



National Taiwan University of Science and Technology

2021 Winter Program

CSC 180 Computing and Society in History

Course Outline

Course Code: CSC 180

Instructor: Mo Sha

Home Institution: Florida International University

Office Hours: TBA and by appointment

Email: msha@fiu.edu

Credit: 4

Course Description:

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

- basic computing and operating systems concepts and techniques
- wireless networks and other communication concepts and techniques
- computer programming for computing system implementation
- real-world computing systems and research

Required Textbooks:

None. Online reading materials will be provided.

Grading & Evaluation:

There will be one exam, which tests basic computer programming concepts and accounts 40 points. Student Project accounts 60 points. Student Project tests the skill of computing system design.

Grade distribution:

A+:4.3——95-100



A :4.0——87-94

A-:3.7——82-86

B+:3.3——78-81

B :3.0——75-77

B -:2.7——71-74

C+:2.3——68-70

C :2.0——65-67

C -:1.7——61-64

D :1.0——55-60

E :0.0——49-54

X :0.0——0

Course Schedule:

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

Week 1: Basic Computing System Concepts, Computer Hardware and Software, Computing Techniques and History, and Internet of Things.

Week 2: Computing System Case Studies (e.g., Health Monitoring Systems, Structure Monitoring Systems, Industrial Automation Systems) and Machine Learning.

Week 3: Computing System Implementation with C Programming Language (Topics include the basic programming concepts, programming environment, variables and conditionals, functions, and arrays).

Week 4: Operating Systems and Wireless Networks.