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Introduction

This manual describes the roles and responsibilities of a Teaching Assistant (TA) in the Department of Chemical Engineering. The object is to inform graduate students about the application process, regulations and expectations. It attempts to provide practical advice to TA’s and answer some common concerns about responsibilities and duties. Guidelines for tutoring and marking reflect the cumulative experience of a number of past and present graduate students and professors. You are urged to read them carefully.

The TAs in the Department of Chemical Engineering assist course instructors by tutoring, marking and/or proctoring. An effective TA plays an essential role in the learning process. A TA will answer student questions, help to solve problems and provide feedback. A TA for laboratory courses (101, 290, 291, 390, 391, 490 and 524) has to supervise lab experiments and guide the students to perform the experiments properly and safely within the allocated time. The Teaching Assistant job will benefit a graduate student by providing financial support and by providing experience in teaching and communicating knowledge.

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Types of Tasks

There are three types of Teaching Assistant tasks:

- A Task – Requires an average of 10 hours per week (13 weeks, or 130 hours)
- B Task – Requires an average of 7.5 hours per week (13 weeks, or 97.5 hours)
- C Task – Requires an average of 5 hours per week (13 weeks, or 65 hours)

A list of tasks typically available in each academic term is included in the Appendix. Knowing when each task is available may help graduate students planning when it is appropriate time during the program to apply for a TA position.

The Ontario Ministry of Education and Training expects that universities will restrict their employment of full time graduate students to a maximum of ten hours per week. University Policy is described in “Guidelines on Graduate Student Support”, which you were notified about on admission. This information can be found at:

https://uwaterloo.ca/graduate-studies/guidelines-graduate-student-support

Refer to your Letter of Admission to Graduate Studies for specific details. The letters are specific for each grad student. A typical statement in the offer of admission may say:

“Additional financial support of up to ~$4,000 per term may be provided from time to time, in the form of teaching assistantship. Teaching assistantships require an additional time commitment of up to ten hours of work per week. These cannot be offered in advance of your arrival at the University of Waterloo and are conditional upon successful completion of the Faculty of Engineering Expectations training course, which is offered twice per year (Normally in April and September). Please note that although you may apply for teaching assistantships, this award is not guaranteed.”
Some scholarships place restrictions on the number of TA units a student may accept per year. For example, holders of NSERC Post-Graduate Scholarships are not to spend more than 450 hours per year on such duties.

International graduate students have to provide a copy of a valid study permit to the University Graduate Studies Office at Needles Hall.

Application for TA Position
Every term the Graduate Office will make available a timeline for application and an updated list of TA tasks available.

- Grad students are allowed to apply for up to 3 different tasks in each term.
- The applicant should rank the preference for the tasks with numerical order (1, 2 and 3).
- Grad student enrolled in the PhD or MASc programs must consult with the research supervisor and obtain permission before the application is submitted. This permission should be in the form of an e-mail from the supervisor to the student. You may be asked to provide a copy if necessary.
- Grad students enrolled in the MEng program must have completed at least 3 grad courses towards degree with overall GPA equal or above 85%.
- The applicant must be in good standing with the degree requirements.
- The applicant must inform on the application if there are plans to be away from the job to attend conferences or meetings related to research activities (indicate the name of the conference/meeting and dates).
- The applicant must have completed the required safety training.
- The applicant must have completed TA Expectations training (or have plans to complete before the TA task starts).
- The applicant must read and understand the requirement of each TA task before applying for it.

The application process is being implemented in electronic format. See instructions in the Appendix. The link for the electronic form is https://chesp.uwaterloo.ca/sites/ta/SitePages/TA%20Application.aspx

Selection Process
The selection of candidates for the different tasks is carried out by a TA Selection Committee. The selection process takes into consideration the requirements for a given task, student preferences, time in program/milestones achieved, the background knowledge, skills and experience of applicants, the progress towards degree requirements and the history of individual applicants with respect to TA. The decision of the committee is final. The TA Selection Committee is composed of the Graduate Review Committee and the CHE Laboratory Instructors as well as a member of CEGSA.

Getting Paid
The TA hourly rate is reviewed each year; information will be made available by the Graduate Studies Office. Teaching Assistant will be paid on the last Friday of every month directly into their bank account. Contact the Graduate Co-ordinator if there is any issue with your payment.
A social insurance number is required to receive payment. Go to the International Students Office (ISO) website at https://uwaterloo.ca/international-students/, click on “New Students”, “applying for documents”, and then “Social Insurance Number”. Get an employment contract from the Graduate Co-ordinator to fill out. Ensure you have a valid study permit as you will be asked for this information. After you have obtained a social insurance number, take this together with your current bank, branch, account number, and a void cheque to Human Resources in the General Services Complex. Also, ensure that your local mailing address (not Department/School address) is up to date on Quest as income tax documents may be mailed to this address. Arrangements can be made to pay for tuition out of the monthly TA salary. Guidelines for arranging this are available at the Finance (studentaccounts) website at http://www.adm.uwaterloo.ca/infofin/students/stdfees.htm.

Select “Using financial aid to pay fees”, scroll to “Using RA or TA income to pay for your fees”.

Availability and Permission for Short Leave During the Term

TAs must be available during regular assigned tutorial/laboratory hours. Plan in advance to avoid conflict with graduate courses. TAs for the lab courses must be in the lab at least 10 minutes before the scheduled starting time of the lab session. TAs must be available from the first week of each academic term. This is particularly important for TAs doing laboratory tasks. For official dates Lectures/classes begin, see link https://uwaterloo.ca/quest/undergraduate-students/important-dates

Permission to be absent from the TA job during the academic to attend conferences has to be obtained from the Associate Chair of Graduate Studies and the course instructor at the beginning of the term.

Permission will be granted only for the time required to attend relevant conferences or research meetings, like when the student needs to present a seminar or a poster.

Permissions will be granted only if the applicant is able to make arrangements with someone that is capable of delivering the TA duties (like another grad student that has done the same task previously).

Students should not plan to take vacations during the TA task.

If due to serious illness/injury or emergency you are unable to fulfill a task that is part of your assignment, notify your TA supervisor immediately. Bring a completed University of Waterloo Verification of Illness to the Graduate Studies Office and the TA supervisor. Information about this service is available at:

https://uwaterloo.ca/health-services/student-medical-clinic/services/verification-illness

Meeting with Course Instructor at the Beginning of the Term

Meet with your TA supervisor (usually course instructor) before the beginning of the term to discuss your duties and the expectations during the term.

Clarify your duties to prevent miscommunication:

- how you will stay in contact with supervisor;
- course content and schedule;
- get a course outline and any reference materials (notes, textbooks, solution manual, etc.);
- schedule for proctoring exams/quizzes;
• scheduled dates for exams and group marking;
• solutions and marking scheme for assignments/quizzes;
• number of assignments and timing of them, how you are to receive/return assignments;
• expected turnaround time;
• if there are several TA’s, how will the work be divided;
• how are marks to be recorded; and
• office hours (time and location).

It may also be helpful to attend the first class of the course, introduce yourself to the students and get an idea of how the course is taught. Ask the course instructor about any specific expectations regarding the delivery of the TA task.

Comment: “TAs are unapproachable, unfriendly, condescending and impatient”

Answer: It is your job to help students, your demeanor is very important

Office hours provide the students with the opportunity to seek help with their assignments. Common questions are “How do I do this question?”, and “What’s wrong with my solution?” These are tricky questions to answer without giving away too much. It takes a lot of practice to give useful and enlightening hints. Ask the student to explain what the question is asking and to describe their reasoning. This will help to reveal if the student has a concept of the problem. You may also want to point the student to the appropriate section of the textbook.

Comment: “They don’t seem to have read the assignment, so how can they help me with it?”

Answer: Familiarize yourself with the current material and assignment before you tutor or mark.

• Be approachable, enthusiastic and honest.
• Be prepared. Review material on which the students are currently working. If you think something is incorrect, see the instructor in advance.
• You should be able to answer all routine questions about the course material. If a student asks a difficult question, take a minute before you answer. If unable to answer, advise them that you will find the answer and communicate it after getting confirmation.
• Always have the course material handy.
• In a tutorial, don’t just sit at the front of the room. Circulate around the room. Try to engage students by asking if they are making progress.
• Try to include everyone when giving answers to questions.
• Encourage the students to ask clear and specific questions.
• Always solve the tutorial questions before the actual tutorial.

Comment: “Their English is so bad that I can’t understand what they are saying”

Answer: The ability to express yourself clearly in English is expected of TA’s. The International Student Office in Needles Hall has courses available to help you improve your language skills.
Comment: “There aren’t enough comments on my paper to know what I did wrong”

Answer: Point out the key error in an incorrect solution and refer students to the solutions if needed.

Assignments are a major source of feedback for instructors and students. TA’s should provide students with information about how well they are learning course material. Assignments indicate to the instructor how well the course material is being communicated.

The TA will advise the students where and when to submit their assignments. If you find an assignment for another course in your box, write the date on it, sign it, and bring it to the Graduate Co-ordinator.

If a student has a problem submitting their work on time, any arrangements must be approved by the course instructor.

At the discretion of the course instructor, you may be asked to mark part of the midterm or final examination for the course.

Your marking style will depend on the instructor’s instructions.

- Examine a student’s solution carefully, clearly mark where the student went wrong, and, if necessary, write a short explanation. If the student appears overly confused, you can provide a short comment, (get help from professor) or (see solutions).
- Avoid ambiguous or cryptic comments or symbols. Avoid arrogant or sarcastic comments.
- Mark consistently. It will help to mark one question at a time on all papers.

Comment: “They follow the marking scheme and won’t admit another solution is correct”

Answer: If you make sure that you understand the material, marking unique solutions should not be a problem.

If it is your job to create the marking scheme, skim the papers to help you decide whether your proposed scheme is reasonable. Ask the instructor whether some marks should be assigned for presentation.

Office Hours

TAs may be asked to have office hours during which undergrad students can stop by and ask questions. Try to schedule office hours to start during one class period and end during the next class period to minimize time conflicts. Post office hours and TA contact information on UW-Learn.

Satisfactory Performance

If you have a problem carrying out your job (i.e.; your duties are requiring more than the allotted number of hours per week), you should first talk to your course instructor or course supervisor. Get in contact with the course instructor/TA supervisor if you have questions. It is also a good idea to discuss any problem you have with your own academic supervisor and the Associate Chair of Graduate Studies.
Comment: “The TAs don’t understand the course material”

Answer: Make sure you are capable of delivering the TA task you have been assigned.

TAs are expected to have general competence in the area of the task. TAs expected to know in detail the material in the courses you are TA’ing. If not, then you must spend time to learn the material, and this is time that is not included in the TA work hours. At the end of term, return all course materials you may have received and ask the course instructor if all tasks have been completed. TAs for laboratories are expected to have completed the experiments and write a short report for laboratory instructor before the lab sessions. TAs are expected to meet required deadlines and be punctual in carrying out their assigned duties. If the TA is unable to meet deadlines, the TA contract may be canceled.

If the performance during the term is unsatisfactory, the TA will be warned in writing by the course instructor/TA supervisor. Continuing unacceptable performance during the term will be reported in writing to the Associate Chair of Graduate Studies. If the student does not meet the expectations of the TA assignment as outlined above, the department, at its discretion, may permanently exclude the student from any future TA assignments. The TAs are evaluated by the course instructor/TA supervisor at the end of each term (see form in Appendix).

Applicants that attempt to pursue a TA task without the appropriate background will compromise the learning experience of the undergraduate students. In the case of laboratories, this may also lead to exposing individuals to hazardous situations. The TA contract can be canceled when a condition of lack of background or unsatisfactory performance is identified.
Appendix

Information, Privacy and Copyright Issues

- Material that contributes to a student’s grade must not be left in a public place.
- Comments/grades should be recorded on pages hidden from view of other students.
- Exams/assignments should be returned only to students who wrote them and not other individuals unless written permission has been given by the author.
- It is a good practice to include a comment sheet when returning assignments to the instructor/professor, letting them know what material is giving students the most trouble and what things they understand well.
- Explain to the students the reasoning of for the marking scheme, but do not let the students talk you into changing the marks without a reason.
- Detecting students who are cheating is important. Inform the course instructor.

Proctoring Tests and Examinations

See the following University link with rules and guidelines:

[https://uwaterloo.ca/registrar/final-examinations/examination-regulations-and-related-matters#rules](https://uwaterloo.ca/registrar/final-examinations/examination-regulations-and-related-matters#rules)

- TA's in the Department of Chemical Engineering will proctor tests and examinations.
- Midterm tests may be held during class time or during the evening.
- Final exams are always written during official examination period.
- Ensure that all unauthorized materials are placed out of reach and sightline at the front or side of the room.
- Sit students with at least one chair in between them. You can and should re-arrange students prior to and even during the exam to prevent students from looking at another paper or calculator.
- For exams and tests outside of normal class time, you are expected to appear 20-30 minutes before the exam begins in order to distribute exam material. You should have everything prepared so that the exam beings on time. Latecomers can then be handled with minimal disruption.
- If there is a mistake or typo in the exam questions, announce this at the beginning of the exam period and write the change(s) on the black/white board. Also advise any examination procedures to be followed (i.e., no one is to leave the exam during the last fifteen minutes)
- If the exam is held in a classroom, regulations require that students sit in alternate seats. Once students have settled down, take a head count as it is useful to know the numbers of examinees present.
- Students should sign an attendance list, and should display their WATCARD while doing so. This protocol discourages cheating.
- If a student asks to leave the room for a short period (i.e. washroom break), make sure all others are present before allowing him/her to leave and have another TA go with them. Only one student at a time should be allowed to leave.
• Do not sit at the front reading a book or doing some work. Walk around the room frequently and change your location in the room when sitting down. Students must realize that proctors are being vigilant.
• Make an announcement when the exam in ½ over, and when there are 10 minutes left in the exam period, and no student may leave the exam in the last 10 minutes. Collect exams punctually.
• Extend the exam period only on the professor’s instruction.
• Remind the students not to discuss the exam until all papers have been collected. As papers are turned in, check each to ensure the name and id# are on it.
• Count the exam booklets to make sure there is the correct number BEFORE students are allowed to leave the room.

Cheating and the Academic Discipline Policy

Watch assignments for copying and cheating. If you feel that students have copied an assignment bring the assignments to the instructor prior to returning the assignment or recording a mark. Nevertheless, do mark the assignment, but draw attention to area that you feel may have been copied.

Tip-offs to plagiarism on assignments and labs, include:
• Entire section with better language than others (paste the section into Google and you can likely identify the location from where it was copied).
• Lack of proper citation or referencing.
• Same wrong answer (i.e. simple calculator error) as other students, but note that students may come up with the same wrong answer routinely without cheating through the same incorrect methodology:
  o Same wrong value, ‘units’ or inverted unit conversion
  o Same spelling or grammar error, and/or
  o Same format error on a plot of figure.

Do not distribute or allow students to have copies of solutions to the assignments that the instructor has not specifically allowed.

If a student comes for assistance, one’s first question should be – show me your current work on the question.

Students are encouraged to form a study group, but each student should:
• Outline the problem on their own.
• Try the problem on their own.
• They then complete and are allowed to verify solutions with others.
• They should identify your study group members on their assignment, and it is expected that a study group will have similar approaches to problem, but it should still not be simply copied.
• They should try to explain completed problems to each other.
• They can do additional problems prior to mid-terms and exams in a study group and share answers, but these should not be allowed in the exam.

Cheating on exams, tests, or assignments is a serious offense and the penalties range from a grade penalty to suspension or expulsion from the University. Cheating includes using
unauthorized aids or communicating in any way with others during an examination. If you observe cheating during an exam first try to prevent the cheating by moving the student. If there are un-authorized materials remove them prior to the exam starting. Make clear and repeated announcements prior to the exam starting as to what type of materials is allowed. Check students desks as the exam is starting to ensure that there are only these types of materials. Thus, prior to your test/exam starting, please ensure that you clearly state the rules and parameters of the exam. The students need to know what is allowed during the exam and what is not. See link for Academic Integrity for Graduate Students http://www.lib.uwaterloo.ca/gradait/

If you detect the possibility of cheating during a test or exam, you must inform the course instructor as soon as possible. You must immediately write a note about the incident and keep any evidence.

**Academic Integrity Policy**

The University of Waterloo requires that all course descriptions contain material related to plagiarism. http://www.eng.uwaterloo.ca/~ugoffice/course_responsibilities.html

Acceptable rules for group work:

- Students may consult other students for assistance for assignments and labs, but each student must submit his/her own version of the work, assignments, spreadsheets, and/or results. Completion of the assignment is the principle method to learn the material in the course.

Academic Integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. www.uwaterloo.ca/academicintegrity/

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance.

Read Policy 70, Student Petitions and Grievances, Section 4, www.adm.uwaterloo.ca/infosec/Policies/policy70.htm.

Discipline: A student is expected to know what constitutes academic integrity to avoid committing an academic offence, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course instructor, academic advisor, or the undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to Policy 71, Student Discipline, www.adm.uwaterloo.ca/infosec/Policies/policy71.htm

For typical penalties check Guidelines for the Assessment of Penalties, www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm

Appeals: A decision made or penalty imposed under Policy 70 (Student Petitions and Grievances) (other than a petition) or Policy 71 (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) www.adm.uwaterloo.ca/infosec/Policies/policy72.htm
Other Links

Events for Teaching Assistants:
https://uwaterloo.ca/centre-for-teaching-excellence/events(category/84

Instructions for TA Application using Online System

1. Access the sharepoint site using
   https://chesp.uwaterloo.ca/sites/ta/SitePages/TA%20Application.aspx

2. Log in using your NEXUS user id and password.

3. Read the course/tasks that are available for a given term and the required skills for each course/tasks.

4. Read instructions about Mandatory Safety Training.

5. Access the Application Form by clicking on “Chem Eng TA Application Form”.

6. In Requirements, complete the fields with your information.

7. Add in “Days/Times Unavailable due to courses or Conferences” the information about commitments that you already know. For example: Planning to attend the CSChE Conference from xx to xx.

8. Identify if you applied for or if you are planning to apply for a TA position outside Chemical Engineering. For example:


10. “Non Chem Eng TA course Names:” □ NE123, NE456

11. In Preferences, identify the tasks that you are applying for using “TA Course Task Level” from the pull down menus. In “Your Skill set applicable to this TA in your words”, add yours skills and qualifications to support your application for a given task. The selection committee will use this information to evaluate if you have the skills and experience required for the job. If you are applying for a laboratory task (CHE 290, 291, 390, 391 and 490), indicate your preference for Task 1 (experimental), Task 2 (computer tutorial) or both.

12. In TA History, use the pull down menus to list previous TAs in the CHE department.

13. Click on “Submit” to complete your application.