

COURSE INFORMATION					
Course Title	Code	Semester	L+P Hour	Credits	ECTS
MASTER THESIS	ESYE600	3-4		NC	60

Prerequisites	
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Language of Instruction	English
Course Level	M. Sc.
Course Type	Compulsory
Course Coordinator	
Instructors	All Faculty Members.
Assistants	
Goals	Contribution to knowledge in Systems Engineering.
Content	Differs for each student.

Course Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
Ability to do detailed literature survey related to thesis topic, and reach knowledge in depth.	1	2	A
Ability to properly collect data required for the study, and use it on ethical basis.	10	2	A
Ability to make experiments/observations to support the study and present the results openly.	5	2	A
Ability to defend the studies on a scientific basis.	8	2	A
Ability to contribute to knowledge.	3	2	A
Awareness of ethical values.	10	2	A

Teaching Methods:	1: Lecture, 2: Paper Discussion, 3: Lab, 4: Case-Study
Assessment Methods:	A: Testing, B: Paper Summary, C: Homework, D: Project

COURSE CONTENT		
Week	Topics	Study Materials
1-52	Research, Thesis Writing, Possible Publication.	Research Material
RECOMMENDED SOURCES		
Textbook		
Additional Resources		

MATERIAL SHARING	
Documents	
Assignments	
Exams	Thesis Defense

ASSESSMENT			
	IN-TERM STUDIES	NUMBER	PERCENTAGE
Mid-terms			
Assignment			
Lab Work			
Term Project			
	Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE			
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE			
	Total		100

COURSE CATEGORY	Expertise
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COURSE'S CONTRIBUTION TO PROGRAM						
No	Program Learning Outcomes	Contribution				
		1	2	3	4	5
1	Ability to reach knowledge in breadth and depth through scientific research in Systems Engineering field; to have extensive knowledge about current techniques and procedures together with their constraints.					X
2	Ability to complement and apply knowledge by scientific methods utilizing limited or missing data; to use knowledge in different disciplines effectively by blending them.					
3	Ability to formulate Systems Engineering problems; to develop novel and original ideas and procedures for their solutions and to use innovative procedures in solutions.				X	
4	Awareness of new and developing applications in Systems Engineering; ability to investigate and learn these applications when required.					
5	Ability to design and apply analytical, and modeling and experimental based research; to solve and interpret complex situations encountered in this process.					X
6	Ability to lead multi-disciplinary teams; to develop solution approaches in complicated situations and to take responsibility.					
7	Ability to develop novel and/or original ideas and methods; to develop innovative solutions for the design of systems, parts or the processes.					
8	Ability to communicate orally or in writing the process and the results of Systems Engineering studies systematically and openly in national or international platforms.				X	
9	Ability to master a foreign language (English) at the European Language Portfolio B2 General Level to communicate orally or in writing.					
10	Ability to recognize social, scientific and ethical values in the process of collection, interpretation and publishing of data, and in all professional activities.					X
11	Ability to visualize social and environmental dimensions of Systems Engineering applications and to observe these dimensions in professional practice.					
12	Ability to develop appropriate methodology and procedures for the modeling, improvement, control and design of complex systems for a specified target.					

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Excluding the exam weeks: 12x Total course hours)			
Hours for off-the-classroom study (Pre-study, practice)			
Midterm examination			
Homework			
Thesis Research and Writing			1500
Thesis Defense			2
Total Work Load			1502
Total Work Load / 25 (h)			60.08
ECTS Credit of the Course			60