國立臺灣科技大學
National Taiwan University of Science and Technology
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No. 43, Keelung Road, Section 4, Taipei, Taiwan

National Taiwan University of Science and Technology

2020 Summer Program

CPM 101 Introduction to Programming

Course Outline

Term: July 06-August 07,2020

Class Hours: 18:00-19:50 (Monday through Friday)

Course Code: CPM 101

Instructor: Bettina Bair

Home Institution: The Ohio State University

Office Hours: TBA and by appointment

Email: bair.41@osu.edu

Credits: 4

Class Hours: According to the regulations of Minister of Education, R.O.C, 18 class hours could be counted as 1 academic credit in all universities in Taiwan. This course will have 72 class hours, including 40 lecture hours, professor 10 office hours, 10-hour TA discussion sessions, 2-hour review sessions, 10-hour extra classes. Review sessions are designed to provide additional coverage (not lectures) of material covered in class. They will be scheduled outside of class. Dates, times, and locations will be announced in class.

Course Description:

Introduction to computer programming and to problem solving techniques using computer programs. No prior programming experience is required. Students will learn the basics of computer architecture, and software development. Topics will include an introduction to variables, syntax, control structures, methods and principles of object-oriented programming. The selected programming language is Java.

Required Textbooks: Cay Horstmann, Java for Everyone Late Objects (2nd edition), John Wiley & Sons, Inc. ISBN: 978-1-118-06331-6

Grading & Evaluation:

Worksheets (20 @ .5 pts each) 10%

Projects (4 @ 5 pts each) 20%

Midterm 30%

Final Exam 40%

Student submissions will be evaluated for conformance to the requirement, completeness, correctness, and the level of effort.

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

Course Schedule: (tentative)

The order of presentation may be modified depending on the pace of the class.

Week1

1. Course Introduction/Basic Concepts
2. Basic I/O
3. Primitive types and expressions
4. Strings, chars, functions
5. Project 1

Week2

1. Boolean variables, expressions
2. Flow of Control – if, else-if
3. If, else-if, nested if
4. Logic practice
5. Project 2

Week3

1. Midterm
2. Arrays
3. While loop
4. For-loops
5. Project 3

Week4

1. Methods
2. Parameter passing
3. Primitive vs reference variables
4. Software design with components
5. Project 4

Week5

1. Java File I/O
2. Objects and Object-oriented programming
3. User defined classes
4. Review
5. Final Exam