

T.C. YEDİTEPE UNIVERSITY
ELECTRICAL AND ELECTRONICS ENGINEERING
“MASTER of SCIENCE (MSc) PROGRAM” INFORMATION PACKAGE

OBJECTIVES:

To produce engineers in the field of Electrical and Electronics Engineering who:

1. can do advanced research and development,
2. can apply the information acquired in the particular area of expertise.

GOALS:

To produce engineers in the field of Electrical and Electronics Engineering who:

1. can make the right decisions independently,
2. can do advanced research,
3. are reliable and productive,
4. can communicate effectively.

STARTING DATE:

Fall Semester of 2002.

MSc PROGRAM LEARNING OUTCOMES:

The competences of the graduates of the “MSc Program in Electrical and Electronics Engineering” are as follows:

PO1. 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.

PO2. Can complete and apply information with scientific methods using limited or missing data; can integrate information from different disciplines.

PO3. Sets up Electrical and Electronics Engineering problems, develops and implements innovative methods for their solutions.

PO4. Develops new and/or original ideas and methods; finds innovative solutions to the system, component, or process design.

PO5. Has comprehensive knowledge about the state-of-the-art techniques and methods in Electrical and Electronics Engineering and their limitations.

PO6. Can design and conduct research of analytical, modeling or experimental orientation; can solve and interpret complex cases that come up during this process.

PO7. Can communicate verbally and in writing in one foreign language (English) at the General Level B2 of the European Language Portfolio.

PO8. Can assume leadership in multi-disciplinary teams; can develop solutions in complex situations, and take responsibility.

PO9. 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.

PO10. Respects social, scientific and ethical values in all professional activities performed during the collection, interpretation and announcement phases of data.

PO11. Is aware of new and emerging applications in Electrical and Electronics Engineering; investigates and learns them, whenever necessary.

PO12. Can identify the social and environmental aspects of Electrical and Electronics Engineering applications.

Teaching and Learning Methods

Teaching and learning methods and strategies are chosen to improve the student's skills such as self learning, lifelong learning, observation, presentation, critical thinking, team working and IT.

Also, to achieve a better learning with students having different learning styles, the program is supported by convenient methodologies given below*:

Teaching and Learning Methods	Major Learning Activities	Tools
Course (lecturing, discussion, question-answer)	Listening, thinking, understanding, interpretation, writing, observation, critical thinking, question development	Standard class ware, text book and class-notes, multimedia, data projector, computer, overhead projector
Problem Solving	Listening, thinking, understanding, interpretation, question development	Standard class ware, solutions manual, multimedia, data projector, computer, overhead projector
Simulation	IT skills, observation, thinking, understanding, verification	Computer, special software
Seminar	Listening, understanding, interpretation, question development, critical thinking, following advancements in EE, lifelong learning	Standard class ware, multimedia, data projector, computer, overhead projector, special equipment
Laboratory	Observation, measurement, recording of measurement results, interpretation, report writing, IT skills, organizational skills, teamwork	Special equipment
Term Research Paper	Research, investigation, thinking, interpretation, report writing, following advancements in EE, lifelong learning	Computer, internet database, library database

(*) Depending on the course specifications, one or more teaching and learning methods might be implemented

Course and MSc Program Learning Outcomes Relations

Course		PÇ1	PÇ2	PÇ3	PÇ4	PÇ5	PÇ6	PÇ7	PÇ8	PÇ9	PÇ10	PÇ11	PÇ12
EE515	Sensors	4	5	5	5	4	4	3	4	4	4	5	4
EE526	Biomedical Elektromagnetics	5	5	5	5	5	4	5		4		5	
EE533	RF Circuit Design	4	5	4	4		4					4	
EE539	Analog IC Design	3	2	2	2	1	1	2	2	5	1	1	5
EE 590	Research Seminar	5	3	3	4	4	4	5		4		5	
EE 600	MSc Thesis	5	5	5	5	5	5	5	5	5	5	5	5

Course and PhD Program Learning Outcomes Relations

Course		PÇ1	PÇ2	PÇ3	PÇ4	PÇ5	PÇ6	PÇ7	PÇ8	PÇ9
EE649	Special Topics in Electronics	5	5		1	1	1	5	5	1
EE659	Special Topics in Communications	4	4	4	4	4	4	4	4	4
EE689	Advanced Topics in Control Systems	5	5					5	5	
EE696	Special Topics in RF Systems	5	5					5	5	

Course Categories	AKTS
SUPPORT COURSES	
EE515 - Sensors	10
EE526 - Biomedical Elektromagnetics	10
EE533 - RF Circuit Design	10
EE539 - Analog IC Design	10
EE 590 – Research Seminar	2
EE 600 – MSc Thesis	30 (*)
EE649 - Special Topics in Electronics	10
EE659 - Special Topics in Communications	10
EE689 - Advanced Topics in Control Systems	10
EE696 - Special Topics in RF Systems	10
(*) 2 semesters x 30 = 60 ECTS	
Total ECTS	142

Level of Qualification:

Students who complete the program successfully and acquire the program competencies receive a “MSc” degree in the area of Electrical and Electronics Engineering.

Admission Requirements:

To apply for a master's program, a Bachelor's degree must be held or expected to be held by the end of the term of application and the requirements given below must be met. Candidates are required to be successful in the interview held by the department they are applying for.

Application Documents	M.Sc.
Application Form	
Diploma (Recognition Certificate for Students Studied Abroad)	Bachelor's Degree Diploma
ALES (is required for Turkish candidates) GRE (is recommended for foreigners)	ALES: 55 GRE: 149
English Proficiency	TOEFL IBT:66 YDS:55

Occupational Profiles and Continued Advance Education:

There is a wide range of job, advanced degree and academic career opportunities for our graduates. They will be able to find jobs in the disciplines of electronics, communication, signal processing, power and energy, electromagnetic fields and waves, control and automation. They are employed in public and private sectors, and in the world's prestigious institutions. They are doing research towards advanced degrees in the world's prestigious universities.

Graduation Requirements:

Those who can successfully complete 7 courses (21 course credits), Research Seminar and the MSc Thesis will graduate with a minimum of 120 ECTS and a CGPA of at least 3.00.

(A student who has received his/her Bachelor's degree in an area other than Electrical and Electronics Engineering, must complete a preparatory program courses with the approval of his/her advisor.

Assessment Methods:

Exams (Quiz, Midterm, Final), Experiment, Homework, Project

Curriculum:

The Program Curriculum consists of 7 field courses, EE590 Research Seminar and EE600 MSc Thesis.

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