

Vocational School / Computer Programming

2024 - 2025 Academic Year

ADVANCED JAVA APPLICATIONS

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
ADVANCED JAVA APPLICATIONS	BPR2160500	Fall Semester	1+2	2	5
Prerequisites Courses					
Recommended Elective Courses					
Language of Instruction	Turkish				
Course Level	Short Cycle (Associate's Degree)				
Course Type	Elective				
Course Coordinator	Lect. Beyza KOYULMUŞ				
Name of Lecturer(s)	Lect. Hüseyin KINAY				
Assistant(s)					
Aim	During the Advanced Java Applications course, in addition to the basic sample applications of the Java programming language, some new topics will be introduced. At the end of this course, students will be able to use the Java programming language effectively and develop real Java applications with this language.				
Course Content	This course contains; Basic Java Subject Reviews, Basic Java Subject Reviews, Introduction to advanced Java topics, Java 8 Functional Programming Topics (Lambda, Streams ...), Inheritance and Data Structures, Sorting and Search Algorithms, Generic Programming, Multithread Programming, Network/Socket Programming (TCP/UDP), Establishing a Database Connection, J2EE Fundamentals, Web Programming, Popular Java Libraries and Frameworks, Enterprise Software Development Tools and Project Examples.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
Uses basic java code effectively.			12, 14, 2, 6, 9	A, E, F	
Understands how to write programs related to the database.			11, 12, 13, 14, 2, 3, 6, 8, 9	A, E, F	
Explains Object Oriented Programming Concepts.			12, 14, 2, 6, 9	A, E, F	
Uses Multi Thread Programming.			2, 6	A, E, F	
Uses popular Java libraries and frameworks in the project.			12, 14, 2, 6, 8, 9	A, E, F	
Knows the tools commonly used in enterprise software development			12, 2, 6	A, E, F	
Explain which Java technologies and libraries can be used for business critical applications.			12, 14, 2, 6	A, E, F	
Teaching Methods	11: Demonstration Method, 12: Problem Solving Method, 13: Case Study Method, 14: Self Study Method, 2: Project Based Learning Model, 3: Problem Bated Learning Model, 6: Experiential Learning, 8: Flipped Classroom Learning, 9: Lecture Method				
Assessment Methods	A: Traditional Written Exam, E: Homework, F: Project Task				
Lecture Schedule					
Sequenc e	Topics	Preliminary Preparation			
1	Basic Java Subject Reviews				
2	Basic Java Subject Reviews				
3	Introduction to advanced Java topics				
4	Java 8 Functional Programming Topics (Lambda, Streams ...)				
5	Inheritance and Data Structures				
6	Sorting and Search Algorithms				
7	Generic Programming				
8	Multithread Programming				
9	Network/Socket Programming (TCP/UDP)				
10	Establishing a Database Connection				
11	J2EE Fundamentals				
12	Web Programming				
13	Popular Java Libraries and Frameworks				
14	Enterprise Software Development Tools and Project Examples				
Evaluation Methods		Weight(%)			
Midterm Exam		40			
General Exam		60			

Resources