

MSCI 391_392_491 Work Term Reports

Instructor

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Overview

The purpose of the work term report is to:

1. Document engineering experience gained during the work term. In particular, the report allows you to draw connections between the theoretical aspects of engineering taught in the classroom and the practical applications of that theory in the workplace.
2. Give you a chance to reflect and report on what you learned from the work term experience.
3. Give you further practice with effective written communication.

Learning Outcomes

Students should be able to:

1. Describe how to work effectively as individuals and as members in teams.
2. Document engineering experience by highlighting key roles and responsibilities.
3. Generate a written report with correct spelling, grammar, and use of graphical representations (e.g. plots, tables, scales etc.) where appropriate.
4. Analyze impact on society, environment, and organization.
5. Identify ethical or unethical organizational practices and offer thoughtful considerations to address misconducts.
6. Reflect and identify gaps in knowledge and/or abilities and formulate plans and goals for filling these gaps.

Instructions

A work term report consists of two parts:

1. Completion of the Professional Engineers Ontario (PEO) pregraduation experience record form.
2. An *expanded report* that includes additional information regarding your work term experience including answers to specific self-reflection questions.

This report is based on the work term that occurs immediately prior to the term in which the work term report is due. Some students may not have a work term immediately prior to the term that a work term report is due. In such cases, the student should submit their work term report based on any previous work term that has not previously been reported. You may not report on the same work term more than once.

Part 1: PEO Pregraduation Experience Record

To become a professional engineer, you must document your engineering experience. You can receive credit for up to 12 months of engineering experience prior to graduation once you are past the half-way point of your degree program. The work term following 2B is the first work term that is past the half-way point of your studies, and the first work term report is due at the start of the 3A term (MSCI 391).

Instructions for completing the PEO pregraduation experience record are found here:

https://peo.on.ca/sites/default/files/2019-09/Guide_for_PreGraduation.pdf

and a MS-Word template for the form is here¹:

<https://peo.on.ca/sites/default/files/2019-09/PregraduationExperienceRecordForm.doc>

For your experience report to be used in a future profession engineer application, you will need it signed by your supervisor. We highly recommend you get this signature while on co-op. If you get it signed, you should retain the original copy of the signed record and submit a PDF scan.

Some students may contend that their work term had no engineering involved. We only ask that you honestly complete the pregraduation experience record. If there was no application of theory, then be honest and write this, but the majority of co-op work terms held by Management Engineering students do have some engineering in them. If you have any doubt, we encourage you to discuss the pregraduation record with your supervisor, who may have more perspective on the nature of the engineering experience you gained performing your job.

Part 2: Expanded Report

Write a report, **with section headings matching the bolded words below**, that addresses the following:

1. Write 1500-2000 words² (approximately 4-5 pages including section headings) that detail what you did during your work term as follows:
 - a. **Job Details**

In part 1 (pre-graduation experience report), you provided a brief description of your job duties. For this part of the expanded report, we would like you to write in detail regarding the work you completed as part of your work term. Explain how you contributed to the company or project(s) that you worked on. Use specific examples to illustrate your job. This section of the report should be 550-800 words long (approximately 1-2 pages).
 - b. **Coursework**

Relate your work term back to the courses you have taken at the University of Waterloo. Discuss how the courses either contributed to, or failed to contribute to

¹ Copies of these documents are also available on Learn.

² Please see comment on word counts in the "Marking" section at end of guidelines to understand how words counts affect your mark.

your effectiveness during the work term. We are interested in the connections made to all of your coursework, both technical and non-technical courses. This section of the report should be around 250-300 words.

c. **Self Reflection**

Write approximately 175-225 word responses for each of the following reflection questions. The goal of these questions is to help you develop the ability to reflect on your work experience and help you improve for future work experiences. Spewing words to fill space, or producing fluff, will result in negative marking.

i. **Self Reflection: Expectations**

In what ways did your work term meet or fail to meet your expectations?

ii. **Self Reflection: Improvement**

As you worked during the term, what knowledge or skills did you find yourself wanting to learn more about or improve? Explain why this lack of knowledge or skills hampered your effectiveness or why knowing more or being better skilled would improve your effectiveness. Keep in mind that one approach to improvement is to further improve your areas of strength, and another approach is to reduce your areas of weakness. Both approaches to improvement are valid. As part of your discussion, formulate a specific goal for improvement, i.e. something you can accomplish.

iii. Provide an answer to one of these questions:

1. **Self Reflection: Ethics**

Explain how your either observed careful consideration of ethics in the practices of the company or how you feel the company failed to act ethically in a certain situation. If you feel the company acted unethically, explain how you addressed that situation.

2. **Self Reflection: Impact**

In what ways did your work or the work of the company have an impact or potential for impact on society? Impact can be both positive and negative.

3. **Self Reflection: Teamwork**

Describe a positive or negative experience you had working on a team during this job and your contribution or response to this experience. How will you take what you learned about teamwork and use it to improve your next team experience?

iv. **Self Reflection: Next Co-op**

Think about your next co-op. Share what you would like to accomplish in your next work term. Please be specific and explain why what you want to accomplish is important. All goals are valid to discuss.

2. **Resume Description of Co-op**

Now that you have written about your co-op in detail, write the description of your work term that you will include in your resume. A good description not only describes your

duties, but also makes clear your contributions and successes. (Suggestion: Go update your resume and then copy that into your work report.) As would be expected, your resume description should put the best light on your job in the fewest words. The resume description is not part of the overall word count described above.

Marking

Your work term report will be marked based on the completeness, detail, insight expressed, use of specific examples, presentation quality, and quality of communication and writing, as well as other potential factors. Kindly refer to the rubric provided at the end of the document.

Words Counts

Word counts are a guideline to attempt to communicate expectations for the amount of writing we want to read overall for this report. To be able to write well in this limited space, you are advised to first write as much as you need to fully communicate what you need to say. Then you should edit your writing to make it concise while still conveying the important information. Cut out the words and sentences that add little value. If a chart, table, or picture will communicate an idea well, please use it. Tables, charts, and pictures do not count toward the word count. Too often students write until they reach word count or page limits and then stop, which produces low quality writing. If in doubt, write more rather than less, but there are no points to be earned from excessive blather and filler material, for we will penalize such writing.

Late Policy

Reports are due on the 10th day of lectures for the academic term in which the report is required. There will be a dropbox in Learn to allow you to submit your report. No late submissions are allowed without prior approval of the instructor. Only serious issues outside of your control, i.e. illness or emergencies, will normally be approved for extensions. Failure to submit your report on time will result in a failing mark of 32.

No Resubmissions

All grades will be final. Students will be unable to resubmit their reports to improve their marks. If you fail a work report, you will have to repeat the course. Failed work reports count as a failed course. If you have to repeat the course, you will be allowed to write about the same work term.

Submission Format

All reports should have a title page and be Adobe PDF documents. Points will be deducted for failure to include a title page with student name, student ID, and course number (e.g. MSCI 391). Be sure to include both the pregraduation record and the extended report in PDF format.

Submission Guidelines

Students are only required to submit electronic copies of reports to the LEARN Dropbox, which closes at 11:59pm on the 10th day of the term. These reports will be processed with the Turnitin software to ensure that all materials and sources used in the reports are properly documented.

It is recommended that you use the PEO MS-Word template for the pregraduation record. The extended report must be written using 12pt Times New Roman or Calibri fonts with single-spacing. Page margins should all be set to 1". Use the APA format for citations and include page numbers.

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. Check [the Office of Academic Integrity](#) for more information.

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](#). When in doubt, please be certain to contact the department's administrative assistant who will provide further assistance.

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. [Check [the Office of Academic Integrity](#) for more information.] 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](#). For typical penalties, check [Guidelines for the Assessment of Penalties](#).

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](#).

Note for Students with Disabilities

[AccessAbility Services](#), located in Needles Hall, Room 1401, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with AccessAbility Services at the beginning of each academic term.

Turnitin.com

Text matching software (Turnitin®) may be used to screen assignments in this course. Turnitin® is used to verify that all materials and sources in assignments are documented. Students' submissions are stored on a U.S. server, therefore students must be given an alternative (e.g., scaffolded assignment or annotated bibliography), if they are concerned about their privacy and/or security. Students will be given due notice, in the first week of the term and/or at the time

assignment details are provided, about arrangements and alternatives for the use of Turnitin in this course.

It is the responsibility of the student to notify the instructor if they, in the first week of term or at the time assignment details are provided, wish to submit alternate assignment.

Marking Rubric



MANAGEMENT ENGINEERING PROGRAM

Work-Term Report Evaluation Sheet

Student Name: _____ ID No: _____

Report Title: _____

Employer: _____

MSCI 391 392 491 Evaluated by: _____

Part 1 – PEO Pregraduation Experience Record

Attributes	Description	Perfect (100%)	Excellent (87%)	Good (75%)	Poor (50%)	Fail (26%)	Unacceptable (0%)	Marks Obtained
Complete Form Submission	Documenting engineering experience according to the PEO record guidelines.	20	17	15	10	5	0	___ / 20

Part 2 – Expanded Report

Job Details 550-800 words	Brief description of work duties and contributions to the company or project(s).	30	26	23	15	8	0	___ / 30
Course-work 250-300 words	Discuss how the courses either contributed to or failed to contribute to work effectiveness.	12	11	9	6	3	0	___ / 12
Self Reflection 175-225 words	Expectations: How did work term meet or fail to meet your expectations?	8	7	6	4	2	0	___ / 8
Self Reflection 175-225 words	Improvement: Discuss what knowledge or skills to improve upon. Formulate a specific goal for improvement.	8	7	6	4	2	0	___ / 8
Self Reflection 175-225 words	Ethics <input type="checkbox"/> Impact <input type="checkbox"/> Teamwork <input type="checkbox"/>	8	7	6	4	2	0	___ / 8
Self Reflection 175-225 words	Next Co-op: Explain what to accomplish in next work term and why is that important.	8	7	6	4	2	0	___ / 8
Resume Description	Write a good description of the job in the fewest words	6	5	4	3	2	0	___ / 6
TOTAL								___ / 100

Comments: