Course Description Form	
Course Code and Name	CENG498 OPEN SOURCE CODING (TECH.ELECT.)
Course Semester	8
Catalog Content	Open source coding definitions, Open-source code development, Open-source software phenomenon, philosophy, advantages and disadvantages, Open systems create processes, The software compatibility and full compliance in the provision of joint work environments, System inter-communication, Shared and distributed databases, Database application development environments, Open source projects and the general features, Security in the open source, Java and Linux programming, Java and Linux programming Application examples
Textbook	Producing Open Source Software 2nd Edition by Karl Fogel, 2017.
Supplementary Textbooks	The Success of Open Source by Steven Weber, 2005. The Architecture of Open Source Applications edited by Amy Brown, Greg Wilson
Credit	6
Prerequisites of the Course (*Attendance Requirements*)	There is no prerequisite or co-requisite for this course.
Type of the Course	Elective
Instruction Language	English
Course Objectives	To help students gain open source code development and open system creation skills
Course Learning Outcomes	1. Open source code development and open system creation skills
Instruction Methods	The mode of delivery of this course is face to face.

Weekly Schedule	1. Week: Open source coding definitions 2. Week: Open-source code development 3. Week: Open-source software phenomenon, philosophy, advantages and disadvantages, 4. Week: Open systems create processes 5. Week: The software compatibility and full compliance in the provision of joint work environments 6. Week: System inter-communication 7. Week: Shared and distributed databases, 8. Week: Database application development environments 9. Week: Database application development environments 10. Week: Open source projects and the general features, 11. Week: Open source projects and the general features, 12. Week: Security in the open source, 13. Week: Java and Linux programming 14. Week: Java and Linux programming Application examples

Teaching and Learning Methods *(These are examples. Please fill which activities you use in the course)*	Weekly theoretical course hours: 3 Weekly tutorial hours Reading Activities Internet browsing, library work Material Design and Implementation Preparation of Midterm and Midterm Exam Final Exam and Preparation for Final Exam

Assessment Criteria		Numbers	Total Weighting (%)	
	Midterm Exams	1	30	
	Assignment	2	10	
	Application			
	Projects	1	20	
	Practice			
	Quiz			
	Percent of In-term Studies (%)		60	
	Percentage of Final Exam to Total Score (%)		40	
	Attendance			

	Activity	Total Number of Weeks	Duration (weekly hour)		Total Period Work Load
Workload	Weekly Theoretical Course Hours	14	3		42
	Weekly Tutorial Hours				
	Reading Tasks	10	3		30
	Studies	10	3		30
	Material Design and Implementation	4	5		20
	Report Preparing				
	Preparing a Presentation				
	Presentations				
	Midterm Exam and Preparation for Midterm Exam	1	13		13
	Final Exam and Preparation for Final Exam	1	15		15
	Other (should be emphasized)				
	Total Workload				150
	Total Workload / 25				6
	Course Credit (ECTS)				6

	No	Program Outcomes	1	2	3	4	5
Contribution Level Between Course Learning Outcomes and Program Outcomes	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

		1	2	3	4
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 sustainable systems	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	Computer Engineering Department Chair bmbb@gazi.edu.tr