

Pre-intensive course programming

for the Software Engineering and Data Sciences Master Programmes

Preparation week	HWS	Day 1	HWS	Day 2	HWS	Day 3	HWS	Day 4	HWS	Day 5	HWS
Self-Study Instruction on Installing the Java virtual Machine, on your computer, and Testing (Instructiona and Vedios will be provided upon registartion)	4	Lecture 1: Variables and Data Type Introduction to course and how to uses Variable and Data types in Java.	2	Lecture 3: Loops 1- What Loops, 2- While Loops, 3- For Loops, 5- Do Loops, 6- New Loop Statement, 7- Infinite Loops.	2	Lecture 5: Functions and Modules 1- Definition, 2- Static Function, 3- Modules, 4- Libraries.	2	Lecture 7:Inheritance in Java Part 1 1- Polymorphism, 2- Method Overloading, 3- Inheritance, 4- Method Overriding, 5- Constructors and Inheritance.	2	Lecture 9: Case Study 1- Problem description, 2- Requirements, 3- Problem Analysis, 4- Solve the problem	2
Self-Study Instruction on Installing the IDE, on your computer, and Testing (Instruction and Vedios will be provided upon registartion)	4	Lecture 2: Condition and Operators 1- Program Control Flow. 2- IF and IF ELSE statements. 3- Nested IF statement. 4- Switch Statement.	2	Lecture 4: Array and Lists 1- Definition, 2- One dimensional array, 3- Two-dimensional array, 4- Multi-dimensional array, 5- Java List, 6- Array Lists, 7- Linked Lists.	2	Lecture 6: Methods and Classes 1- Introduction to Object Oriented Programming, 2- Classes and Objects, 3- Methods return values, 4- "this" keywords 5- Constructor, 6- Encapsulation and data hiding.	2	Lecture 8: Inheritance in Java Part 2 1- Supper keyword, 2- Multilevel Inheritance, 3- Abstraction, 4- Interface, 5- Lambda Function.	2	Lecture 10: Assessment Students will receive the questions and they have to submit results before ending on the session using online testing,	2
Self-Study 1-Eclipse first start, 2- Create your First Program, 3- Run your Fist Program	2	Programming Practical 1 Programming Exercises. You will work through the instructions for class for programming. The lecturer will answer questions over chat and will drop in to check your progress.	2	Programming Practical 2 You will work through the instructions for class for programming. The lecturer will answer questions over chat and will drop in to check your progress.	2	Programming Practical 3 Programming Exercises. You will work through the instructions for class for programming. The lecturer will answer questions over chat and will drop in to check your progress.	2	Programming Practical 4 Programming Exercises. You will work through the instructions for class for programming. The lecturer will answer questions over chat and will drop in to check your progress.	2		
		Self-Study Reading lectures and repeating and testing all the excises	8	Self-Study Reading lectures and repeating and testing all the excises	9	Self-Study Reading lectures and repeating and testing all the excises	10	Self-Study Reading lectures and repeating and testing all the excises	10		
	10		14		15		16		16		4

75 Hours
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Lecture

Independent Study

List of abbreviations HWS: Hours per week (1 hour = 45 min.) ECTS: European Credit Transfer System

- Assessment information
 Your assessments will be weighted as follows:
 20%: Participation (online attendance)
- 20%: Solving Exercises during practical Sessions 60%: Online Final Exam