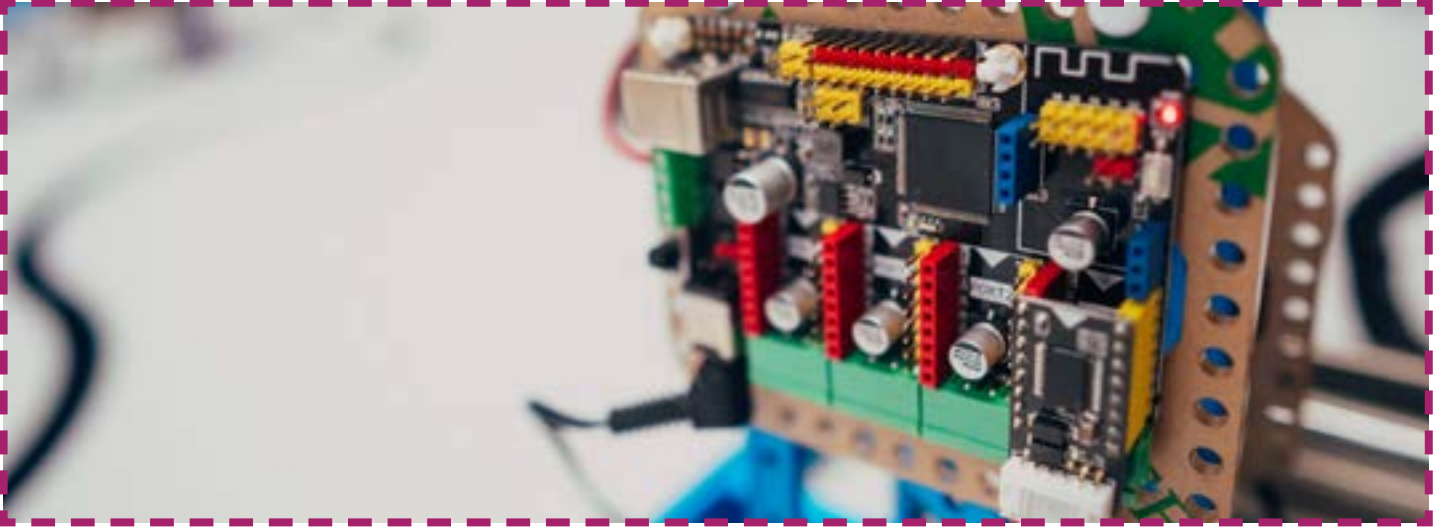# MSc PROGRAM IN COMPUTER ENGINEERING
(Thesis - Without Thesis)

What is Computer Engineering Master's Program (English)?

In today's world, the fact is that information and technology is a part of our lives. The interdisciplinary studies gain importance all over the world has caused the importance of studies in computer engineering to increase rapidly. Developments in software development methods, hardware technologies, health informatics, robotics, artificial intelligence technologies, neuroscience and data mining speed up the developments in computer engineering.

Therefore, specialized computer engineers who are able to follow the English literature are needed in every sector of technology and informatics. The aim of Computer Engineering (English) with Thesis / Non-Thesis to educate researchers who have the theoretical and practical knowledge related to the field, have the ability to follow the English resources and developments in the field simultaneously with the rest of the world, are equipped in designing, to develop and ensure the security of information systems, to have advanced problem solving skills and to be focused on the application.

Who can apply?

Graduates of the Faculty of Engineering, Mathematics and Computer Science, Statistics, Physics, Chemistry, Biology, Astronomy and Space Sciences and similar Science-Mathematics Science and Teaching Undergraduate Programs graduates can apply. Candidates who have received their undergraduate degree in a different field from Computer Engineering and Software Engineering will participate in the Scientific Preparation Program to be determined by the Department of Computer Engineering and the Board of Directors of the Institute. The Scientific Preparation Program should be completed in maximum 2 semesters.

What are the application requirements?

Candidates who apply for this program must have a score of 55 or above from the Academic Personnel and Graduate Education Entrance Exam (ALES). Candidates who score at least an ALES score in the Graduate Record Examination (GRE), which is considered equivalent to the LES exam by the Interuniversity Board, are also considered. In admission to graduate programs; ALES score (50%), undergraduate grade point average (30%) and interview (20%) is sorted by the sum of the scores.

English proficiency certificate is required for graduate programs in English. For programs conducted in English or another foreign language, the foreign language proficiency level and other criteria suggested by the relevant Institute Executive Board and approved by the Senate are announced to the candidates. Prospective students can meet the English entrance requirement by taking TOEFL IBT, YDS, e-YDS or the English Proficiency Exam organized by Üsküdar University during certain periods of the year.

COURSE LIST
(Thesis - Without Thesis)

FIRST TERM						
Code	**Course Name**	**Type**	**T**	**P**	**C**	**ECTS**
COME511	Advanced Algorithms	C	3	0	3	8
COME513	Advanced Computer Networks	C	3	0	3	8
XXX	Elective Course-I	E	3	0	3	8
XXX	Elective Course-II	E	3	0	3	8
TOTAL			**12**	**0**	**12**	**32**

SECOND TERM						
Code	**Course Name**	**Type**	**T**	**P**	**C**	**ECTS**
INS501	Research Methods and Scientific Ethics	C	3	0	3	6
COME502	Seminar	C	0	0	0	2
XXX	Elective Course-III	E	3	0	3	8
XXX	Elective Course-IV	E	3	0	3	8
XXX	Elective Course-V	E	3	0	3	8
TOTAL			**12**	**0**	**12**	**32**

THIRD TERM						
Code	**Course Name**	**Type**	**T**	**P**	**C**	**ECTS**
COME591	Graduation Thesis - I	C	0	0	0	**30**

FOURTH TERM						
Code	**Course Name**	**Type**	**T**	**P**	**C**	**ECTS**
COME592	Graduation Thesis-II	C	0	0	0	**30**

TOTAL CREDITS FOR GRADUATION			**24**	**0**	**24**	**124**

PREREQUISITED COURSES FOR OTHER FIELDS - FIRST TERM						
Code	**Course Name**	**Type**	**T**	**P**	**C**	**ECTS**
COME 505	Algorithms and Programming	C	2	2	3	5
COME 507	Computer Communications	C	3	0	3	5
COME509	Computer Structures	C	3	0	3	5
PREREQUISITED COURSES FOR OTHER FIELDS - SECOND TERM						
Code	**Course Name**	**Type**	**T**	**P**	**C**	**ECTS**
COME504	Discrete Structures	C	3	0	3	5
COME506	Data Structures and Algorithms	C	2	2	3	5
COME508	Operating System Design	C	3	0	3	5

ELECTIVE COURSES						
Code	**Course Name**	**Type**	**T**	**P**	**C**	**ECTS**
COME512	Advanced Database Design	E	3	0	3	8
COME514	Artificial Intelligence and Applications	E	3	0	3	8
COME515	Advanced Topics in Data Mining	E	3	0	3	8
COME516	Advanced Software Engineering	E	3	0	3	8
COME517	System Science and Engineering	E	3	0	3	8
COME518	Statistical Analysis Methods and Applications	E	3	0	3	8
COME519	Data and Network Security	E	3	0	3	8
COME520	Advanced Machine Learning	E	3	0	3	8
COME521	Natural Language Processing	E	3	0	3	8
COME522	Digital Image Processing	E	3	0	3	8
COME523	Special Topics in Computer Engineering	E	3	0	3	8
COME524	Human Computer Interaction	E	3	0	3	8
COME525	Artificial Neural Networks	E	3	0	3	8
COME526	Digital Signal Processing Applications	E	3	0	3	8
COME527	Wireless Network Protocols	E	3	0	3	8
COME528	Advanced Parallel Processing	E	3	0	3	8
COME529	Embedded Systems in Real Time Applications	E	3	0	3	8
COME530	Bioinformatics	E	3	0	3	8
COME531	Advanced Robotics	E	3	0	3	8
COME532	Advanced Scientific Computing	E	3	0	3	8
COME533	Mobile Application Development	E	3	0	3	8
COME534	Graph Algorithms	E	3	0	3	8
COME535	Modeling and Simulation	E	3	0	3	8
COME536	Microcontroller and Applications	E	3	0	3	8
COME537	Web Technologies and Programming	E	3	0	3	8
COME538	Cyber Security	E	3	0	3	8
COME539	Computer Vision	E	3	0	3	8
COME540	Brain Computer Interfaces	E	3	0	3	8
COME541	Cryptography	E	3	0	3	8
CYS507	Computer Forensics	E	3	0	3	8
CYS517	Penetration Testing and Vulnerability Analysis	E	3	0	3	8