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# **Engineering Technology**

**ENGR 101**

**Semester 2, XMUT 2024**

**Mohammad Nekooei**

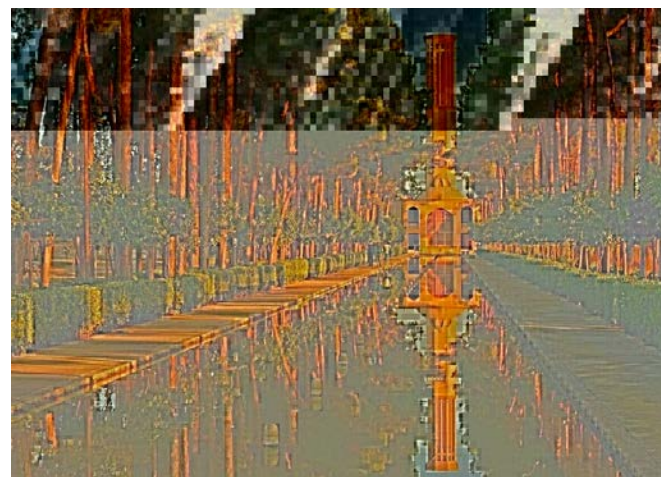
**Pawel Dmochowski**

**School of Engineering and Computer Science**

**Victoria University of Wellington**

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# About Me



TripAdvisor.com | Travel Around Persia Credit: @Anjak\_jamook

# The ENGR 101 Team

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Designed by Peter Andrae (Pondy)



Lecturer (Part 1) Mohammad Nekooei

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Co-teacher Dr. Zhang Lin (XMUT)

Markers PhD students

Tutors XMUT students

Students You and the people around you

# What is the course about?

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- ENGR 101 is about understanding the fundamental principles underlying Engineering.
- Work within a team, including breaking up and allocating tasks, managing a team, and working with other people to achieve a defined task
- Be creative and able to apply critical thinking through the design, implementation and testing of systems to solve real-world problems
- Give you a new set of mental tools for addressing problems
  - Creative,
  - Very precise,

# What kind of course is it?

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- Key factors for success are
  - problem solving, not memory, not guessing
  - logical/abstract thinking,
  - attention to detail
  - being able to think about your own thinking processes
  - not getting behind!!!!
- Takes time! plan on around 12 hours / week
- Practical work is critical

# Background needed for ENGR 101

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- We assume you have ***used*** a computer
- We do ***NOT*** assume you have done any programming
  - If you haven't, This course is for you!
  - don't worry about, or be intimidated by those who have!
- But some students have!
  - good – it is definitely helpful.
- We try to meet the needs of the full range of students
  - Lots of help available in all the lab sessions

# Essential Info: Lectures and Labs

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- Lectures: (Mingli 4-204)
  - Wednesdays and Thursdays (even weeks)
  - Labs: Two times a week
  - starting this week!
- Test:
  - Thursday 8:20-9:55 (Week 8)
- All lectures will be recorded and available on the website

# Essential Info: Assessment

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## Final grade based on:

- |                          |     |
|--------------------------|-----|
| • Attendance             | 10% |
| • Assignments            | 20% |
| • Labs                   | 20% |
| • Mid-term Test (Week 8) | 25% |
| • Final Exam             | 25% |

**Note:** If you fail the course the first time and need to take the make-up exam, the make-up exam will only be part of your final grade - your final grade will be 50% of your coursework marks and 50% from the make-up exam.



# Assessment

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## Mandatory Requirements

- 1 day after the deadline will receive a maximum mark of 90%,
- 2 days after the deadline will receive a maximum mark of 80%,
- 3 days after the deadline will receive a maximum mark of 70%,
- 4 days after the deadline will receive a maximum mark of 60%.
- 5 days after the deadline will receive a maximum mark of 50%.
- **No work will be accepted after releasing the solutions unless previously arranged with the course organizer.**

# Essential Info: Accessing course info.

Engineering and Computer Science use their own course websites (more open and more flexible than Blackboard)

- Bookmark [https://ecs.wgtn.ac.nz/Courses/XMUT101\\_2024T1](https://ecs.wgtn.ac.nz/Courses/XMUT101_2024T1)
  - all the information about the course
  - all the lecture slides
  - all the assignment handouts and code
  - all the resources
- WeChat group
  - Announcements

# How do you study effectively?

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- It depends on you!
  - different people learn in different ways!
- Working and learning with other people.
- ?
  
- Ways to fail:
  - procrastinating to the last minute
  - forgetting what assignments are due or when the tests are
  - putting off the lectures until later
  - getting too much help in the assignments
  - not getting help in the assignments when you need it (wasting time going round in circles)
  - trying to do too many different things.
  - only working on your study, and not doing any living and growing

# Academic Integrity

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- Central principles of Academic Integrity:
  - If you present something as your work, it should be done by you.
  - If you include something done by someone else, you must make it clear and give them credit.
  
- How does this work with
  - getting information and help from the web (or other sources)
  - getting help from other students (or other people)
  - getting help from staff or tutors.

# Plagiarism

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- You must not present anybody else's work as if it were your own work:
  - Basic principle of academic integrity.
  - 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!!!
- **AI Tools (such as copilot and chatgpt) are \*not\* permitted in ENGR101:**
  - Tests will be on-site and paper-based
    - We teach fundamental concepts necessary to understand harder concept
    - If you use AI at this stage, you will have problems in later courses

# Text Books

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## Text Book

- Digital Systems, by R J Tocci
- Beginning C for Arduino, Second Edition: Learn C Programming for the Arduino, by Jack J Purdum
  
- May be an important resource for some people.
- Lectures will not cover all the details you need!
  - But nor will the textbook!

## Resources

- Lecture slides & Assignments: On ENGR101 web page.