

MECH ENG 2A03 – Fall 2018

Writing	Graphics
Instructor: Dr. Greg Wohl Office: ETB 411 x 21195 Email: wohl@mcmaster.ca	Instructor: Dr. Elizabeth Hassan Office: ETB 109 x 24768 Email: hassae3@mcmaster.ca

Writing Lecture: 1330-1430 Mon MDCL 1105

Graphics Tutorial:

Section	Time	Location
T01	1530-1730 Tues	JHE A102
T02	1530-1730 Thu	ABB 163
T03	930-1130 Tues	T13 106

Lab: Per your schedule, JHE 219A (the Mech Eng computer lab)

Office hours: Dr. Hassan: 1300-1500 Thurs ETB 109 (Dr. Hassan's office)
Dr. Wohl: 1430-1630 Fri ETB 411 (Dr. Wohl's office)

The information in this course outline is accurate at the time of writing but may be modified at the instructor's discretion. Also, please note the policy for "extreme circumstances" on the final page.

Equipment/Text:

- **Calipers are required.** These are available for purchase at the Campus Store. Any existing metric calipers you have (manual, dial or digital) are also acceptable.
- **Textbooks are optional.** You can use *Engineering Design Graphics* by Leake (the same as you used in ENG 1C03) for graphics reference, but no problems will be drawn from the text.

For Writing, the recommended text is *Writing in the Technical Fields: A Practical Guide, 2nd Edition* by Ewald (ISBN-13: 9780199021499).

Copies of these books are available in the Campus Store.

Course policies:

- It is mandatory to come prepared to lectures, tutorials, and labs. All lectures, tutorials and labs will have participation activities / assignments that will be graded.
- Lecture content for the writing component will be provided in advance on *Avenue to Learn*. It is mandatory to review the lecture content in advance to be prepared for the group assignments in lecture.
- It is mandatory to bring your past work, pencil, eraser, plain (unlined) paper and calipers to each tutorial session.
- It is mandatory to bring your past work (digital and paper copies as applicable) to each tutorial session. It is important to bring your lab work to tutorial and vice versa, as many of the assignments have both lab and tutorial components.
- Labs may be completed at home on your own device, but a TA will be available in the lab to help with questions you may have about the software.
- Work will be assigned in lecture, tutorial, and labs to be completed by the end of the respective class time. Generally, you should be able to complete your in-class graphics work in the tutorial or lab periods and writing assignments in lecture. Your work will be handed in at the end of classes (lectures, tutorials, and labs) via Avenue. **For this reason, attendance is compulsory for all components.** Also, you must attend YOUR lab and tutorial section.
- In addition to the in-class writing assignments, four (4) memos and one (1) group report will be assigned to complete outside of class. (See next page for grading.)
- If you miss a lecture, lab, or tutorial due to illness, you can hand in assignments up to two weeks late with no penalty, no need to email or MSAF. If you require more time than two-weeks grace period for your submissions, contact Dr. Hassan (graphics) or Dr. Wohl (writing).
- All course work **MUST** be handed in by the end of day (midnight) one week after the last day of classes, which is December 12, 2018, no extensions.
- If you need to take additional measurements of the tutorial parts, you can come to Dr. Hassan's office (ETB 109) during office hours.
- Grading guides will be posted on Avenue, if after reviewing the guide you think that your assignment has a grading error, send Dr. Hassan or Dr. Wohl an email

- Course materials will be posted on Avenue. Please check your McMaster email for updates
- All submissions must be digital, via Avenue. Make sure that photos, scans or pdfs of your drawings are legible so the TAs can grade them. **Handwritten writing assignments, drawings submitted on lined paper, or drawings that are illegible for another reason will be given a grade of 0**, but you may resubmit within the grace period if you wish.
- Participation in lecture and tutorial will be assessed by in-class quizzes using *Avenue to Learn* and graded on the following scale.

If total points =	0	0.2x	0.4x	0.6x	> 0.8x
% grade (out of 5)	0	1.25	2.5	3.75	5

We use this scale so that if you participate consistently, even if you are not always correct, you can achieve a high participation grade (since “perfect” is actually 80%)

Communication Guidelines:

- Dr. Hassan will be present at tutorials, Dr. Wohl will be present at lectures on Mondays
- Please do not leave voicemails
- Email will be replied to within 24h, but please include the course code (2A03) in the subject line
- You can instant message Dr. Hassan on Slack, your Mac ID should allow you to join the 2a03.slack team (team name “2a03”)
- If you need to see either Dr. Hassan or Dr. Wohl in person, you can come to open office hours (see page 1) or make an appointment via email.

Course Grade Breakdown:

Writing – 40%	Graphics – 60%
<ul style="list-style-type: none"> • Group Report - 10% • Individual Memos – 15% • Individual Assignment – 10% • Participation via Avenue Quiz – 5% 	<ul style="list-style-type: none"> • Group Assembly – 13% • Individual Tutorial Work – 14% • Individual Lab Work – 15% • Individual Assembly – 13% • Participation via Avenue Quiz – 5%

Learning Outcomes:

By the end of the course, the student should be able to:

1. Proficiently use a solid modeling CAD system to create part and assembly models and to generate drawings and bills of material;
2. Properly dimension engineering drawings according to national standards;
3. Select appropriate views and use drawing conventions such as sectioning and auxiliary views to communicate part design information;
4. Perform geometric developments and kinematic linkage motion analysis using CAD;
5. Generate machine components such as cams using CAD design tools and access standard parts from CAD libraries;
6. Communicate effectively in a variety of written forms of technical communication, with a focus on technical memorandums (memos), laboratory reports and email;
7. Effectively construct and implement a variety of graphical communication tools in their oral and written technical communications.
8. These include, but are not limited to: tables, line plots and bar charts;
9. Correctly employ citation methods in their technical documents;
10. Demonstrate awareness of some of the issues surrounding technical communications and professional ethics within the context of Professional Engineering in protecting the public and the public interest;

Graduate Attributes:

MECHENG 2A03 provides the student the opportunity to develop competence in the following CEAB graduate attributes:

Graduate Attributes	Learning Outcomes where it is measured
Knowledge base for Engineering 1.3 Competence in Engineering Fundamentals 1.4 Competence in Specialized Engineering Knowledge	2, 3 1, 4, 5
Use of Engineering Tools 5.2 Demonstrates an ability to use modern/state of the art tools	1, 4, 5
Communication skills 7.3 Constructs effective oral or written arguments as appropriate to the circumstances	6 – 9
Professionalism 8.1 Demonstrate an understanding of the role of the engineer in society, especially in protection of the public and public interest	10

Weekly Plan

Week of		Lab	Tutorial	Writing
1	3 sep	No Lab	No Tutorial	No Lecture
2	10 sep	No Lab	T2 - Intro. Make a hand drawing that clearly indicates what part you have (I,II or III). [2%]	First Lecture 10 September
3	17 sep	L2 - Make a 3d model of the part you drew in T2. Upload a dimensioned drawing [1%]	T3 - Make enough measurements and sketches that you will be able to make dimensioned drawings of both parts. Upload your sketches [2%]	Memo 1 - Letter of Engagement [5%]
4	24 sep	L3 - Make dimensioned drawings of the parts you drew in T3. Upload your finished drawing [4%]	T4- Make enough measurements and sketches that you will be able to make a dimensioned drawing of the given part. Upload your sketches [2%]	
5	1 oct	L4 - Make a dimensioned drawing of the part you drew in T4. Upload your drawing [1%]	T5 - Trade CAD drawings with a colleague who drew a different part, correct their drawing. Upload the corrected drawing [1%]	Memo 2 – Measurement chart [5%]
Thanksgiving/Midterm Break – No classes				
6	15 oct	L5 - Make the suggested corrections to your drawing. Upload your finalized drawing [4%]	T6- Make enough measurements and sketches that you will be able to make a dimensioned drawing of the given part. Upload your sketches [2%]	
7	22 oct	L6 - Hand in dimensioned drawing of your part that you drew in T6 [1%]	T7 - Trade CAD drawings with a colleague who drew a different part, correct their drawing. Upload the corrected drawing [1%] Make a dimensioned sketch of the new part today, upload [2%]	Memo 3 – Ethics [5%]
8	29 oct	L7 - Make the suggested corrections to your drawing. Upload your finalized drawing [4%]	T8 – Begin work on your group assembly	
9	5 nov	L8 – Work on your group assembly	T9 – Continue work on your group assembly	
10	12 nov	L9 – Finish your group assembly [13%]	T10 – Begin work on your individual assembly	Group report due [10%]
11	19 nov	L10 - Work on your individual assembly	T11 – Continue work on your individual assembly	
12	26 nov	L11 – Finish your individual assembly [13%]	T12 – Peer feedback on individual assembly [2%]	
13	3 dec	No Lab	No Tutorial	Individual Instruction set [10%]
ALL WORK MUST BE HANDED IN BY MIDNIGHT ON DECEMBER 12, 2018				

Policy Reminders

Senate and Faculty of Engineering require all course outlines to include the following reminders:

Adverse Discrimination

“The Faculty of Engineering is concerned with ensuring an environment that is free of all adverse discrimination. If there is a problem, that cannot be solved by discussion among the persons concerned, individuals are reminded that they should contact the Department Chair, the Sexual Harassment Officer or the Human Rights Consultant, as soon as possible.”

Academic Integrity (Ethics and Dishonesty)

“Students are reminded that they should read and comply with the Statement on Academic Ethics and the Senate Resolution on Academic Dishonesty as found in the Senate Policy Statements distributed at registration and available in the Senate Office.”

“You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the *Academic Integrity Policy*, located at www.mcmaster.ca/academicintegrity.

The following illustrates only three forms of academic dishonesty:

- Plagiarism, e.g. the submission of work that is not one’s own or for which other credit has been obtained.
- Improper collaboration in group work.
- Copying or using unauthorized aids in tests and examinations.”

Authenticity / Plagiarism Detection

In this course we will be using a web-based service (Turnitin.com) to reveal authenticity and ownership of student submitted work. Students will be expected to submit their work electronically either directly to Turnitin.com or via Avenue to Learn (A2L) plagiarism detection (a service supported by Turnitin.com) so it can be checked for academic dishonesty.

Students who do not wish to submit their work through A2L and/or Turnitin.com must still submit an electronic and/or hardcopy to the instructor. No penalty will be assigned to a student who does not submit work to Turnitin.com or A2L. All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line

search, other software, etc.). To see the Turnitin.com Policy, please go to www.mcmaster.ca/academicintegrity.

Academic Accommodation of Students with Disabilities

“Students with disabilities who require academic accommodation must contact [Student Accessibility Services \(SAS\)](#) to make arrangements with a Program Coordinator. [Student Accessibility Services](#) can be contacted by phone 905-525-9140 ext. 28652 or e-mail sas@mcmaster.ca. For further information, consult McMaster University’s [Academic Accommodation of Students with Disabilities](#) policy.”

Academic Accommodation for Religious, Indigenous or Spiritual Observances (RISO)

“Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the RISO policy. Students requiring a RISO accommodation should submit their request to their Faculty Office normally within 10 working days of the beginning of term in which they anticipate a need for accommodation or to the Registrar’s Office prior to their examinations. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.”

Requests for Relief for Missed Academic Term Work McMaster Student Absence Form (MSAF)

In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar “Requests for Relief for Missed Academic Term Work”.

<http://academiccalendars.romcmaster.ca/content.php?catoid=18&navoid=3204#Requests for Relief for Missed Academic Term Work>

Extreme Circumstance

“The University reserves the right to change the dates and deadlines for any or all courses in extreme circumstances (e.g., severe weather, labour disruptions, etc.). Changes will be communicated through regular McMaster communication channels, such as McMaster Daily News, A2L and/or McMaster email.”