

Teaching Assistants Manual

2024-2025



UNIVERSITY OF
WATERLOO

Department of
Chemical Engineering

Table of Contents

Introduction	1
Contact Information	1
Teaching Assistant Program Coordinator	1
Associate Chair – Operations.....	1
Teaching Assistantships	1
Graduate Student Employment	1
Restrictions	2
Requirements	2
ChE TA Opportunities.....	2
Job Listings for the Upcoming Term.....	2
Workload	3
Competency	3
Application Process	3
Employment Contract	4
Selection.....	4
Compensation	4
Administration for Payroll.....	4
Effective Teaching	5
Training/Resources	5
Mandatory Training.....	5
Optional Resources	6
Preparation.....	6
Instructor Expectations	6
Course Material.....	7
Absences from Work.....	7
Performance	7
Behavior	8
Assignments	8
Marks.....	8
Questions.....	9
Office Hours.....	9
Harassment and Discrimination	9

Unsatisfactory Performance.....	10
Appendix A: Information, Privacy and Copyright Issues.....	11
Appendix B: Cheating and the Academic Discipline Policy	12
Assignments	12
Study Groups	12
Appendix C: Academic Integrity	13
Grievances	13
Discipline	13
Appeals.....	13

Introduction

Thank you for your interest in the teaching assistant program within the Department of Chemical Engineering (ChE).

Teaching Assistants (TAs) play an essential role in our students' learning process. TAs support course instructors by answering student questions and marking papers. They support students by answering their questions, helping them solve problems and providing useful feedback about their work. TAs for laboratory courses guide students to perform experiments properly and safely within the allocated time. In addition to supporting student learning, TAs support the University by modelling ethical behavior, preserving academic integrity, protecting student privacy and maintaining a safe environment.

In return for their contributions through their TA position, graduate students earn money and gain experience teaching and communicating. This job experience provides a new perspective from which to consider teaching, learning and the discipline of chemical engineering.

Whether you are thinking about becoming a TA or looking for information to support you in your current role as a TA in the Department of Chemical Engineering, this manual is a good place to start. It provides some basic information for teaching assistants (TA's), including an overview of employment guidelines for graduate students and the application process. It also includes information for students who have been assigned a TA position, including training requirements, helpful tips to enhance your on-the-job performance and resources for further information. Although the Department of Chemical Engineering strives to keep this guide up to date, changes for the term that you are TAing may not be reflected in this document.

Contact Information

If you have TA-related questions that this manual does not answer, please contact one of the departmental representatives below:

Teaching Assistant Program Coordinator	Sarah Fischer 519-888-4567 x41585 sfische4@uwaterloo.ca	E6 3024
Associate Chair – Operations	Nasser Mohieddin Abukhdeir 519-888-4567 x31306 nmabukhdeir@uwaterloo.ca	E6 3016

Table 1: ChE TA Contacts

Teaching Assistantships

The Department of Chemical Engineering hires graduate students to act as teaching assistants (TAs) for dozens of undergraduate lectures and laboratory courses each term. Graduate students must apply for and be selected to undertake such positions. Applicants must ensure that they are eligible and have the qualifications and time available to take on teaching assistant responsibilities.

Graduate Student Employment

According to the Ontario Ministry of Education and Training, universities can employ full-time graduate students for up to twenty hours per week.

The University of Waterloo's guidelines for graduate student support specify "through the university, full-time students can accept on average at most twenty hours of paid employment per week, unless the employment is directly related to their degree programs. The twenty-hour maximum applies to the total time required for Teaching Assistant and Research Assistant duties."

Restrictions

Your participation in TA employment may be restricted by policies put in place by the Department of Chemical Engineering, the Faculty of Engineering, the University and/or any funding agencies, including those that have provided scholarships. For example, the NSERC Post-Graduate Scholarship places restrictions on the number of hours per year a recipient may spend fulfilling TA duties. It is your responsibility to be aware of any restrictions on your ability to engage in paid employment and proceed accordingly.

Your Letter of Admission to Graduate Studies may include other information specific to your situation. Please refer to your letter of admission for more details.

Requirements

Chemical Engineering has the following requirements for graduate students who would like to be a TA:

- If they are direct-admit PhD students beyond the 6th term or regular-admit PhD students beyond the 4th term, then they must have completed their Comprehensive Exam.
- If they are probationary or transitional students, they must have satisfied the requirements to be re-classified as a regular student.
- They can provide Canadian SIN and bank account information.
- They have completed the mandatory ExpecTations training.

There are several requirements that must be met by a student to qualify for employment as a Teaching Assistant:

- Teaching Assistants must be a registered full-time student.
- Teaching Assistants must be available during times scheduled for the courses's lectures, tutorials and labs.
- Teaching Assistants must be available from the first day of the first month of the term until the last day of the last month of the term.
- International students must have a valid study permit. You must ensure the study permit has not expired or will not expire during the period of teaching assistantship. Please see GSPA's update your [immigration status website](#) for more information regarding renewal of study permits or immigration status changes.

ChE TA Opportunities

Current job listings and the online application form are available on the Department of Chemical Engineering's FileMaker application site: <https://tinyurl.com/TA-Online-System>.

Job Listings for the Upcoming Term

1. Navigate to <https://tinyurl.com/TA-Online-System>
2. Use your WatIAM username and password to access the site.
3. You will see personal information that needs to be completed at the top, the course number, and the number of hours per term required. A brief description of the competency required for the position is available by clicking the "?" button.

Workload

The Department offers three levels of TA positions, based on the number of hours per week required.

The table below describes the workload associated with each level of time commitment:

Level	Average Required Time per Week	Average Required Time per 13- Week Term
A	9.23 hours	120 hours
B	7.5 hours 7.69	100 hours
C	5 hours 3.84	50 hours
D	-	20 hours

Table 2: TA Levels and Time Commitments

Competency

To perform your TA duties well, you must have general competence in the topic of the course you have been assigned and a complete understanding of the material it covers.

If, after you secure a teaching assistant position, you realize that you have not mastered the course material, then you must learn it on your own time. In other words, the time it takes to learn the course content is not included in your TA work hours and no financial compensation is available for it.

TAs without the appropriate background and/or the ability to express themselves clearly in English could compromise the learning experience of their undergraduate students and, in the case of laboratories, expose students to hazardous situations. For these reasons, the department can cancel your TA contract if it is determined that you lack the necessary background or your performance is unsatisfactory.

Tip: The University's [Writing and Communications Centre](#) provides resources to help you improve your language skills if necessary.

Application Process

Interested graduate students must apply online to be considered for a TA position. To do so, follow these instructions:

Navigate to <https://tinyurl.com/TA-Online-System>

1. Use your WatIAM username and password to access the site.
2. Complete the personal information along the top. Once this has been completed, Select, in your order of preference, one or more courses that you would like to TA.
3. For each of the three preferences, describe how your skill set makes you a suitable

candidate to TA that course.

4. Click 'Submit.'
5. A confirmation email will be sent to confirm your application. If you do not receive a confirmation email, please email s4fische@uwaterloo.ca to assist with your application.

Tip: Before you apply for any TA position, read and understand the requirements to be sure that you can fulfill them.

Employment Contract

All Teaching Assistants (TA's) must sign a TA contract letter which clearly states the position, remuneration and responsibilities for the task they are about to undertake.

Teaching Assistants are required to complete a Weekly Time Tracking form (a link will be provided at the beginning of each term). Failure to complete this form by the outlined deadline may result in termination.

Selection

TA positions are assigned based on student priority, TA task, preference of the instructor for the TA, and preference of the student for the task.

Students gain or lose priority based on the Teaching Assistantships held, the number of TA tasks completed, and their performance (punctuality, preparedness, and overall competence). The department will endeavor to capitalize on former experience, while still providing opportunities for new TAs, i.e.: a TA will be given lower priority for a course if they have been the TA for the same course in the last 2 offerings of the course; or, a TA will be given lower priority if they have been given 2 Teaching Assistantships in a single year. Students with poor performance (an example of which is not showing up for their proctoring duties) shall be given the lowest priority and risk not being assigned a Teaching Assistantship.

Selection is final; however, if a TA who is offered a Teaching Assistantship rescinds their offer, it is possible to still be offered a TA position after the first round of offers is made.

Compensation

TAs are paid on a monthly basis in accordance with the University of Waterloo's rates or Graduate Teaching Assistantships.

Graduate Teaching Assistantships are considered employment income and are subject to statutory deductions for income tax, Canada Pension Plan (CPP) contributions and Employment Insurance (EI) premiums.

Compensation requires the TA's satisfactory performance of the duties expected of their position.

Administration for Payroll

Once you have been selected for a TA position, you must complete some administrative tasks

to ensure that you will be paid for your work.

The TA Program Coordinator will send you a TA Confirmation Letter. This letter is like an employment contract. It describes the TA position's level and compensation. After you sign the TA Confirmation Letter, return it to the TA Program Coordinator.

With the receipt of your signed document, the TA Program Coordinator will register you as a TA. Soon after, you will receive an email from Workday, the University's human resources software system, requesting that you complete the onboarding process. It requires you to submit the banking and personal information required to arrange the Department's payroll processes.

The University will deposit your payment into your bank account on the last Friday of every month you are employed. If there is a problem with your payment, contact the TA Coordinator.

Tip: If you need a social insurance number (SIN), see the instructions on the [Student Success Office](#) web page.

Tip: You can arrange to have your tuition paid directly from your monthly TA salary. Guidelines for arranging direct payment are available on the [Finance \(Student Financial Services\)](#) web page. Under 'Paying Your Fees,' select 'How to become "Fees Arranged" and what it means.' Under the heading 'There are two ways to become "Fees Arranged,"' select 'Pay all or part of your Term Balance later by using the Promissory Note process'.

Effective Teaching

Before you begin your job as a teaching assistant, ensure that you understand your specific role and responsibilities and that you have completed all your training and conducted all the activities you need to be prepared.

Training/Resources

The University provides many resources that will help you become an effective TA. Some training is mandatory, and some is optional – and encouraged.

Mandatory Training

As a TA in the Faculty of Engineering, you must complete the following mandatory training before you begin your duties:

- [ExpectATions](#) –workshop offered over a two week period. This training is held each term in October, February and June. Currently, ExpectATions is offered virtually with synchronous and asynchronous components, which takes approximately 8 to 10 hours to complete.
Visit Engineering's [Teaching assistants \(TA's\)](#) web page for details about the workshop and when it is scheduled to be offered again.
- [UW Safety Office Training](#)
 - SO 1100 Supervisor's Safety Awareness
 - SO 1001 Employee Safety Orientation
 - SO 1081 Workplace Violence Awareness

- SO 1002 WHMIS for Employees
- SO 1010 Laboratory Safety
- AODA Accessibility Training
- [Chemical Engineering Safety Manual](#) - last updated June 2019

Optional Resources

In addition to the mandatory training required for your employment as a TA, there are other ways you can improve your skills.

You are encouraged to take advantage of the many resources offered by the University's Centre for Teaching Excellence (CTE). University of Waterloo graduate students may attend individual workshops and enroll in certificate programs. CTE also provides the following resources specifically for graduate students and postdoctoral fellows:

- Workshops for international teaching assistants (TA's) who are new to teaching in Canada.
- A week-long [Teaching Development Seminar Series](#) for postdoctoral fellows.
- [CTE's TA Manual](#), which contains resources, policies, strategies, and suggestions for teaching assistants.
- Consultations with graduate students and postdoctoral fellows preparing their [teaching dossiers or statements](#) of teaching philosophy for academic jobs.
- Being a TA in Online Courses

LEARN will likely be an important part of your role as a TA. Consider these resources:

- Getting Started in LEARN: in-person, interactive workshop offered at the beginning of each term: See the CTE Events Page.
- LEARN Help Resources for Teaching Assistants: resource providing step-by-step guidance on how to do common LEARN tasks such as entering grades and managing a discussion forum.
- Teaching Online: Basic Skills for TAs – an online module developed by the Centre for Extended Learning.
- Online self-paced modules on online and blended teaching developed by Carleton University.

Preparation

To be successful in your TA position, prepare in advance so that you understand your responsibilities, assemble all the material and information you need well before the first day of classes or labs, and consider the workload and time requirements for the remainder of the term and how they relate to your personal schedule.

Instructor Expectations

Before the term begins, meet with your TA supervisor, who is usually the course/lab instructor of the course you have been hired to support. When you discuss your duties and the instructor's expectations of you for the term, ensure that you cover the following topics:

- Preferred method of communication
- Specific expectations
- Course outline

- Course content and schedule
- Course reference materials (notes, textbooks, solution manual, etc.)
- Quiz/test/exam schedule
- Assignment schedule
- Assignment/quiz solutions and marking scheme

- Assignment receipt/return method
- Expected turnaround time
- Recording method for marks
- Division of work among multiple TAs, if applicable
- Office hours – location, including remote hours via MS Teams, and time

Course Material

Knowing as much as possible about your course/lab will increase your confidence and ability to support your students. Here are some tips on how to prepare for your TA duties.

Plan to attend the first class of the course, where you can introduce yourself to the students and learn how the course is taught. If you are teaching a lab, visit the laboratory where it will be conducted to ensure that you know where the equipment, chemicals and supplies are stored and what dangers, such as high-voltage electricity and corrosive chemicals, might exist. Before the lab sessions begin, complete the lab experiments yourself and write a short report for your laboratory instructor to confirm that you understand the associated expectations.

Before you conduct a tutorial, familiarize yourself with the material on which the students are working. Solve the tutorial questions ahead of time so you know the answers and how they can be found. Have all the course material nearby while you are teaching – you never know when it will help you answer a student's question.

Tip: If your early review of the course material reveals any problems, discuss them with the instructor before your session with your students.

Absences from Work

Sometimes, important obligations conflict with the responsibilities of a TA position. To be absent from your TA duties, you must get permission from the TA Coordinator *at the beginning of the term*.

Note: Lab TAs cannot be excused from TA duties. Lack of consistency in the lab poses a safety concern for students.

Tip: Do not plan to take any vacation time during your Teaching Assistantship

If a serious illness or injury or an emergency leaves you unable to fulfill any part of your TA assignment, notify your TA supervisor and TA Coordinator immediately. It will be your responsibility to complete a 'Request for Leave of Absence' Form and have your family physician or a University of Waterloo Health Services representative complete a University of Waterloo [Verification of Illness](#) form.

Performance

Successful TAs share some common traits and approach their jobs in similar ways. Your behavior and the way you handle the administrative and communication aspects of your job can influence the quality of your work.

Behavior

In a tutorial, your behavior and mannerisms affect the students' response to your efforts. Be approachable, enthusiastic, and honest. If on campus, circulate around the room and try to engage students by asking if they are making progress. If you're working remotely, use the "Ask the Instructor or TA" discussion board on LEARN to answer students' general questions about course content or assessments. Promote interaction and meaningful discussions. Whether in person or online, facilitate discussions by asking good questions, making connections, and responding to a variety of students.

Encourage the students to ask clear and specific questions. When you answer a question, try to involve everyone – not just the person who asked it. You should be able to answer all routine questions about the course material. If a student asks a difficult question, consider it carefully before you answer. If you cannot provide an answer, explain that you will find the answer and let them know more later.

Assignments

Assignments provide a major source of feedback for instructors and students. They help instructors know how well their students are learning the course material, so they can make changes to their teaching content and/or delivery if necessary. They help students recognize their own progress (or lack thereof), so they can adapt their study habits if necessary.

Unless the instructor has specifically allowed it, do not distribute, or allow students to have copies of solutions to the assignments.

Usually, the instructor will tell the students where and when to submit their assignments. You should discuss with the instructor how they would like you to access the submitted assignments. If you mistakenly receive an assignment for another course, write the date on it, sign it and bring it to the Department's [Undergraduate Advisor](#).

If a student has a problem submitting work on time, discuss this with the instructor and get their approval for any arrangements you want to make with the student. Make sure you are aware of any alternate arrangements specified in the course outline.

Marks

Most often you will be expected to grade assignments, quizzes or lab reports. At the discretion of the course instructor, you may also be asked to mark part (but not most) of a midterm or final examination for the course using a solution key and marking rubric prepared by the instructor.

While your marking style will depend on the instructor's preferences, consider the following common guidelines:

- Examine a student's solution carefully.
- Clearly mark where the student went wrong and, if necessary, write a short explanation.
- If the student's work implies confusion, a short comment like 'Get help from professor' or 'See solutions,' may be helpful.
- Point out the key error in an incorrect solution and refer students to the solutions if necessary.
- Avoid ambiguous or cryptic comments or symbols.
- Avoid arrogant or sarcastic comments.
- Mark consistently. Marking one question at a time on all papers can help with consistency.

You may not always see the exact solution that you expect. Unique – and correct – solutions are possible. When you understand the material well, correct solutions that fall outside the marking scheme should be easily identifiable. Be on the lookout for unexpected correct solutions.

Students depend upon useful and informative marking comments to help them identify and solve problems with their work. Without enough commentary, they cannot know what they did wrong or how to improve their approach.

Questions

Students will come to you for help with problems and assignments. Frequently asked questions include:

- How do I do this question?
- What's wrong with my solution?

Your first response should be "Show me your current work on the question."

To reveal if the student understands the problem, ask them to explain the question and describe their reasoning. It can be tricky to answer questions without giving away too much information. Giving useful and enlightening hints takes practice.

Office Hours

You may be asked to hold office hours during which undergraduate students can stop by to ask questions and seek help with their assignments.

To minimize time conflicts for students, try to schedule your office hours to start during one class period and end during the next class period. Ask the instructor for the students' common timetable, this is available to instructors on the [outline.uwaterloo tool](#). Post your office hours and TA contact information on [Waterloo LEARN](#).

Harassment and Discrimination

In your role as TA, you are in a very visible and accessible position. Some students feel more comfortable talking with a TA than other members of the University community, and you may be called upon to talk about more than just academic work.

If you become aware of or are approached about any situation involving harassment or discrimination, you have serious responsibilities as a TA. When an initial complaint is handled well, with sensitivity and understanding, the potential for a successful resolution increases dramatically.

When problems related to [harassment](#) and discrimination arise, you may be the first person in an official capacity called upon to respond. As a TA and employee, you are required under University [Policy 33 - Ethical Behavior](#), [Policy 42 - Prevention and Response to Sexual Violence](#), and provincial human rights legislation to respond in a timely and sensitive manner.

You are not required to take formal action on the complaint. But it is important to listen to the complaint, notify your immediate supervisor as soon as possible and get help to determine how to proceed.

The [Conflict Management and Human Rights Office \(CMAHRO\)](#) has prepared [Guidelines for Teaching Assistants](#) to assist in the rare, but difficult, cases when a TA is presented with an initial human rights complaint. Since these issues can be complex and serious, these

guidelines focus on that initial meeting where you may be asked to respond to the student bringing a concern.

After the initial encounter with the student, you must consult with your course professor or department chair. You may also access other resources on campus, including CMAHRO, Counseling Services, Health Services and Campus Police.

Tip: For more information about the University's Workplace Harassment Program, see the Safety Office's [Workplace Harassment Program brochure](#).

Unsatisfactory Performance

The department may, at its discretion, permanently exclude poorly performing TAs from future TA assignments.

If you have a problem carrying out your job, you should first talk to your course instructor or your TA supervisor. It is also a good idea to discuss any problem you have with your own academic supervisor and the Associate Chair of Graduate Studies.

If your on-the-job performance is unsatisfactory, either your course instructor or TA supervisor will provide you with written notice. If, after that notice, your performance continues to be unacceptable, your course instructor or TA supervisor will provide written notice to the TA Committee Chair.

Your performance will be evaluated by either the course instructor or your TA supervisor at the end of each term as well as by the students. If you apply for TA positions in the future, this evaluation will be considered during the selection process.

Appendix A: Information, Privacy and Copyright Issues

Universities must comply with the provisions of the provincial Freedom of Information and Protection of Privacy Act. The University of Waterloo must collect, use, maintain, disclose and dispose of personal information in a manner consistent with the legislation. You must exercise care to protect students' privacy when returning their assignments and posting their grades.

Here are some highlights to remember:

- You must comply with [Policy 46 – Information Management](#).
- Never leave material that contributes to a student's grade in a public place, unless the instructor has included notification on the course outline and provided an alternative to those students who request it. Alternative options may include pick up during the instructor's office hours; pick up from administrative staff or the TA; or delivery by mail, provided that the student supplied a self-addressed, stamped envelope.
- Even with permission to leave marked material in a public place, it should be there for no more than two weeks.
- Material left in a public place should be identified by the students' student ID numbers only – no names.
- Assignments that are not picked up by students must be retained by the instructor for one year after the end of the term in which the work was submitted or after the resolution of any grade revision request or appeal unless students have been notified on the course outline that they will be retained for a shorter period. Make sure that assignments that are not picked up by the students are returned to the instructors.
- Record comments/grades on pages that are hidden from the view of other students.
- Return exams/assignments only to the student who wrote them, unless that student has provided written permission to give them to another person.
- When returning assignments to the instructor, include a comment sheet that describes what material is giving students the most trouble and what things they understand well.
- Explain to your students the reasoning for the marking scheme.
- Do not let students talk you into changing marks without a reason.
- Inform the course instructor if you suspect a student of cheating.

For more information, read the [Returning assignments and posting grades](#) information on the University's Information and Privacy site.

Appendix B: Cheating and the Academic Discipline Policy

Cheating on assignments, tests or exams is a serious offence. Cheating includes using unauthorized aids or communicating with others during an examination. Penalties for cheating range from a grade penalty to suspension or expulsion from the University.

If you suspect cheating during a test or exam, inform the course instructor as soon as possible. Also, write a note about the incident immediately and keep any evidence.

For more information, see the open-access version of the [Graduate Academic Integrity Module](#). The module is a degree requirement for all graduate students.

Assignments

Watch assignments for indications of copying, cheating and plagiarism. Tip-offs to plagiarism on assignments and labs include:

- Entire sections with better language than others – in such cases, paste the section into Google, where a search may identify the source
- Lack of proper citation or referencing
- Errors that are the same as another student's errors, including
 - Wrong answers
 - Wrong value, unit or inverted unit conversion
 - Incorrect spelling or grammar
 - Incorrect format on a plot or figure

If you think that a student may have copied an assignment, grade the assignment and bring it to the instructor before returning it to the student or recording a mark. Draw attention to the area that you think may have been copied.

Tip: Students who use the same incorrect methodology may have the same wrong answer, without cheating.

Study Groups

Students are encouraged to form study groups, but they must be vigilant to do the work independently.

You may recommend these study group guidelines to students:

- Outline the problem on your own
- Try the problem on your own
- Complete and verify solutions with others
- Explain completed problems to each other

Members of a study group will have similar approaches to a problem, but they should not all have the same answer.

Students may work together in a study group to complete and share answers regarding additional problems before mid-terms and exams, but these problems should not be part of the exam.

Note: Ask your students to identify their study group members on their assignment.

Appendix C: Academic Integrity

Academic integrity is a cornerstone of research, teaching, and learning. You are expected to demonstrate academic integrity in your work and encourage it in your students. Because teaching assistants (TA's) are sometimes involved in student grievances, discipline, and appeals, it is wise to familiarize yourself with the relevant resources, policies and processes.

To maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. The Office of Academic Integrity is a promotional and educational unit that communicates the importance of academic integrity at the University. Learn more on the University's [Academic Integrity web page](#).

Grievances

Students who believe that a decision affecting some aspect of their university life has been unfair or unreasonable may have grounds for initiating a grievance.

[Policy 70, Student Petitions and Grievances](#), Section 4, provides more information about grievances and the processes involved with filing a petition.

Discipline

Students are expected to know what constitutes academic integrity to avoid committing an academic offence and to take responsibility for their actions. Students who are unsure whether an action constitutes an offence or who need help to learn how to avoid offences (e.g., plagiarism, cheating) or about rules for group work/collaboration should seek guidance from their course instructor, academic advisor or undergraduate Associate Dean.

For information on categories of offences and types of penalties, students should refer to [Policy 71, Student Discipline](#).

Appeals

Decisions made or penalties imposed under Policies 70 and 71 may be appealed. Students who believe they have grounds for an appeal should refer to [Policy 72- Student Appeals](#).