

COURSE INFORMATION					
Course Title	Code	Semester	C +P + L Hour	Credits	ECTS
PhD Seminar	EE690	Fall/Spring	0+0+0	0	2

Prerequisites	-----
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Language of Instruction	English
Course Level	Master's
Course Type	Core
Course Coordinator	Prof. Dr. Duygun Erol Barkana
Instructors	Prof. Dr. Duygun Erol Barkana
Assistants	-----
Goals	This is an introductory level course to help students motivating their own research. Students admitted for the PhD program with thesis should complete a seminar course. The research seminar course is non-credit and each student is evaluated based on Fail and Pass.
Content	Specific for the selected thesis topic

Learning Outcomes	Program Outcomes	Teaching Methods	Assessment Methods
1) Ability to follow scientific papers, analyzing and interpreting these publications.	1,2,3,4,5,6,7,9,11	1,2	E
2) Ability to discuss the scientific publications with critical thinking, ability to address new research directions	1,2,3,4,5,6,7,9,11	1,2	E
3) Ability to model the state-of-the-art applications in literature using software and/or hardware.	1,2,3,4,5,6,7,9,11	2,3	E
4) Ability to document the existing methods and new research directions clearly.	1,2,3,4,5,6,7,9,11	6	E
5) Ability to present the existing methods and new research directions clearly. Ability to defend ideas in front of the audience.	1,2,3,4,5,6,7,9,11	4	E

Teaching Methods:	1: Lecture, 2: Problem Solving, 3: Simulation, 4: Seminar, 5: Laboratory, 6: Term Research Paper
Assessment Methods:	A: Exam, B: Quiz, C: Experiment, D: Homework, E: Project

COURSE CONTENT		
Week	Topics	Study Materials
1-14	Specific for the selected thesis topic	

RECOMMENDED SOURCES	
Textbook	Scientific publications
Additional Resources	

MATERIAL SHARING	
Documents	
Assignments	
Exams	

ASSESSMENT		
IN-TERM STUDIES	NUMBER	PERCENTAGE
Semester Research Paper (Report + Presentation)	1	100
Total		
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		
Total		100

COURSE CATEGORY	Field Course
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COURSE'S CONTRIBUTION TO PROGRAM						
No	Program Learning Outcomes	Contribution				
		1	2	3	4	5
1	Can reach information in breadth and depth, and can evaluate, interpret and apply this information to scientific research in the area of Electrical and Electronics Engineering.					X

2	Can complete and apply information with scientific methods using limited or missing data; can integrate information from different disciplines.				X	
3	Sets up Electrical and Electronics Engineering problems, develops and implements innovative methods for their solutions.				X	
4	Develops new and/or original ideas and methods; finds innovative solutions to the system, component, or process design.				X	
5	Has comprehensive knowledge about the state-of-the-art techniques and methods in Electrical and Electronics Engineering and their limitations.				X	
6	Can design and conduct research of analytical, modeling or experimental orientation; can solve and interpret complex cases that come up during this process.				X	
7	Can communicate verbally and in writing in one foreign language (English) at the General Level B2 of the European Language Portfolio.					X
8	Can assume leadership in multi-disciplinary teams; can develop solutions in complex situations, and take responsibility.					
9	Can systematically and openly communicate in national and international venues the proceedings and conclusions of the work he/she performs in Electrical and Electronics Engineering.				X	
10	Respects social, scientific and ethical values in all professional activities performed during the collection, interpretation and announcement phases of data.					
11	Is aware of new and emerging applications in Electrical and Electronics Engineering; investigates and learns them, whenever necessary.					X
12	Can identify the social and environmental aspects of Electrical and Electronics Engineering applications.					

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (including 2 midterms: 14xtotal lecture hours)	14	1	14
Hours for off-the-classroom study (Pre-study, practice)	12	3	36
Final examination	1	2	2
Total Work Load			52
Total Work Load / 25 (h)			2.08
ECTS Credit of the Course			2