TAs work through the entire lab (including pre-lab, if applicable, measurements and data analysis).

These weekly meetings are run by the Instructor, Chaya Nanavati and the Head TA.

## ***TEACHING ASSISTANTS for Physics 60 Series Courses***

### Weekly Tasks & Approximate Time Spent on Each

(25% Teaching Assistantships)

Physics 61, 63, 65 Discussion Section TAs
1.25 hours – One 1.25-hour discussion section* 1 hour – Office Hour in <a href="#">Physics Tutoring Center (PTC)</a> 3 hours - Preparation 3 hours - Grading 2 hours - Miscellaneous tasks**  TOTAL = Average of 10 hours per week

Physics 62, 64 Lab TAs
4 hours - Two 2-hour labs 2 hours - Preparation 2 hours - Grading 2 hour - Miscellaneous tasks**  TOTAL = Average of 10 hours per week

Physics 67 Lab TAs
2 hours – One 2-hour lab *** 2 hours – Either one additional 2-hour lab, or office hours in <a href="#">Physics Tutoring Center (PTC)</a> *** 2 hours – Preparation 3 hours – Grading 1 hour – Miscellaneous tasks**  TOTAL = Average of 10 hours per week

\* Discussion sections in the Ph 20, 40 and 60 are based on interactive learning techniques. See p. 12 for details.

\*\* Miscellaneous administrative tasks shared by all Lab and Discussion TAs throughout the quarter include conducting review sessions, grading midterm and final exams, writing homework solutions, writing exam solutions, proctoring exams, scanning lecture notes, etc.

\*\*\* Depending on enrollment in class, TAs may have one section per week, or may have one section and “share” an additional section with another TA on alternate weeks.

## ***INTERACTIVE DISCUSSION/LAB SECTIONS in the 20, 40 and 60 Series***

Discussion and lab sections for all three introductory sequences are held in the sub-basement of the Physics Astrophysics Building (PAB). Discussion sections for Ph20s and 40s are held in rooms S14 and 15 with two sections running concurrently. The two rooms are separated by an accordion-style wall that can be opened to make one larger room to allow the two TAs to lead a consolidated section if student attendance warrants. Discussion sections for the Ph60 series are held in S17A, 14 or 15 depending on room availability.

Each Discussion TA in the Ph20 and 40 series is responsible for two sections meeting once a week for 50 minutes. TAs for the Ph60 series are responsible for one section meeting once a week for 75 minutes.

Labs for the Ph 20, 40 and 60 series are separate one-unit courses. Sections meet in PAB rooms S08, S12, or S16. Each Lab TA is responsible for two 2-hour lab sections each week. The exception is Ph67, which is a two-unit course with a lecture component; these TAs have one section, plus they may share a section on alternate weeks with another TA if the enrollment warrants three sections.

Before the quarter begins, all TAs are trained in leading sections using interactive learning techniques to engage students. During the quarter, TAs work through the section curriculum, or the lab exercises, for the coming week at the weekly course staff meetings. Much of the curriculum comes from, or follows the philosophy of, the results of [Physics Education Research \(PER\)](#) developed at a number of physics departments in the U.S. and elsewhere. This philosophy requires that students be active learners during the section. Students in Discussion sections collaborate in groups of 3 or 4 as they work through various types of problems and exercises that delve into important concepts in physics. A representative list of these activities includes:

- (a) tutorial worksheets
- (b) multi-step problems
- (c) hands-on problems
- (d) simulation based problems (using [PhETs](#) or other computer simulations)
- (e) predict-explain problems such as those developed by U. of MD and U. of WA
- (f) the physics behind a working model

Lab exercises are designed to be similarly interactive. The key to these active learning sections is that they are student-driven. Unlike traditional sections where students ask questions that the TA answers at the blackboard, or where the lab TA sits at the front of the room while the students work, the TA instead interacts with students and asks leading questions that help the students understand concepts or develop problem-solving techniques themselves. The TA's role in the process is to facilitate the student discussions, rather than to serve as an instructor. In other words, instead of telling the students "the answer", the TA guides the students so that they can learn the concept as a group.

Chaya Nanavati provides the weekly curriculum, selecting/developing problems in consultation with the course Instructor, the Head TA, and any other TAs interested in participating in this aspect of the course.

## ***ON LINE COURSE MANAGEMENT SYSTEM***

*(information primarily for Instructors and Head TAs)*

Coursework (CW) is the primary course management system used by all classes in the Physics Department. Most students at Stanford are very familiar with the Coursework system at <http://coursework.stanford.edu>. Instructors may choose to use their own web page instead.

Coursework Site setup: Elva Carbajal sets up a Coursework site for each Physics course prior to the beginning of the quarter. Default settings, which can be changed by the Instructor, are as follows:

- Course content from prior year is NOT transferred. Instructors, Head TAs or TAs who need access to prior year's materials should contact Elva, who will give access to the old site. Materials can then be copied into the current CW site as appropriate.
- Guest access to the site is turned off.
- Default Tools: Syllabus, Announcements, Gradebook, Materials, Section Info, Site Info.
- Optional Tools that Instructor/HeadTA can add: Assignments, Drop Box, Schedule, Web Info (in Site Info/Tools)
- Elva adds Instructor and TA names to site, except for 20/40 series, where Elva adds Instructor/Head TA, and the HeadTA adds the rest of the TA's.
- All TA's are entered as "TA" rather than "Section TA" to simplify access to various parts of the site.
- For courses with preset section times on Axxess—usually 20s, 40s, 60s, 105, 107—student section registration is automatically downloaded from Axxess. If a course needs this feature and it is not yet set up, use the following CW settings:
  - Site Info→Add Roster (you must add at least "Section-01", which is always the lecture section of a course)
  - Section Info→Options→ check the box "Automatically manage sections"

### During the Quarter:

- The CourseWork gradebook is the primary tool for recording grades. For security, CW logs all grading activity.
- By default, scores entered into the CW gradebook are not visible to students. This can be changed by HeadTA/TA for each assignment.
- HeadTA/TA enters assignments manually into CW gradebook.
- TAs should also keep a hardcopy of grades in a bluebook or an independent spreadsheet as a backup and as a safeguard against tampering. Bluebook or hard copy spreadsheet is submitted to Elva at the end of the quarter.
- All homework and exam solutions should be entered with an expiration date – (use Materials/Actions/ReviseDetails), so they are not visible in the future.

### End of Quarter:

All sites are automatically "unpublished" at the end of the quarter—only Instructors and Course Admins have access to the site after this time. Instructor can change this at any time in the future.

## ***HEAD TEACHING ASSISTANTS (Physics 20 & 40 Series Courses) DUTIES AND RESPONSIBILITIES***

Before the beginning of quarter:

- Meet with course instructor to go over syllabus. Establish dates for midterm exams and for all review sessions. Check that canonical homework due date is correct (see table on p. 9).
- Ask Elva to schedule rooms for review sessions and for midterm exams if the midterm is given outside class time.
- Confirm that all Bookstore materials are in stock—text, workbooks, clickers. Jenifer Tice in the Physics Main Office does the textbook ordering and can help with this.
- Confirm that Coursework site is up and running and that you have “TA” privileges. Old course material should be hidden (it shouldn’t be there unless the Instructor asked for it), including solutions and gradebook entries.
- Post syllabus in “Syllabus” section of Coursework, if the instructor has not already done so. Set syllabus access to "Stanford" or "Public" so that it is visible to at least the Stanford community on the [Syllabus](#) web site.
- Monitor Coursework enrollment; ask Elva to add sections on Axxess if necessary. Target section enrollment is 16 for both Discussion and Labs. Discussion section enrollment can be expanded up to a maximum of 18 if necessary, labs up to 17.
- Get the TA list for both discussion and lab TAs from Elva . Survey\* the TAs for:
  - Date and time for the organizational meeting (this should be no later than the Friday before the beginning of the quarter) – the instructor should be available for at least part of the organizational meeting.
  - Day and time preferences for leading sections (although each TA will lead two sections, it is best to ask for three or four preferences). Section times have been pre-assigned on Axxess; students sign-up for sections directly on Axxess. Lab and discussion TAs would get different surveys.
  - Day and time preferences for weekly course staff meetings.
  - Day and time preference for Physics Tutoring Center hours (Ph 40 TAs staff the PTC primarily on M, T, F while Ph20 TAs staff primarily on W, Th, F. However, TAs from either course may be assigned to other days. The two Head TAs should confer on scheduling.
- Assign TAs to sections and PTC hours based on survey.
- Hold TA organizational meeting – preferably during the week before the quarter begins.
  - Assign TAs to sections and PTC hours if not already done (try to do it before the meeting). Have TA’s confirm both their assigned times and that they have no planned absences for the quarter.
  - Establish time for weekly course staff meetings for both discussion section TAs and lab TAs
  - Assign miscellaneous tasks to TAs. These include: homework solutions, review sessions, exam proctoring and grading, grade entry, etc)

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\* two survey tools that work well for this purpose are Stanford’s [Webform](#), or [www.doodle.com](http://www.doodle.com)

- Determine and announce procedure for checking homework and exam solutions.
- Assign PTC hours
- Make sure TAs know when final exam grading session will take place.
- Enter TAs on Coursework. Note: Coursework automatically downloads sections and student section registration data from Axxess and updates it regularly. However, it does not “synch” the data, it simply overwrites any existing Coursework section membership data with the latest Axxess data—any manual changes made in CW will be erased.

Beginning/first week of quarter:

- Provide Elva with a list of all assignments, both section and PTC hours, by Friday of the first week of classes.
- Enrollment redux: Monitor Coursework enrollment; ask Elva to add sections on Axxess if necessary. Target section enrollment is 16 for both Discussion and Labs. Discussion section enrollment can be expanded up to a maximum of 18 if necessary, labs up to 17. Once most students are enrolled in sections, there will always be some students who need to switch. At this point, it’s a good idea to switch Coursework/SectionInfo/Options from “Automatic” to “Manual” section management. Axxess section data will no longer be downloaded to CW, and you can move students between sections as necessary. **CAUTION: once you do this, DO NOT switch back to Automatic. In the latter mode, the data is not synched; rather, the most recent Axxess section registration data overwrites all section data in Coursework, erasing any manual section changes you might have made.**
- If requested by CTL (Center for Teaching and Learning), add their Peer Tutors as “guests” to your CW site so they can stay up to date on the curriculum [http://www.stanford.edu/dept/undergrad/cgi-bin/drupal\\_ual/ARS\\_index.html](http://www.stanford.edu/dept/undergrad/cgi-bin/drupal_ual/ARS_index.html) (this is a University service in addition to the Physics Tutoring Center)
- Ask Elva to assign Hewlett homework mailboxes to students. Send email to students explaining the system.
- Students submit their homework to the TA for the section for which they have signed up on Axxess.
- Please ask TAs to discourage students from attending other sections “at will” since a TA in a crowded section will be limited in the attention he/she can provide the students.
- Confirm that Elva has given students and TAs after-hours access to basement labs and Tutoring Center in Physics/Astrophysics building.

During quarter:

- Along with Instructor and Chaya Nanavati, run weekly course staff meetings for Discussion TAs.
- Attend weekly Lab course staff meeting as necessary to discuss organizational issues.
- Handle problems that cannot be resolved by section TAs.
- Check that grades are entered into Coursework by section TAs in a timely manner.
- Check that TAs return graded homework prior to the due date of the next assignment.
- Work with Instructor to organize posting of course materials, problem set solutions, etc.

Before exams:

- Ask Elva to schedule room and order food for midterm exam grading session(s).
- Review or take exam to make sure there are no errors. Give feedback to instructor on length, difficulty, clarity, etc.
- Assign TA proctors and ask Elva to help you find rooms for students that need accommodations or make-ups.

End of quarter:

- Ask Elva to schedule room and order food for final exam grading session (Department policy as of Autumn 2009 allows budgeting \$6.75 per TA when ordering food)
- Work with instructor to enter final grades into Axess.

**Head TAs CAN and SHOULD delegate responsibilities and make sure that all TAs are pulling their share of the load.**

## ***TA EVALUATIONS***

1. Mid Quarter TA Evaluations
  - a 20/40/60 series: paper evaluations given to students at the end of their 3<sup>rd</sup> class meeting with their TA. Chaya Nanavati provides paper forms to TAs. Section ends 10 min early: TA appoints one student to collect evaluation forms, place in a sealed envelope, and return to Elva Carbajal in the Physics Main Office. The TA leaves the room while students fill out the evaluation.
  - b All other courses: Elva will set up and announce, on Coursework, an online evaluation survey for students to fill out. This should be live from 9am Monday to 5 pm Friday of the 4<sup>th</sup> week of class. Students are asked to fill it out *after* their 3<sup>rd</sup> class meeting with their TA.
  - c TAs in courses with online evaluations should announce this in their class during the 3<sup>rd</sup> class period (usually in the 4<sup>th</sup> week) of the term.
  - d Feedback comes back to TA's in time for their 4<sup>th</sup> (latest 5<sup>th</sup>) class of the term.
  - e Evaluations are reviewed by Rick Pam and Head TAs. TAs with fair to poor Mid Quarter Evaluations will receive support and guidance on how to improve.
  
2. End Quarter Evaluations are completely online. Head TA should send a reminder to students ~48 hours before the deadline.

## ***TA AWARDS***

Teaching assistants play a significant role in instruction within our department. In many cases, they are also future faculty members. We encourage all TAs to strive for excellence and recognize those TAs who have provided outstanding services to students, in the following ways:

### Paul H. Kirkpatrick Award

Paul H. Kirkpatrick was a distinguished member of the Stanford Physics Department for 28 years before retiring in 1960. He died in December, 1992. Although well known for his 40 years of x-ray research, for the invention of the x-ray microscope, and for his pioneering work in scientific holography (long before the invention of the laser), he is at least as famous for his spirited championship of the importance of furthering excellence in the teaching of physics.

The Kirkpatrick Award is given quarterly, and TAs are nominated by their course instructors. Awardees are selected based on the faculty nomination and TA evaluations from students. Awardees receive a certificate and \$1500.

### Center for Teaching and Learning Centennial TA Award (Bi-annually)

The Centennial Teaching Assistant Awards consist of \$500 prizes and certificates presented in a June awards ceremony (June 12<sup>th</sup>, 2010)—presided over by the Dean of H&S, the Dean of Engineering, and the Dean of Earth Sciences—to TAs with outstanding records as teaching assistants. Half of the H&S departments with teaching assistants are invited to nominate—depending on their size—one, two, or three of their TAs to receive the Centennial TA designation.

## ***IMPORTANT RESOURCES FOR YOUR TA CAREER***

### People

- Elva Carbajal, Undergraduate Student Services Officer [elva@stanford.edu](mailto:elva@stanford.edu) 723-4362
- Maria Frank, Graduate Student Services Officer [maria.frank@stanford.edu](mailto:maria.frank@stanford.edu) 723-0830
- Rick Pam, Adv. Lab Manager, Dept. Teaching Resource [rick.pam@stanford.edu](mailto:rick.pam@stanford.edu) 725-2365
- Greg Romine, Introductory Lab Manager [gsromine@stanford.edu](mailto:gsromine@stanford.edu) 726-7230
- Chaya Nanavati, Physics Education Specialist [nanavati@stanford.edu](mailto:nanavati@stanford.edu) 725-2346
- George Yan, Lecture Demos in Hewlett [jyan@stanford.edu](mailto:jyan@stanford.edu) 723-1220
- and, of course, your Head TA and the course professor

### Places

- Physics Tutoring Center [physicstutor.stanford.edu](http://physicstutor.stanford.edu)
- Center For Teaching and Learning (CTL) - 723-1326 <http://ctl.stanford.edu/>
- Office of Judicial Affairs (Honor Code Violation Resources) - 725-2485  
<http://www.stanford.edu/dept/vpsa/judicialaffairs/about/welcome.htm>
- Bechtel International Center (International Student Resources) - 723-1831  
<http://www.stanford.edu/dept/icenter/>
- Office of Accessible Education (Disabled Student Support and Services) - 723-1066  
<http://studentaffairs.stanford.edu/oe>
- Counseling and Psychological Services (CAPS) - Vaden Health Center - 723-3785  
<http://vaden.stanford.edu/caps/index.html>

### Tools

-Varian Physics, 1st floor Copy Center. See Stewart Kramer or Khoi Huynh in the Physics Stores for the current TA copier code. In addition, Khoi and Joel Crawford are both available and extremely efficient at making large number of photocopies associated with department classes. However, they need at 24 hours notice, and a form found in the Copy Center on the left side of the room. They are an excellent resource, and excellent people!

-Coursework (<https://coursework.stanford.edu/portal>) Stanford's online course management system. If you use it efficiently as a TA, it'll make tracking students, grades, lab reports, section times, and e-mail addresses a breeze.

-Scanner and associated software located in the copy center. Useful for scanning in on-time, double-checked homework solutions for presentation on the Coursework website.

### References

1. Sexual Harassment Policy Office: <http://www.stanford.edu/dept/shpo/>
2. Honor Code/Fundamental Standard:  
[www.stanford.edu/dept/vpsa/judicialaffairs/guiding/honorcode.htm](http://www.stanford.edu/dept/vpsa/judicialaffairs/guiding/honorcode.htm)
3. Health & Safety: [www.stanford.edu/dept/physics/facilities/safety/](http://www.stanford.edu/dept/physics/facilities/safety/)
4. Policy and Procedure for Student Requests for Services and Accommodations  
[www.stanford.edu/dept/diversityaccess/access/student\\_request.html](http://www.stanford.edu/dept/diversityaccess/access/student_request.html)

## APPENDIX

### *GUIDELINES FOR SETTING DISCUSSION SECTION & LAB TIMES (Physics 20 & 40 Series Courses)*

Section times are now pre-scheduled so that discussion, lab and tutoring center times can remain stable from quarter to quarter, year to year. The Head TA does not schedule these. The schedule is listed in Axess, and Axess requires students to choose a section when they enroll. . In the rare instance when a section time or room needs to be changed, added or deleted, the Head TA should consult with Elva, Chaya and Rick.

Scheduling is performed according to the following criteria:

- 1) Homework due dates: Fri. for 20 series, Wed. for 40 series. See p. 8 for lab day schedules.
- 2) All discussions are scheduled with two concurrent sections. All sections meet in PAB S14 and S15. If attendance drops below the optimal size for interactive groups, both sections can be combined by removing the partition between the two rooms can be removed, with both TAs acting as facilitators in one room.
- 3) Avoid:
  - a) Scheduling sections/labs during first year graduate courses in Winter and Spring quarters and during the 20/40 series lecture hours (MWF 9-9:50 and 10-10:50).
  - b) The 5-7pm dinner block for two-hour lab sections; (5-6pm and 6-7pm OK for discussion sections).
  - c) 12:50 - 3:05 as this is a popular time for other classes to be scheduled.
  - d) Scheduling discussion sections on days before homework is due (discussion sections are not for the purpose of homework help—that's the PTC's job).
  - e) Scheduling sections after 8pm.
- 4) Allowed and Encouraged:
  - a) Some sections/labs 10-11am (T/Th only) and 11am-12pm time frames. These times tend to work well for athletes.
  - b) All discussion sections for a course should be “sandwiched” between two lecture periods. This allows the Instructor to plan lectures knowing that all students have seen the same discussion material.
  - c) Tutoring Center staffing primarily for the two days before homework is due. When possible, allow TA's to schedule their hours in the Tutoring Center right after their discussion/lab section.
- 5) Sections/labs are subject to the same university standardized class meeting times as lectures: <http://studentaffairs.stanford.edu/registrar/faculty/allowable-times>. The registrar won't assign rooms for times that don't conform to these standards.
- 6) Pre-scheduled discussion and lab section times are entered in Axess by the Undergraduate Student Services Officer with pre-set enrollment caps. See p. 6, “Section Sizes”.

