

**Vocational School / Computer Programming**  
**2023 - 2024 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
<b>Prerequisites Courses</b>					
<b>Recommended Elective Courses</b>					
<b>Language of Instruction</b>	Turkish				
<b>Course Level</b>	Short Cycle (Associate's Degree)				
<b>Course Type</b>	Elective				
<b>Course Coordinator</b>	Lect. Beyza KOYULMUŞ				
<b>Name of Lecturer(s)</b>	Lect. Serkan İŞLEYEN, Lect. Beyza KOYULMUŞ				
<b>Assistant(s)</b>					
<b>Aim</b>	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.				
<b>Course Content</b>	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.				
<b>Course Learning Outcomes</b>			<b>Teaching Methods</b>	<b>Assessment Methods</b>	
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	
<b>Teaching Methods</b>	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				
<b>Assessment Methods</b>	A: Traditional Written Exam, E: Homework, F: Project Task				
<b>Lecture Schedule</b>					
<b>Sequence</b>	<b>Topics</b>	<b>Preliminary Preparation</b>			
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				
<b>Evaluation Methods</b>		<b>Weight(%)</b>			
Midterm Exam		40			
General Exam		60			

Resources