



HANYANG UNIVERSITY

2018 HISS Syllabus

C++ Programming

Professor: **Jongyeop Kim**
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Home Univ.: Southern Arkansas University
Dept.: Math & Computer Science

Description: This course will cover the basics of “C++” programming language and present fundamental concepts and techniques used in Object Oriented Programming. This course uses a combination of lectures and hands-on lab exercises to enhance programming skills. Hands-on Lab exercise will be solved within the class through group discussion or direct conversation with the instructor.

Objective: Upon completion of this course, the student will be able to:

1. Define the terms of data types, control structures and functions.
2. Understand the control structures: if-else statements, while for/do-loops.
3. Apply algorithmic thinking to programming logic design.
4. Demonstrate an ability to implement basic C++ program using OOP concepts.

Preparations:

1. Computer: **Must bring a laptop computer for hands-on Exercise.**
2. e-book: Teach yourself in 21 Days, C++ Language Tutorials by Juan Soulie, C++ for dummies 5th Edition by Stephen Randy Davis.
3. Anyone who has basic knowledge of computer encourage to attend.

Schedule:

	<Lectures & Labs>
Week 1	1. Getting Started. - An overview, Environment setup, Writing first C++ program. 2. Declare Variables and Constants. - Declaring Variable types, Performing Mathematical operations. 3. Controlling Program Flow. - While loop, for loop, special loop controls.
Week 2	4. Creating Functions. - Defining and Calling the Function 5. Arrays - Define and using array, array of arrays 6. Taking a first look at C++ pointers. - Passing pointer to a function. Midterm Exam (July 11, Thu).
Week 3	7. Programming project 1. 8. Adding Class to C++. - Defining and calling member function in class.

Hanyang International Summer School

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	9. Inheritance a class. - Constructing, Destructing a subclass.
	10. Error Handling. - Examining the Exception a subclass.
	11. Factoring Classes. - implementing abstract classes, Creating a project file.
Week 4	12. Object-Oriented Analysis and design 13. Programming Project II. Final Exam (July 25, Wed).

Evaluation:	Midterm (%)	Final (%)	Attendance (%)	Lab Exercise (%)	Participation (%)	Etc. (%)
	20	20	10	35	10	5