한국외국어대학교
HANKUK UNIVERSITY OF FOREIGN STUDIES

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81, Oedae-ro, Mohyeon-myeon, Cheoin-gu, Yongin-si, Gyeonggi-do, 17035, Korea

Hankuk University of Foreign Studies

2019 Summer Session

CPM 101 Introduction to Programming

Course Outline

Term: July 01-August 02,2019

Class Hours: 8:00-9:50 (Monday through Friday)

Course Code: CPM 101

Instructor: Dr. Mahfuza Farooque

Home Institution: Pennsylvania State University

Office Hours: TBA and By Appointment

Email: mff5187@psu.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:

The implementation of this course is done in C++. Students will learn how to declare variables and use them within a program using pointer access. Students will write applications by using various functions and also able to create own data type with the help of the C++ Standard Library.

Course Objectives: After this course, students will be able to

1. Map a an appropriately given problem to code
2. Compile and link a C/C++ program
3. Write a sequential set of statements
4. Write conditional statements
5, Write loops

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6. Have a basic understanding of the different data types and the use of pointers
7. Understand the use of functions
8. Output to the screen and to a file
9. Input from keyboard or file
10. Understand and use libraries
11. Arrays
In short, students will be able to
•   Develop algorithms and pseudo code,
•   Implement simple problems based on developed pseudocodes and
•   Test, debug and correct programs

Required Textbooks:
Starting out with C++ from Control Structures through Objects by Tony Gaddis, 9th Edition.

Note: You could also use other online resources

Grading & Evaluation:

•   Attendance   10%
•   Home Work   20%
•   Quiz   25%
•   Midterm: 20%
•   Final Exam   25$

Grading & Evaluation:
Letter grades will be assigned per the following scale which will be strictly followed.
• 90 – 100 %   A
• 80 – 89%   B
• 70 – 79%   C
• 60 – 69%   D
• 0 – 59%   F

Course Schedule:

The course outline is tentative, and it will be modified depending on the pace of the class.

Week1
Session 1: Introduction to Computers and Programming, Introduction to C++
Session 2: Basic program syntax
Session 3: Data types, declarations, expressions, variables

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Session 4: Type conversion, Formatting output, String and Character Objects
        (Quiz1 and HW1)

Week2
Session 1: Conditional Statements
Session 2: Flags, Logical Operators
Session 3: Loops
Session 4: Continue to Loop and Files
        (Quiz2 and HW2)

Week3
Session 1: User-defined functions, standard library functions
Session 2: Functions: Passing Data by Value, Passing reference variables as parameter
Session 3: Overloading Functions, Basic of Arrays
Session 4: Midterm Exam

Week4
Session 1: Continue to Array, Vectors
Session 2: Searching and Sorting Arrays
Session 3: Pointers
Session 4: Characters, C-Strings, and string-class
        (Quiz3 and HW3)

Week5
Session 1: Structured Data
Session 2: Continue to Structure Data, Linked List
Session 3: Stacks and Queues
Session 4: Final Exam