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**National Taiwan University of Science and Technology**

**2020 Summer Program**

**CPM 101 Introduction to Programming**

**Course Outline**

**Term:** June 01-July 03,2020

**Course Code:** CPM 101

**Instructor:** Mo Sha

**Home Institution:** State University of New York at Binghamton

**Office Hours:** TBA and by appointment

**Email:** [msha@binghamton.edu](mailto:msha@binghamton.edu)

**Credit:** 4

**Class Hours:** This course will have 72 class hours, including 40 lecture hours, 10 lecturer office hours, 10-hour TA discussion sessions, 2-hour review sessions, 10-hour extra classes

**Course Description:** Review of programming concepts, programming environments, debugging tools, large program management and design.

This course is designed to provide a solid foundation and background in basic programming techniques and concepts, as well as an overview of programming in the C language:

- review basic programming concepts and problem solving techniques
- programming in a Linux environment without the help of an IDE
- programming and problem solving in the C language
- overview of simple data structures
- implement algorithms efficiently and correctly
- system tools useful for debugging

**Required Textbooks:**



國立臺灣科技大學

National Taiwan University of Science and Technology

10607 台北市大安區基隆路四段 43 號

No. 43, Keelung Road, Section 4, Taipei, Taiwan

Brian W. Kernighan and Dennis M. Ritchie. The C Programming Language. 2nd edition, Prentice Hall, 1988  
[Free online].



### **Grading & Evaluation:**

There will be three exams, 20 points each. Exams test basic programming concepts. Homework accounts 40 points. Homework tests the skill of programming and problem solving.

The grade distribution (90-100%=A, 80-89%=B, 70-79%=C, 60-69%=D; and below 60% = F)

### **Course Schedule:**

The course outline is tentative and may be modified accordingly depending on the pace of the class.

**Week1:** Introduction to Basic Programming Concepts: C Programming Language, C Programming Environment, and Variables and Conditionals in C Programming Language.

**Week 2:** Bitwise Operations, Preprocessing, Functions, and User-defined Data Types in C Programming Language.

**Week3:** Arrays, Structs, Unions, and Enums in C Programming Language.

**Week4:** Pointers in C Programming Language.

**Week 5:** Input and Output in C Programming Language.