# Work Term Report

**Due: January 10th**

## Outline:

* Must follow:
  + <https://uwaterloo.ca/mechanical-mechatronics-engineering/sites/ca.mechanical-mechatronics-engineering/files/uploads/files/mme_workreportformatting_rev_fall_2021.pdf>
  + <https://uwaterloo.ca/mechanical-mechatronics-engineering/sites/ca.mechanical-mechatronics-engineering/files/uploads/files/mme_workreportwriting_rev_fall_2021.pdf>
  + <https://uwaterloo.ca/mechanical-mechatronics-engineering/sites/ca.mechanical-mechatronics-engineering/files/uploads/files/common_work_report_errors_checklist_1.pdf>
  + <https://uwaterloo.ca/mechanical-mechatronics-engineering/sites/ca.mechanical-mechatronics-engineering/files/uploads/files/workreportevaluationform_blank.pdf>
* Technical Writing
* 2000-3000 words
* Contains at least 3 technical references
* 250 word abstract
* Contains at least one figure or table
* Title page, tables page, abstract, intro, body, conclusion.
* Find something technical that interests you and write a report about it.

## Tasks to Complete

* Determine a subject
  + Think of a topic which could help you in future projects that you want to learn about any ways
* Find technical references on the topic
* Create a bullet point outline of the body of the report
* Write the 2000-word body
* 750 words of intro and conclusion
* Write 250-word abstract
* Add in any additional figure’s tables, citations references etc.
* Generate table of contents and format page numbers, add title page etc
* Proofread
* Read backwards to check spelling mistakes
* Proofread
* Have a 3rd part edit
* Submit

## Schedule:

As of November 20th, there are 7 weeks to complete this assignment, which give us 7 weekends excluding this one.

* Weekend 1: Find a suitable topic, create a very rough outline of what aspects you want to research.
* Weekend 2: Find technical references, read and highlight pertinent information.
* Weekend 3: Create a bullet point outline for the body of the report.
* Weekend 4: Write the body of the report (2000 words max)
* Weekend 5: Write intro, conclusion and abstract
* Weekend 6: Add in tables, figures, references, citations, title page table of contents, page numbers.
* Weekend 7: Proofread forwards, then backwards and then forwards again before handing off for a final edit by a 3rd party.

## Weekend 1: Topic

**Areas of Interest:**

* Electronics
  1. History of PIC microcontrollers
* Mechanical Design
* Controls
  1. Inverse Kinematics
* Robotic Firmware
* Manufacturing
  1. Laser Cutting (How to Build)
  2. CNC (How to Build)
  3. The history of 3D printing technology and it’s future