# ENGR 101: Engineering Technology

# Term 1, 2024

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# In-Person Attendance Required

The COVID era has disrupted education globally, but it is time to return to more effective in-person education.

* In-person attendance is required at tutorial labs, and project labs unless you are unable to attend due to illness or other serious circumstances. Exceptions are possible for students not living in the Wellington region, but this needs to be arranged. Contact Howard ASAP.

* In-person attendance at lectures is strongly encouraged.

* Tests are all in-person in the evenings. Exceptions are possible in extenuating circumstances. See Howard.

* Note almost all classes are returning to in-person instruction.

# ENGR 101: Engineering Technology

ENGR101 ''provides a general introduction to the fundamental technical concepts needed to understand the design and engineering of electronic, mechatronic, networked and software systems. It is intended to give students experience in basic engineering practice, through gaining understanding of basic software, hardware and network systems and applying this knowledge to complete a project which includes all aspects of these technologies."

- Foundations of Digital Engineering
- Introduction to the BE and professional aspects of being an Engineer.
- 1st Core course in Engineering for ALL specializations
- Connects to information from COMP102/112, ENGR121, ENGR 122, ENGR 123, CYBR 171, CGRA 151, ENGR 141, ENGR 142.

## COVID or other illness…

We expect to have students and staff out with COVID and/or other illnesses this term.

\* If you are unwell, stay home.

\* Keep in touch and keep us informed. We will work with you.

# Course Organisation:
# This is a project-based course

Two short projects in the first half of the term.
One long project in the second half of the term.

More a bit later in this lecture – this week is a special case. But generally:

- Lecture weeks: three lectures and a lab with a tutorial exercise.

- Lab/Project weeks: Two labs per week. These are called Lab A (Mon-Weds AM) and Lab B (Weds PM – Fri). One lecture on Friday.

- Again, in-person attendance is required as you will be working in groups.

**This week is different from the usual**

**Three lectures**

**Both labs are running.**
- Lab A features a long-ish math test in the first hour (second hour does not meet). Does not affect your grade in any class. The purpose of this is to help us give you better course advice.

- Tlab B is a tutorial about engineering ethics and sound.

**Course Organisation**
The schedule can be a bit complicated and is not completely standard. But no need to worry – just look at the course web page: https://ecs.wgtn.ac.nz/Courses/ENGR101_2024T1/WebHome

- The course web page is essential. It is our primary way of communicating with you.

- Course information, lecture, lab, and tutorial times, announcements, handouts, etc

- Project details (times, dates, files …)

- Forum for questions, discussion, announcements

- **Please make SURE your VUW email account forwards to whatever email address you actually read.**

**Assessment**

Project marks are subdivided into parts but here is the big picture:
- 13% Short Project 1
- 13% Short Project 2
- 10% Integrated Tutorials
- 4% On-line Quizes
- 20% Mid term test
- 30% AVC Project
- 10% AVC test
- Final Exam … there isn't one.

**Projects – these are the core of the course**

- More details later but ...

- Short Project 1: You will simulate the sound of musical instruments.

- Short Project 2: You will use a camera to detect the theft of a fabulously valuable ruby called the Red Panther.

- AVC Project: In the Autonomous Vehicle Challenge project, your robot has to follow a twisting, turning line. This is the core of the course. It is a group project.

**Tests and Quizzes**

- The two tests cover material related to the projects.
    - 20% for the mid-term test in Week 8.
    - 10% for the AVC test in Assessment Week.

- The on-line quizzes are a tool to help you understand the material.
    - 4% of the course mark.

**Integrated Tutorials (in labs mostly)**

- The integrated tutorials link together ideas from this course and other first year courses.

- They are marked for participation. Turn up, do some work and turn it in, get 100%.

- Start Week 1 in Lab B.

- Note the tutorial topics are tentative. If we find many students need help with something in this class or another, we will make a tutorial to help.

- These are a fairly unique VUW approach to learning.

## Plagiarism

You must not present anybody else's work as if it were your own work:

- Basic principle of academic honesty.

- Applies to work by other students, friends, relatives, the web, books. . .

- If you received substantial help, then you must state who helped and how much.

- If you declare any work from someone else, then it isn't plagiarism!

- You do NOT need to declare help from course materials, ENGR 101 tutors and staff.

**ENGR101 Group Work and Collaboration:**
We encourage you to talk to each other, and help each other understand and solve problems, BUT

• The work you submit should be yours. If you worked on it as a team, you must say that it is team work and who the other members of your team are.

• If you use resources, quotes, or ideas from the lectures, assignments or tutors/staff then you do not need to declare it, from any other source, then declare it!

• The consequences of Plagiarism can be severe.

**Changes from Previous Years**
Students at Victoria University give feedback on courses every year. Feedback on ENGR101 and ENGR110 is quite positive overall but we have taken on board two key points among others:

- More practice problems will be provided for tests.

- More help will be provided with programming in c++.

**Help is available:**

- Course advice: See Howard Lukefahr

- Personal issues: see the Counselling Centre

- Additional academic help: See Learning Support Services

- Problems snowball. Don't wait until you can't take the weight. Get help sooner, not later. Keep us informed. **We will work with you if we know what is going on.**

**Evening Workshops (Starts this week!)**

- Monday and Wednesday 6:00 - 8:30 PM, AM 101. In person.

- We may have a Zoom presence.

- General help for any first year ENGR courses with Howard, academics, and tutors.

- These are optional but very helpful. Come as often as you want.

**Getting out ... hopefully not**

- 8 March - no consequences
- 9 March – 10 May Withdrawal without refund
- After 10 May withdrawal requires permission of Associate Dean and is given only when special circumstances arise.

## Class Representatives Needed

- Communicate any concerns from your classmates to the course coordinator.

- Build interpersonal skills.

- A nice line on your cv.

- Elections will take place next lecture.

- Email Howard after lecture if you are interested.