

## BMED4912 COURSE CATALOG INFO

<b>Course Code : BMED4912</b>				<b>Course Name : Graduation Design Project</b>			
Semester	Lecture (Le+T+L)	Local Credit	ECTS	Language	Category	Instructional Methods	Prerequisites
8	(0+0+8)	4	7	English	Core	-	Senior Standing Coreq.ENGR4901
<b>Course Content</b>	Design and development of a system component or process for an electrical and electronics engineering problem to meet desired needs. Submission of the results in the form of a project report and oral presentation.						
<b>Course Outcomes</b>	<b>CO 1.</b> Apply engineering theoretical/practical knowledge and skills in project work. <b>CO 2.</b> Execute the specification, research, design, implementation and testing phases of the project . <b>CO 3.</b> Carry out the responsibilities of the project in accordance with ethical principles. <b>CO 4.</b> Appreciate the real-life implementation challenges and possible social effects of the project outcomes. <b>CO 5.</b> Present the project outcomes effectively using written, verbal and visual tools. <b>CO 6.</b> Understand the additional knowledge and expertise necessary for the improvement of project outcomes.						

### COURSE ASSESMENT AND ECTS WORK LOAD

Type of Work	Count	ECTS WORK LOAD		
		Time (Hour)(Including prep. time)	Work Load	
Final Presentation	1	10	10	
Reports	1	40	40	
Assignments				
Midterms				
Interm Meetings/Supervision	14	1	14	
Laboratory				
Tutorial				
Other(Project Work, Self study)	14	8	112	
		<b>Total work load</b>		172
		<b>ECTS Credit (Load/25)</b>		7

**PROGRAM OUTCOMES - COURSE OUTCOMES RELATIONS**

<b>PO</b>	<b>Program Outcomes</b>	<b>CO</b>
1	1.1. Adequate knowledge in fundamentals of mathematics (algebra, differential equations, integrals, probability etc), science (physics, chemistry, biology etc.) and computer science (programming and simulation);	
	1.2. ability to use theoretical and applied knowledge in these areas in complex engineering problems.	
2	2.1. Ability to identify, formulate, and solve complex engineering problems;	1,2
	2.2. ability to select and apply proper analysis and modeling methods for this purpose.	1,2
3	3.1. Ability to design and integrate components of a complex system or process, as they relate to Biomedical Engineering discipline, under realistic constraints and conditions, in such a way as to meet desired requirements;	1,2
	3.2. ability to apply modern design methods.	1,2
4	4.1. Ability to devise, select, and use techniques and tools needed for analyzing and solving complex problems encountered in engineering practice;	1,2
	4.2. ability to employ information technologies effectively.	2
5	5.1. Ability to design experiments,	2
	5.2. ability to conduct experiments, gather, analyze and interpret data.	2
6	6.1. Ability to work in intra-disciplinary teams;	
	6.2. ability to work in multi-disciplinary teams;	
	6.3. ability to take individual responsibilities.	3
7	7.1. Ability to effectively communicate via written and oral means;	5
	7.2. knowledge of at least one foreign language;	
	7.3. ability to write effective reports and comprehend written reports;	5
	7.4. ability to write design and manufacturing reports	5
	7.5. ability to present effectively,	5
	7.6. ability to give and follow clear instructions.	
8	8.1. Recognition of the need for lifelong learning;	6
	8.2. ability to access information, to follow developments in science and technology, and to continue to educate him/herself.	6
9	9.1. Consciousness to behave according to ethical principles, and about professional and ethical responsibility;	3
	9.2. knowledge on standards used in engineering practice.	
10	10.1. Knowledge about business life practices such as project management, risk management, and change management;	
	10.2. awareness in entrepreneurship, innovation;	
	10.3. knowledge about sustainable development.	
11	11.1. Knowledge about the global and social effects of engineering practices on health, environment, and safety, and contemporary issues of the century reflected into the field of engineering;	4
	11.2. awareness of the legal consequences of engineering solutions.	

<b>Revison Date</b>	<b>Prepared by</b>	<b>Approved by</b>
1.9.2019, 1.6.2021, 1.9.2021	Doç. Dr. Ramazan Köprü Prof.Dr. Ahmet Aksen	Prof.Dr. Ahmet Aksen