



## Teaching Assistants in IIT Madras- A quick look-up guide

Welcome all to the new role of being a Teaching Assistant (TA) at IIT Madras. We hope that the following FAQ would be useful for you to prepare yourself to be a successful TA!!

### 1. Why should I be a TA?

All students who take admissions for the Masters' and Doctoral Program sign an undertaking to earn their Half Time Teaching Assistantship (HTTA) or Half Time Research Assistantship (HTRA). There are a few exceptions. All scholars enrolled in HTTA/HTRA scheme earn their assistantships by putting in 8 hours of work as suggested by the Department. Renewal of assistantship every semester is also subject to a good performance during the preceding semester in the discharge of responsibility as a teaching/research assistant.

More than any of the above, by being a TA you get an excellent opportunity to improve your expertise in the technical content of the course, enhance your communication skills, obtain a hands-on experience in handling the experiments in the laboratory and improve peer interactions.

### 2. What are the possible TA responsibilities in the department?

Tutor for a theory or a laboratory course, mentor for students

### 3. How do I find what my responsibilities are?

You are typically assigned a course or a lab by the department before the semester begins. You must report to the faculty in charge of the course/laboratory well in advance and find out what your responsibilities are.

### 4. How should I prepare myself to be a TA for a tutorial for a theory course?

See Annexure I

### 5. How should I prepare myself to be a TA for a laboratory course?

See Annexure II

### 6. How do I begin my task on the first day?

The first day of your action makes a lot of difference in handling students for rest of the days. Introduce yourself and familiarize with each fresh batch of students when you meet them. Your personality, punctuality, preparedness and sharing expectations help manage your tutorial /laboratory classes better throughout the session. Remember first impact lasts forever in the minds of students.

### 7. What if I am not able to attend a Tutorial/Laboratory session?

Try not to be absent for the tutorial/laboratory session. In case of unavoidable circumstances, find another TA to replace you and inform the teacher in advance.



## **Annexure I**

### **Preparation for tutorial sessions**

There are three phases when you handle a tutorial session

#### **Before the tutorial session**

1. Meet the teacher and understand your responsibilities well in advance.
2. Attend the lectures of the course for which you are a tutor. Work out the solutions for all the tutorial problems yourself.
3. Approach fellow-TAs if you find any discrepancy or if you need help in solving the tutorial problems. If the issue is still not resolved approach the teacher.
4. If you are asked to prepare a tutorial sheet, do not copy and paste the contents from the internet. Try to use reference text books and be innovative.
5. If you think you have trouble expressing yourself in English, make sure that you speak English as much as possible. Seek out English-speaking lab-mates and friends for regular conversations, read English newspapers and books.

#### **During the tutorial session**

1. Report for the session on time.
2. Try to work with a smaller group of students. Make sure that you work with the same group every week. This will help you to keep track of the progress of the students through the semester.
3. Try to lead the students to the correct solutions by providing appropriate hints rather than solving the entire problem yourself.
4. Encourage questions from the students. You need not answer all of them; you can lead the group to a discussion based on their questions. It is best if the group arrives at an answer. In case you do not know the answer, accept the same with the promise that you will get back with the answer. Make sure to keep up that promise. You can plan to ask them some questions as well.
5. Be friendly and open with the students, simultaneously being firm with them.
6. Keep track of the progress of each student in your group. Give a periodic feedback to the student about his/her progress. Issue warnings if the student is consistently under-performing. Report to the faculty if you find that a particular student is consistently underperforming.
7. Pay special attention to slow-learners.
8. Be open to the feedback and comments from the students and faculty.

#### **After the tutorial session**

Many times you are required to grade the tutorials/assignments/tests.

1. Make sure that you work out the solutions to the questions yourself, and compare it with the answer key. Think and work out possible alternate solutions to the same question.
2. Understand the marking scheme from the teacher.
3. Consult the teacher if are in doubt.
4. Make sure that you are not partial to some student/students while grading. Follow basic ethics.



## Annexure II Preparation for laboratory sessions

There are three phases when you handle a laboratory

### **Preparation Phase :**

1. Meet the faculty –in- charge a few days in advance of the actual lab class and get the details of the experiment. Get clarifications from him/her regarding all aspects of the experiment and the expectations.
2. Prepare by reading about the theoretical background of the experiment. Know the physical concepts involved in the experiment. This helps in discussion and answering questions from students.
3. Go to the laboratory and check out the condition of the equipment/instrumentation. Perform the laboratory experiment at least once one or two days before the actual laboratory class. Make sure the equipment/ instrumentation are in good condition after your experimentation.
4. In case there are problems, report to faculty in charge and make sure that they are rectified in time for laboratory session.
5. Familiarize with safety/ security aspects of the experiment / equipment/laboratory.
6. Prepare an instruction sheet for the experiment in consultation with the faculty, and keep sufficient copies ready for distribution to students for their reference.
7. Obtain students roll list for the laboratory course.
8. Meet senior TA/TAs who have handled the laboratory session in earlier semesters to discuss their experiences. Try to discuss about the specific issues that they faced and how they handled difficult students/ difficult situations. Their inputs are invaluable.
9. If there are laboratory assistant available in the laboratory, introduce yourself to them and consult them in case of any necessity.

### **Laboratory Phase:**

1. Report on time for the laboratory class. Verify condition of the equipment/set up about 30 minutes before the students arrive in the class and be ready with the hand outs. Follow dress code if any.
2. After the students have come in take attendance.
3. On the first day, introduce yourself to the students and ask the students to introduce themselves to you. This is important to start off on a pleasant note.
4. Get the email ids and contact numbers of the students, and give them your contact phone number and email id for future interactions.
5. Make brief introductory remarks about the experiment, its importance, its relevance to the theory they have studied in the class.
6. In case the students are required to come to the laboratory with preparation, check whether it is done.
7. Ask the students suitable questions to know their level of preparation for the experiment.
8. Demonstrate the experiment, simultaneously explaining what you are doing.
9. Ask the students to perform the experiment and record data.
10. Let there be as much cooperative/group activity as possible
11. Tell them the importance of repetition of measurements and error analysis.
12. Guide them in doing the required calculations, in an interactive way.
13. Discuss how to interpret results. Ask them comment on the results.
14. Obtain the reports for grading –soft copy or written report as per the instructions of the faculty.



15. Clean up the set up, if necessary, and leave the set up in a good condition after the experiment.
16. Inform the students that they can meet you, if required, at a specified place and time. Keep about one hour per week for this activity

#### **Assessment and Feedback Phase:**

1. Correct/evaluate/grade the submitted reports after receiving suitable instructions from the faculty in charge. Have a consistent marking scheme.
2. Continue to interact with students if they have any clarifications regarding any aspect of the laboratory session, including of course grading.
3. At the end of the academic session, get a written feedback from the students study it and pass on the same to your faculty in charge. The feedback questionnaire will be supplied to you by the faculty in charge.

#### **Good Practices:**

1. Keep a professional demeanour throughout your interaction with students, in and out of the class/ laboratory.
2. Discuss with the faculty in charge the extent of your authority /responsibility while you are in the laboratory supervising the experiments.
3. Good preparation enhances competence and hence confidence.
4. Carefully observe instrument and human safety in laboratory class.
5. Preparing simple questions for short oral quizzing during explanation of experiments enables active participation of students, facilitate attention, provides feedback and formative assessment
6. Avoid any dishonesty during the discharge of your responsibility.