

COURSE DESCRIPTION FORM			
Course Code and Name	BM224 PRINCIPLES OF PROGRAMMING LANGUAGES		
Course Semester	4		
Catalogue Data of the Course (Course Content)	Structures, differences, and use cases of programming languages		
Course Textbooks	1. Concepts of Programming Languages 11th Edition by Robert Sebesta, 2015 2. Programming Language Concepts 2nd Edition by Peter Sestoft, 2017		
Supplementary Textbooks	1. Programming Language Pragmatics 4th Edition by Michael Scott, 2015		
Credit (ECTS)	6		
Prerequisites for the Course (Attendance Requirements)	Attendance mandatory		
Course Type	Compulsory		
Language of Instruction	Turkish		
Course Objectives	Explain the general structure and differences of programming languages and instruct on the usage of various programming languages.		
Course Learning Outcomes	1. Defines the basic structures of programming languages 2. Examines and compares different programming languages 3. Describes the structures of compilers and interpreters 4. Engages in coding development using various programming languages		
Instruction Method (Face-to-face, Distance education etc.)	Face-to-face		
Weekly Schedule of the Course	1. Development of programming languages 2. Structures of programming languages 3. Syntax and semantics 4. Lexical and syntactic analysis 5. Data types, context, and scope 6. Functional programming languages 7. Functional programming languages 8. Functional programming languages 9. Functional programming languages 10. Logical programming languages 11. Logical programming languages 12. Logical programming languages 13. Multi-paradigm programming languages 14. Multi-paradigm programming languages		
Teaching Activities (The time spent for the activities listed here will determine the amount of credit required)	Weekly theoretical course hours Reading activities Internet search and library work Midterm and revision for midterm Final exam and revision for final exam		
Assessment Criteria		Number(s)	Weight (%)
	Midterm exam	1	35
	Assignment	3	25
	Application		
	Project		
	Practice		
	Quiz		
	Final exam	1	40
Total		100	

Workload of the Course	Activity	Number of Weeks	Duration (Weekly Hour)	End of Semester Total Workload				
	Weekly theoretical course hours	14	3	42				
	Weekly practical course hours							
	Reading activities	14	3	42				
	Internet search and library work	12	3	36				
	Designing and implementing materials							
	Making a report							
	Preparing and making presentations							
	Midterm and revision for midterm	1	12	12				
	Final exam and revision for final exam	1	18	18				
	Total workload			150				
	Total workload/ 25			6				
	Course Credit (ECTS)			6				
Contribution Level between Course Outcomes and Program Outcomes	No	Program Outcomes	1	2	3	4	5	
	1	Knowledge of mathematics, science, basic engineering, computing, and computer engineering; ability to use this knowledge in solving complex engineering problems.					X	
	2	Ability to define, formulate and analyze complex engineering problems using basic science, mathematics and engineering knowledge and considering the UN Sustainable Development Goals relevant to the problems addressed.				X		
	3	Ability to design creative solutions to complex engineering problems; ability to design complex systems, processes, devices, software, algorithms or products to meet current and future requirements, considering realistic constraints and conditions.				X		
	4	Ability to select, use and develop appropriate techniques, resources and modern engineering and informatics tools, including estimation and modeling, for the analysis and solution of complex engineering problems while being aware of their limitations.				X		
	5	Ability to use research methods to examine complex engineering problems or research topics in computer engineering, including reviewing the literature, designing experiments, conducting experiments, collecting data, analyzing and interpreting results.						
	6	Knowledge of the effects of engineering practices and the standards used in these practices on society, health and safety, economy, sustainability and environment within the scope of the UN Sustainable Development Goals; awareness of the consequences of engineering solutions in the fields of information security and law.						
	7	Acting in accordance with engineering professional principles and knowledge on ethical responsibility; awareness of acting impartially, without discrimination on any issue, and being inclusive of diversity.		X				

	8	Ability to work effectively individually and as a team member or leader in intradisciplinary and multidisciplinary teams (face-to-face, remote, or hybrid).			X		
	9	Ability to conduct effective verbal and written communication on technical issues in Turkish or English, prepare reports, make effective presentations and prepare software documentation, considering the various differences of the target audience (such as education, language, profession).		X			
	10	Knowledge of business practices such as project, risk and change management and economic feasibility analysis; awareness of entrepreneurship and innovation.			X		
	11	Lifelong learning skill that includes the ability to learn independently and continuously, to adapt to new and developing scientific practices and technologies, and to think inquisitively about technological changes.					
Lecturer(s) and Contact Information	Assist. Prof. Dr. Çağrı Şahin cagrisahin@gazi.edu.tr						