Course Description Form

Course Code and Name	CENG464 MULTIMEDIA SYSTEMS (TECH.ELECT.)
Course Semester	8
Catalog Content	Architectures for multimedia systems, digital audio, image technology and image compression, computer graphics, multimedia information systems, multimedia communication systems, structure of the Internet, the methods of data storage and data access on the Internet.
Textbook	Multimedia Networks: Protocols, Design and Applications, Hans W. Barz, Gregory A. Bassett, Wiley, 2016.
Supplementary Textbooks	- Fundamentals of Multimedia, Ze-Nian Li and Mark S. Drew, Prentice-Hall, 2003. - Multimedia Systems and Techniques, Furth Borko, Springer, 1996.
Credit	6
Prerequisites of the Course **(** *Attendance Requirements***)**	-
Type of the Course	Technical Elective
Instruction Language	English
Course Objectives	To provide knowledge about architectures for multimedia systems, digital audio, image technology and image compression, computer graphics, multimedia information systems, multimedia communication systems, structure of the Internet, the methods of data storage and data access on the Internet.
Course Learning Outcomes	Students who successfully complete this course have knowledge on the following topics: Architectures for multimedia systems, digital audio, image technology and image compression, computer graphics, multimedia information systems, multimedia communication systems, structure of the Internet, the methods of data storage and data access on the Internet.
Instruction Methods	The mode of delivery of this course is face to face
Weekly Schedule	1.Week: Architectures for multimedia systems 2.Week: Architectures for multimedia systems 3.Week: Digital audio 4.Week: Image technology 5.Week: Image compression 6.Week: Computer Graphics 7.Week: Multimedia information systems 8.Week: Multimedia communication systems 9.Week: Multimedia communication systems 10.Week: Structure of the Internet 11.Week: Data storage on the Internet 12.Week: Data storage on the Internet 13.Week: Data access 14.Week: Data access methods
Teaching and Learning Methods *(These are examples. Please fill which activities you use in the course)*	Weekly theoretical course hours: 3 Reading Activities Internet browsing, library work Preparation of Midterm and Midterm Exam Final Exam and Preparation for Final Exam
Assessment Criteria	

	Numbers	**Total Weighting (%)**
Midterm Exams	1	50
Assignment	5	10
Application	0	0
Projects	0	0

Practice	0	0	
Quiz	0	0	
Percent of In-term Studies (%)		60	
Percentage of Final Exam to Total Score (%)		40	
Attendance			

Workload

Activity	Total Number of Weeks	Duration (weekly hour)	Total Period Work Load
Weekly Theoretical Course Hours	14	3	42
Weekly Tutorial Hours	0	0	0
Reading Tasks	14	3	42
Studies	14	3	42
Material Design and Implementation	0	0	0
Report Preparing	0	0	0
Preparing a Presentation	0	0	0
Presentations	0	0	0
Midterm Exam and Preparation for Midterm Exam	1	12	12
Final Exam and Preparation for Final Exam	1	12	12
Other (should be emphasized)	0	0	0
Total Workload			150
Total Workload / 25			6
Course Credit (ECTS)			6

Contribution Level Between Course Learning Outcomes and Program Outcomes

No	Program Outcomes	1	2	3	4	5
1	Sufficient knowledge on mathematics, science and computer engineering; ability to apply theoretical and practical knowledge in these areas to model and solve engineering problems				X	
2	Ability to identify, define, formulate and solve complex engineering problems; ability to choose and apply appropriate analysis and modelling methods for these purposes				X	
3	Ability to design a complex system, process, device, software, algorithm, or product under realistic constraints and circumstances to meet certain requirements; ability to apply modern design techniques for this purpose					X
4	Ability to choose, develop and use modern techniques and tools necessary for engineering applications; ability to effectively use computing technologies					X
5	Ability to design and implement systems or experiments to solve engineering problems, collect and interpret data to evaluate and analyze the results of solutions		X			
6	Ability to work effectively in intradisciplinary and interdisciplinary teams or individually		X			
7	Ability to efficiently prepare, evaluate and interpret reports	X				

	8	Ability to make presentations and conduct effective verbal and written communication in Turkish and English	X				
	9	Awareness of the necessity of lifelong learning; ability to access information, follow scientific and technological developments; ability to perpetually renew oneself				X	
	10	Awareness of professional and ethical responsibility, ability to act in accordance with ethical principles				X	
	11	Ability to apply knowledge on project management, risk management and change management		X			
	12	Awareness of entrepreneurship and innovation, ability to design and build			X		
	13	Ability to devise local and global solutions to contemporary issues considering the effects of engineering applications on health, environment and security			X		
	14	Awareness of the legal consequences of engineering solutions		X			
	15	Ability to apply knowledge on software development process and documentation rules			X		
	16	Knowledge on standards used in engineering applications				X	
	17	Awareness of occupational health and security, information security and privacy		X			
The Course's Lecturer(s) and Contact Information		Prof. Dr. M. Ali AKCAYOL akcayol@gazi.edu.tr					