National Taiwan University of Science and Technology

2021 Summer Program

CSC 28 Discrete Structures for Computer Science

Course Outline

Course Code: CSC 28

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 discrete structures. Topics covered include an introduction to logic, functions, recurrence relations, graphs, etc. This course also introduces a series of programming techniques that allows students to implement and use basic data structures.

Required Textbooks:

Thomas C. Standish. Data Structures, Algorithms & Software Principles. Pearson Publishing, 1994.

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

Grading & Evaluation:

There will be two exams, 30 points each. Exams test basic 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.

Week 1: Introduction to discrete structures and programming concepts.

Week 2: Logics, bitwise operations, recurrence relations, and functions.

Week 3: Array, user-defined data types, and linked list.

Week 4: Tree and graphs.