



National Taiwan University of Science and Technology

2021 Summer Program

CPM 270 Software Construction

Course Outline

Course Code: CPM 270

Instructor: Mo Sha

Home Institution: State University of New York at Binghamton

Office Hours: TBA

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Credit: 4

Course Description:

This course provides an overview of software construction and introduces a series of techniques that leads students through the gradual construction of a complete and working software system. Topics include:

- basic programming and software implementation concepts and techniques
- embedded operating systems and embedded software development
- wireless communication and machine learning techniques
- real-world software systems

Required Textbooks:

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

Philip Levis and David Gay. TinyOS Programming. Cambridge University Press, 2009 [Free online].

Grading & Evaluation:

There will be one exam, one programming assignment, and one software design project. Exam accounts 30 points and tests basic programming concepts. Homework accounts 30 points and tests basic software implementation skill. Design Project accounts 40 points and tests basic software system design skill.



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.

Week 1: Introduction to Basic Software Construction and Programming Concepts

Week 2: Introduction to Programming Techniques, Embedded Operating Systems, and Embedded Software Development

Week 3: Introduction to Wireless Communication and Machine Learning techniques

Week 4: Real-world Software System Case Studies

