EE2310 Course Description 課程大綱

This course is targeted at those who are interested in programming but have not learned anything in this area before. We chose the C programming language because it is the most widely used in the world. All course lectures will be given in computer labs. In each lecture, students are expected to learn the designated material, complete some small tasks, and upload to our server to get points. Attendance is mandatory (could be done online if Covid-19 is not contained). If you register in this course, you are expected to **GET UP BEFORE 8AM TWICE A WEEK** and spend SIGNIFICANT AMOUNT OF TIME studying and writing programs. On average, 25% of the students eventually drop this course.

AI-policy: We have two quizzes and one final exam. All of them are programming tests in a computer lab. We do not prohibit the use of any AI-tools for the lectures and labs, but you won't be able to use any AI-tools in the quizzes/exam as all networks will be disconnected then. You can use AI-tools to help you learn how to write programs. Each student is expected to write programs without the aid of any AI-tools. **If you can't write programs independently without AI tools**, it will be very difficult to get reasonable grades in the quizzes/exam and **it will be very difficult to pass this course**.

For those who could not register but wish me to sign, it is required to show up in the class for the first two weeks. We only have very limited seat for those who wish to add this course, so there is no guarantee that you could add this course.

Textbooks
No required textbooks. We will use our own slides.

請注意:這是早八的課程，而且內容很繁重，如果沒有決心花很多時間學習，或是無法早起的同學，請勿修習此課程。本課程絕對不是輕輕鬆鬆就能拿高分的課程，需要相當程度的投入。本課程平均有 25%的同學最後會退選。課程方式是全上機，每次上課每位同學都要些一至數個小程式(等於每堂課點名)，同學必須在指定的時間內完成當日課程內的小程式才算得分。課程分為 lecture 以及 lab 兩種，lecture 的課程教師會用大約 30m 分鐘至一小時講述概念，剩餘的時間要用這些概念完成一個小程式。Lab 則是以前一次 lecture 的內容引

申出一個稍微複雜一點的程式，可能以文字敘述或是教師簡短講述題目，同學們要剩餘的時間完成。lecture 以及 lab 會交替進行，每週各一次，這些 lecture 跟 lab 的內容關係緊密連貫，所以如果同學某一次 lecture 沒在指定的時間內做完，也沒有利用其它時間盡快補上進度的話，之後的 lecture/lab 一定做不出來，那麼大概有很高的機率最終要退選了。所以沒有決心花很多時間的同學，我們不建議你選這門課程。

AI 相關規定：本課程有兩次 Quiz 以及期末考，都是上機寫程式。課程的 lecture 以及 lab 不禁止使用 AI 工具，但同學們自己必須會不靠 AI 寫程式，Quiz 以及期末考均為無 AI、斷網考試，若同學們平時無法不靠 AI 自己獨立寫程式的話，那麼 Quiz、期末考很難考好，本課程將很難及格。

關於加簽:因為名額非常稀少，所以請要加簽的同學先跟我聯絡，完成前兩週所有的課程要求。電機系同學優先，其餘同學若太多要加簽我們以抽籤決定。

無指定教科書，上課的投影片即可

Reference Books
Kernighan, Brian W.; Dennis M. Ritchie (February 1978). The C Programming Language (1st ed.).
Englewood Cliffs, NJ: Prentice Hall. ISBN 0-13-110163-3.

<Teaching Method>
Labs 100% 請注意本課程是全上機實習!

Syllabus
<C Programming Language>
1. Introduction.
2. Variables, data types, and operators.
3. Flow of control and functions.
4. Flow of control II and I/O
5. Pointers and arrays. Basic sorting
6. User-defined datatypes.

7. Advanced pointers. Stacks and Queues. 8. Dynamic memory allocation.

<C++ Programming Language>

9. Classes and objects, Member functions/variables

10.Constructors

11.Friend functions

12.Class Inheritance

13. Polymorphism

Evaluation

Labs: 30% + **Quiz #1 15%** + **Quiz #2: 25%** + **Final 30%**

Course webpage on eLearn