

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

<b>Prerequisites</b>	
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<b>Language of Instruction</b>	English
<b>Course Level</b>	M. Sc.
<b>Course Type</b>	Compulsory
<b>Course Coordinator</b>	
<b>Instructors</b>	All Faculty Members.
<b>Assistants</b>	
<b>Goals</b>	Contribution to knowledge in Industrial and Systems Engineering.
<b>Content</b>	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

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

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

<b>MATERIAL SHARING</b>	
<b>Documents</b>	
<b>Assignments</b>	
<b>Exams</b>	Thesis Defense

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

<b>COURSE CATEGORY</b>	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 Industrial and 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 Industrial and 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 Industrial and 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 Industrial and 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 Industrial and 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.					

<b>ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION</b>			
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			
<b>Thesis Research and Writing</b>			1500
<b>Thesis Defense</b>			2
<b>Total Work Load</b>			1502
<b>Total Work Load / 25 (h)</b>			60.08
<b>ECTS Credit of the Course</b>			<b>60</b>