



HANYANG UNIVERSITY

Hanyang ERICA Summer School

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2020 HESS Course Syllabus

Course Information	Course Title(Eng)	Introduction to Computer Science	Course Category	
	Course Title(Kor)			
	Credit–Lecture-Lab	3 credits-4.5 hrs-0 hrs	Course Restrictions	
	College/School	International Summer School (ERICA)	College/School Responsible	
	Meeting Times		Electronic Attendance	Y/N

Instructor Info	Department		Name	
	Contacts		E-mail	
	Homepage			
Course Type	Teaching Method	Classroom + Practical		

Course Description	<p>This course will introduce computer science and the fundamentals of computer programming. Introduction to Computer Science is specifically designed for students with no prior programming experience and taking this course does not require a background in computer science. This course will introduce a variety of fundamental topics within the field of computer science and will use Java, which is a high-level, portable, and well-constructed computer programming language, to demonstrate those principles.</p> <p>The course starts with an overview of the course topics followed by introducing the fundamentals of Java as well as object-oriented programming terminology and concepts. By the end of the course, you will have a strong understanding of the fundamentals of computer science, programming design skills and the Java programming language. A combination of lectures and lab exercises will be used to teach this course.</p>
Course Objectives	<p>Upon completion of this course, the student will be able to:</p> <ol style="list-style-type: none"> 1. Understand the fundamentals of Computer Science and Java programming. 2. Understand the fundamentals of object-oriented programming in Java.

	<p>3. Have awareness of the important topics and principles of software development.</p> <p>4. Have the ability to write a computer program to solve specified problems.</p> <p>5. Be able to design, develop and execute simple Java programs.</p>
Notice for Students	<ul style="list-style-type: none"> • Students must have their own laptop computer. • Basic knowledge of Windows/MacOS/Unix-based Operating System required. • All electronic course material will be provided to students.

Textbook	No.	Title	Author	Publisher	ISBN	Price(KRW)

Evaluation	Evaluation Criteria	Percentage (%)	Evaluation Criteria	Percentage (%)
	Attendance	10 %	Quiz	
	Assignments	70 %	Mid-term Exam	
	Discussion		Final Exam	
	Team Project		Participation	20 %
	Other			Percentage (%)
	Total 100 %			

Daily Lecture Plan and Assignments	Day	Title	Activity
	1		<ul style="list-style-type: none"> • Overview of Computer Science, Introduction to Java Object-Oriented Programming (OOP) concept and Java
	2		<ul style="list-style-type: none"> • Objects and Classes • Executing and debugging a Java program • Java Basics, Data Types, Variables, Expressions and Operators
	3		<ul style="list-style-type: none"> • Conditional statements, Iteration (loops) • Characters and Strings
	4		<ul style="list-style-type: none"> • Arrays, Declaring and Accessing an array
	5		<ul style="list-style-type: none"> • Java Input / Output • Assessment



	6		<ul style="list-style-type: none">• Java Methods (parameters, return types)
	7		<ul style="list-style-type: none">• Object-Oriented Inheritance
	8		<ul style="list-style-type: none">• Object-Oriented Encapsulation and Polymorphism
	9		<ul style="list-style-type: none">• Searching & Sorting data (Java Search & Sorting algorithms)• Assessment
	10		<ul style="list-style-type: none">• Revision and Round up