

| COURSE INFORMATION | | | | | |
|--------------------|---------|----------|----------|---------|------|
| Course Title | Code | Semester | L+P Hour | Credits | ECTS |
| PH.D. THESIS | ESYE700 | | 0+0 | NC | 150 |

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| Prerequisites | |
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| Language of Instruction | English |
| Course Level | Ph.D. |
| Course Type | Compulsory |
| Course Coordinator | |
| Instructors | |
| Assistants | |
| Goals | The goal of Ph.D. thesis is to ensure that the student is transformed into a professional researcher and can later take on independent, long-term research commitments. |
| Content | Each Ph.D. thesis research is unique and has its own merits. |

| 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 | 1,2,3 | 2 | A |
| Ability to properly collect, evaluate and assess the required data for the research topic | 3,4,5 | 2 | A |
| Ability to make experiments/observations to support the study and present the results using scientific language | 5,6,7,9 | 2 | A |
| Ability to defend the studies before the peers and convened jury | 10 | 2 | A |
| Ability to contribute to the existing scientific knowledge in the specific area of research topic | 7,8 | 2 | A |
| Awareness of ethical values | 5 | 2 | A |

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| 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 |
| 1-104+ | Research for the Ph.D. Thesis+ Publications+ | All research material including books, papers, patents |

| RECOMMENDED SOURCES | |
|----------------------|--|
| Textbook | |
| Additional Resources | |

| MATERIAL SHARING | |
|------------------|--|
| Documents | |
| Assignments | |
| Exams | |

| ASSESSMENT | | | |
|--|-----------------|--------|------------|
| | IN-TERM STUDIES | NUMBER | PERCENTAGE |
| Mid-terms | | | |
| Assignment | | | |
| Lab Work | | | |
| Term Project | | | |
| | Total | | 100 |
| Contribution o Final Examination to Overall Grade | | | |
| Contribution of In-Term Studies to Overall Grade | | | |
| | Total | | 100 |

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| COURSE CATEGORY | Expertise |
|------------------------|-----------|

| COURSE'S CONTRIBUTION TO PROGRAM | | |
|----------------------------------|---------------------------|--------------|
| No | Program Learning Outcomes | Contribution |

| | | 1 | 2 | 3 | 4 | 5 |
|----|--|---|---|---|---|---|
| 1 | Ability to understand and apply natural sciences, mathematics and engineering sciences in advanced level. | | | | | X |
| 2 | Ability to possess wide and deep knowledge in the field of Systems Engineering including the most recent advances. | | | | | X |
| 3 | Ability to possess advanced level of required skill, techniques and methods to conduct research by using and evaluating up-to-date information. | | | | | X |
| 4 | Ability to model, design and develop solutions, under realistic constraints, a system, a process or a product by generating innovative and original ideas. | | | | | X |
| 5 | Ability to transfers advancement in scientific, technical and cultural developments to the society with the ethical responsibility and scientific objectivity. | | | | | X |
| 6 | Ability to perceive, design and applies an original research process independently: manages this process successfully. | | | | | X |
| 7 | Ability to execute a comprehensive study that brings innovation to the science and technology or develops technological product/process or adapts an already known method to a new field. | | | | | X |
| 8 | Ability to contribute to the development of science and technology literature by publishing research results in respectable scientific journals. | | | | | X |
| 9 | Ability to analyze, synthesize and evaluate critically the ideas and developments in the field of specialization. | | | | | X |
| 10 | Ability to communicate effectively in written, orally and visually with peers and wide scientific and social communities by using a foreign language at a level of European Language Portfolio C1 General Level. | | | | | X |

| 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) | | | |
| Homework | | | |
| Ph.D. Thesis research and thesis writing | | | 3750 |
| Final oral exam | | | 3 |
| Total Work Load | | | 3753 |
| Total Work Load / 25(h) | | | 150.1 |
| ECTS Credit of the Course | | | 150 |