

COURSE DESCRIPTION FORM	
Course Code and Name	CENG394 FILE ORGANIZATION (TECH. ELECT.)
Course Semester	6
Catalogue Data of the Course (<i>Course Content</i>)	Introduction, File Structures, Organization and Processing, Physical aspects of storage area, Sequential file development, decomposition/composition algorithms, Direct file processing techniques, Indexed file processing techniques, Multi-list File Organization, Introduction to Database Management Systems
Course Textbooks	Tharp, A. L. (2008). File organization and processing. John Wiley & Sons.
Supplementary Textbooks	Folk, M. J. (2006). File structures: An object-oriented approach with C++. Pearson Education India. Wiederhold, G. (1987). File organization for database design. McGraw-Hill College.
Credit (ECTS)	6
Prerequisites for the Course (<i>Attendance Requirements</i>)	Prerequisites course: No Co-requisites: Obligatory course attendance 70%
Course Type	Elective
Language of Instruction	English
Course Objectives	Investigating the structure of files which is one of the fundamental concepts of computer science Strengthening the conceptual understanding of computer science fundamentals
Course Learning Outcomes	1. Defines the structures and organization of files. 2. It refers to the physical properties of the storage medium. 3. Creates and develops sequential files. 4. Applies parsing/merging algorithms. 5. Applies direct file processing techniques. 6. Creates and develops indexed files. 7. Creates and improves file conversion and multi-linked list structures. 8. Defines the basic information of database management systems.
Instruction Method (<i>Face-to-face, Distance education etc.</i>)	The mode of delivery of this course is face to face.
Weekly Schedule of the Course	1. week: Introduction 2. week: File Structures, Organization and Processing 3. week: File Structures, Organization and Processing 4. week: Physical aspects of storage area 5. week: Sequential file development 6. week: Decomposition/composition algorithms 7. week: Decomposition/composition algorithms 8. week: Direct file processing techniques 9. week: Direct file processing techniques 10. week: Indexed file processing techniques 11. week: Indexed file processing techniques 12. week: Multi-list File Organization 13. week: Multi-list File Organization 14. week: Introduction to Database Management Systems
Teaching Activities (<i>The time spent for the activities listed here will determine the amount of credit required</i>)	Weekly theoretical course hours: 3 Reading activities Designing and implementing materials Making a report Midterm and revision for midterm Final exam and revision for final exam

Assessment Criteria		Number(s)	Weight (%)					
	Midterm exam	1	30					
	Assignment	2	20					
	Application	1	10					
	Project							
	Practice							
	Quiz							
	Final exam	1	40					
Total	5	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	0	0	0					
	Reading activities	2	15	30					
	Internet search and library work								
	Designing and implementing materials	1	28	28					
	Making a report	1	15	15					
	Preparing and making presentations								
	Midterm and revision for midterm	1	15	15					
	Final exam and revision for final exam	1	20	20					
	Total workload			150					
	Total workload/ 25			6					
	Course Credit (ECTS)			6					

Contribution Level between Course Outcomes and Program Outcomes	No	Program Çıktıları	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			x		

		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.						
	8	Ability to work effectively individually and as a team member or leader in intradisciplinary and multidisciplinary teams (face-to-face, remote, or hybrid).						
	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.						
	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.						x
Lecturer(s) and Contact Information	Prof. Dr. Hacer KARACAN hkaracan@gazi.edu.tr							