

Chapter 00.

Course Outline and Syllabus –

ENGG1110 [A B C D E F]

2021-22 Term 1

Teacher

Section	Teacher	Office Location
A	Dr. CHAU Chuck Jee	YIA 1207
B	Dr. HO Marco	SHB 734
C	Dr. CHEONG Chi Hong	YIA 1207
D	Dr. YIP Kit Sang Danny	SHB 735
E	Mr. FUNG Ping Fu, Michael	YIA 1207
F	Dr. CHUI Yim Pan, Wystan	SHB 126

By the way, you can contact us through the “**Email**” function
in Blackboard or CUSIS

Venue and Time

Section	Mon Lecture	Wed Lecture+Lab
A	M(14:30-16:15)	W(10:30-12:15)
B	M(14:30-16:15)	W(10:30-12:15)
C	M(16:30-18:15)	W(13:30-15:15)
D	M(16:30-18:15)	W(13:30-15:15)
E	M(16:30-18:15)	W(15:30-17:15)
F	M(14:30-16:15)	W(15:30-17:15)

You shall attend the assigned lab session.

Learning Outcome

Learning Outcome #1

The ability to apply computer programming to solve engineering problems.

Weekly three-hour lectures

- Fundamentals of programming (***C Language***)
 - Variables, flow control, functions, arrays etc.
- Basics of problem solving via programmatic thinking

Weekly one-hour lab sessions

- Applying programming concepts learned in the lectures
- Hands-on practice through lab exercises

Learning Outcome

Learning Outcome #2

The ability to model a system on a computer to meet specifications.

Related learning activity: Course Project.

- Project specification and requirement to be released
- Problem solving: solution formulation and program testing

Assessment

Overall Assessment Scheme

Participation (7%) and ICAC Talk (3%)	10%
Lab Exercises	25%
Midterm Examination (to be held <u>11/13 Oct</u> Tentative)	10%
Programming Project (individual)	15%
Final Examination • Important: score <u>at least 40 out of 100 marks</u> in the final exam in order to PASS this course.	40%
Total	100%

In order to pass this course,
your contributions in ALL FIVE assessment items are required!

Assessment scheme may change due to University arrangements concerning the pandemic

Participation + ICAC Talk (10%)

- To encourage you to participate in the course's learning activities properly, particularly the lab
- **Easiest marks to get!**
- Exact format differs from section to section.
- **PLEASE COME TO LECTURES AND LABS** regardless of your programming background! It's a great way to meet new friends and enjoy university life.
- Starts on Week 4

ICAC Talk (3%)

- ENGG1110 Students are **REQUIRED** to attend an **ICAC Talk**.
- Officials from the Independent Commission Against Corruption will come and talk about **fighting corruption**.
 - As an engineering student and future professional, you should know and understand this important matter!
- Tentative schedule: **20 Oct 2021 (Wed)** during Lecture hours
 - Will be in another lecture hall, to be announced

Lab Exercises (25%)

- Practice programming so that eventually you can tackle the project and the final exam
 - From our experience, if you just sit in the lecture, you won't see much improvement in programming
- You are encouraged to **discuss** with peers, BUT **NOT copying or sharing** C source code.

A sizable portion of midterm/exam questions will be based on the Lab Exercises, so please make sure you do it by yourself properly!

Lab Exercises (25%)

- Two types of Lab Exercises
 - **Pre-Lab Exercises**: Released every week **after Monday lecture**; Due **9:30am Wed**. Very simple, for you to warm up. Easy marks to get!
 - **Lab Exercises**: Released every week **9:30am Wed** when Pre-Lab is due; due **1:00pm Mon** in the next week
- **Both** counted towards the total Lab Exercises marks
- Most of you will not be able to finish the lab within your section's lab hour. You are encouraged to continue during your weekend, and use our **Consultation Hours**

Consultation Hours

- Some of you may need more time and help to finish each week's Lab Exercises
- In addition to your formal lab hours, we provide **Consultation Hours** for you to continue your lab (Starting from Week 2, venue to be announced)
 - Mon: 12:30-13:30
 - Thu: 15:30-16:30
 - Fri: 15:30-16:30
- It is completely optional. You can come and go anytime.
- One or two tutors will be present to offer help

Course Schedule

Week #		Lecture Content (Tentative)
1	6 Sep	Introduction, C Programming Basics
2		Data Types and Operators
3		Public Holiday on Wednesday , Branching Statements, Basic Debugging
4		Arrays and Characters
5	4 Oct	Basic Looping
6		Midterm (Tentative 11 or 13 Oct in-class) , More Looping
7		Nested Looping

Course Schedule

Week #		Lecture Content
8	25 Oct	Functions
9	1 Nov	Project Introduction , Advanced Function Concepts
10		Variable Scope
11		String Manipulation, Struct and Sorting
12		Recursion, Pointers and Dynamic Memory Allocation
13		Conclusion and Revision (End of teaching)
14	6 Dec	Reserved for special make-up lecture/labs

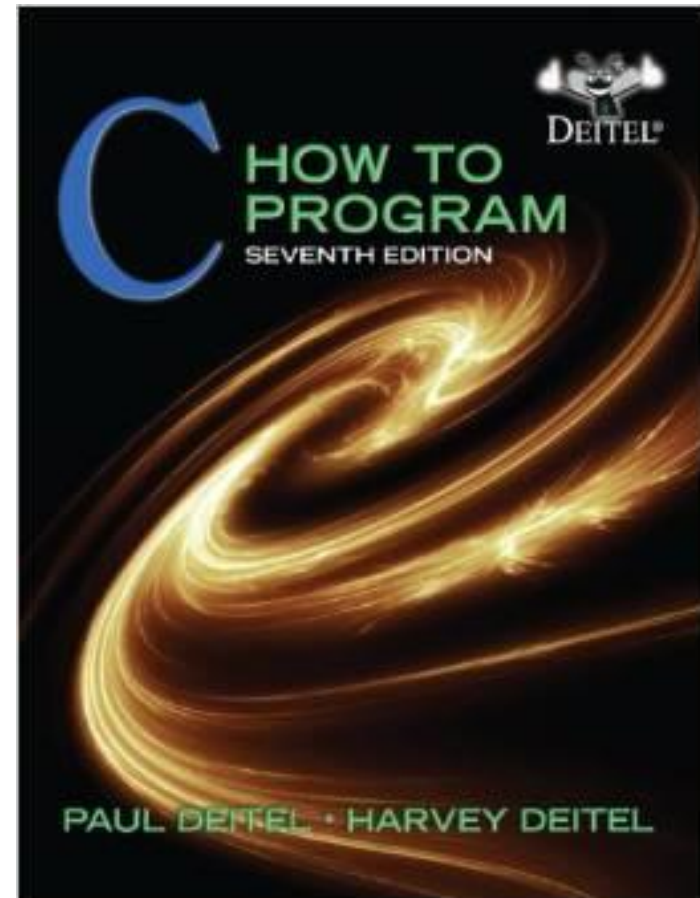
Course Resources

CUHK eLearning Platform

- <https://blackboard.cuhk.edu.hk/>
 - **BlackBoard** course (Web and App)
 - Each section will have their corresponding entry.
- You can find the following:
 - Lecture notes
 - Project materials
 - Announcements
 - Resources and instructions

Textbook and Readings

- Lecture presentation slides are the main teaching materials.
- **Reading Text**
 - C How to Program,**
by Deitel & Deitel (any edition)
 - 7th or 8th ed.
 - Available in CUHK library.
 - Stock in YIA Bookstore.



Online eBook and Micro-modules

- If you prefer an eBook, we have an interactive C Programming **eBook**, with **micro-modules** and online self-learning exercises.
 - [VPN Required] <http://cprog.erg.cuhk.edu.hk/>
 - By Dr T. Y. WONG, Mole (CSE, CUHK).
 - The materials are divided into chapters and sections.
 - Micro-modules are short video clips for self-learning.
 - You may attempt the online exercises for self-testing and getting instant feedback.

What VPN?

- When you want to access certain CUHK resources while you are **NOT directly connected to the CUHK** network e.g.
 - via Internet Service Provider (ISP) at home,
 - using mobile data services such as 4G, 5G, WiFi.
- You need CUHK Virtual Private Network (VPN)!
 - <https://www.itsc.cuhk.edu.hk/en-gb/all-it/wifi-and-network/cuhk-vpn>
 - Set up once and store your CWEM password.
 - Good idea to set it up at the start of semester!
 - ITSC is improving the connectivity from mainland, so please be patient

Academic Honesty

- **NO PLAGIARISM 嚴禁抄功課**

- No copying from others
- No “*lending*” your work to others
- <http://theory.stanford.edu/~aiken/moss/>
(for your eyes only)

- Every plagiarizing case will be reported to the Faculty.

- Must Read: **Honesty in Academic Work**

- <http://www.cuhk.edu.hk/policy/academichonesty> (CUHK)
- <https://www.erg.cuhk.edu.hk/erg/AcademicHonesty> (ERG)

Expectations and Mutual Respect!

- Student/Faculty **Expectations** on
Teaching and Learning
 - http://engg1110.erg.cuhk.edu.hk/student_teacher_expectations.pdf

Seeking Help Outside Class

- The tutor-on-duty can answer your questions if you come to the Consultation Hours, lab or course related
- Again a reminder:
 - Mon: 12:30-13:30
 - Thu: 15:30-16:30
 - Fri: 15:30-16:30(Starting from Week 2, venue to be announced)