

Course Structure Diagram with Course Credits

The undergraduate program in Computer Engineering consists of 47 courses with 240 ECTS credits in total.

There are at least 5 courses in each semester, excluding common compulsory courses and elective courses.

In each program, there are common compulsory courses identified by the Higher Education Council of Turkey (YÖK) and other common courses determined by the University Senate.

Beginning from the junior (third) year, elective courses are anticipated in each semester.

25% of the elective courses are taken from other faculties.

There are at least 7 elective courses in each undergraduate program.

COURSES OFFERED THROUGHOUT THE UNIVERSITY		
Common University Courses	Campus Orientation	The students are registered to this course at the beginning of the first semester of the freshman year to familiarize them with the campus life at NEU.
	Career Planning	The students are registered to this course at the beginning of their second semester of the freshman year to help them prepare for work life after graduation.
	Cyprus History and Culture	This course is taken by students in their freshmen year and it aims to help them to familiarize them with the local history and culture.
Common Compulsory Courses (YÖK Courses)	Turkish Language I-II (Turkish for Foreigners I & II to replace this course for international students) Principles of Atatürk and History of Revolution I-II	These are the compulsory courses which are required to be offered in all of the associate and undergraduate programs in Turkey according to the Higher Education Legislation.
	Information Technologies	This course is anticipated in all the associate and undergraduate programs in Turkey in order to make the students gain the qualifications related to basic

		information technologies.
	Foreign Language (ENGLISH) I & II	This course is offered in the first and second semester and conducted according to the program curriculum of each faculty.

List of courses of taken each semester are given below.

BSc in Computer Engineering

1st Semester

CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E	prerequisite
COM106	Introduction to Programming	Programlamaya Giriş	C	3	2	4	6	
CHM101	General Chemistry	Genel Kimya	C	3	2	4	5	
ENG101	English I	İngilizce I	C	3	0	2	3	
MTH101	Calculus I	Matematik I	C	4	0	4	5	
PHY101	General Physics I	Genel Fizik I	C	3	2	4	5	
CAM100	Campus Orientation	Kampüse Uyum	C	2	0	0	2	
YİT101 / TUR101	Turkish for Foreigners I / Turkish Language I	Yabancılar için Türkçe I / Türk Dili I	C	2	0	2	2	
COM001	Computer Engineering Orientation	Bilgisayar Mühendisliği Yönlendirme	C	2	0	0	2	
Total				22	6	20	30	

2nd Semester

CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E	
AII104	Discrete Structures	Ayrık Yapılar	C	3	0	3	5	
AII102	Programming & Problem Solving	Programlama ve Soru Çözme	C	3	2	4	6	AII106
ENG102	English II	İngilizce II	C	3	0	2	3	ENG101
MTH102	Calculus II	Matematik II	C	4	0	4	6	MTH102
PHY102	General Physics II	Genel Fizik II	C	3	2	4	6	PHY101
YİT102 / TUR102	Turkish for Foreigners II / Turkish Language II	Yabancılar için Türkçe II / Türk Dili II	C	2	0	2	2	YIT101
GEC351	21st Century Skills	21. Yüzyıl Becerileri	E	2	0	0	2	

Total				20	4	19	30	
	3rd Semester							
CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E	
AII001	Logic Design	Sayısal Mantık	C	3	2	4	6	AII104
AII201	Data Structures& Algorithms	Veri Yapıları ve Algoritmalar	C	3	2	4	6	AII102
AII204	Electrical Circuits	Elektrik Devreleri	C	3	0	3	5	PHY102
MTH201	Differential Equations	Diferansiyel Denklemler	C	4	0	4	6	MTH101
AİT103 / AİT101	Atatürk Principles & Reforms I	Atatürk Prensipleri ve Reformları I	C	2	0	2	2	
MTH113	Linear Algebra	Lineer Cebir	C	3	0	3	5	
Total				18	4	20	30	
	4th Semester							
CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E	
AII202	Database Management Systems	Veri Tabanı Yönetim Sistemleri	C	3	2	4	5	AII201
AII203	Computer Architecture and Organization	Bilgisayar Mimarisi ve Organizasyonu	C	3	2	4	5	AII001
COM208	Electronics I	Elektronik I	C	3	2	4	5	AII204
ENG201	English Communication Skills	İngilizce İletişim	C	3	0	3	4	ENG102
AİT104 / AİT102	Atatürk Principles & Reforms II	Atatürk Prensipleri ve Reformları II	C	2	0	2	2	AIT103
RE	Restricted Electives	Sınırlı Seçmeli	E	3	0	3	4	
COM200	Summer Training I	Staj 1	C	0	0	0	5	
Total				17	6	20	30	
	5th Semester							
CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E	
AII302	Operating Systems	İşletim Sistemleri	C	3	0	3	6	AII203
COM362	Signals and Systems for Computer Engineers	Bilgisayar Mühendisleri için Sinyaller ve Sistemler	C	3	2	4	6	MTH201
COM339	Programming Language Concepts	Programlama Dilleri Kavramı	C	3	0	3	5	AII106
MTH251	Probability and Statistics	Olasılık ve İstatistik	C	3	0	3	6	MTH102
COM344	Automata Theory	Otomata Teorisi	C	3	0	3	5	AII104

CAR100	Career Planning	Kariyer Planlama	C	2	0	0	2	
Total				17	2	16	30	
	6th Semester							
CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E	
AII351	Embedded Systems	Gömülü Sistemler	C	3	2	4	5	AII203
AII303	Data Communications and Networking	Veri İletişimi ve Ağlar	C	3	2	4	5	
COM333	Operational Research	Yöneylem Araştırması	E	3	0	3	5	AII201
COM382	Real Time Systems	Gerçek Zamanlı Sistemler	E	3	0	3	5	MTH201
AII002	Systems Simulation	Sistem Simülasyonu	C	3	0	3	5	MTH251
COM300	Summer Training II	Staj II	C	0	0	0	5	
Total				15	4	17	30	
	7th Semester							
CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E	
COM490	Engineering Design I	Mühendislik Tasarımı I	C	2	2	3	7	
AII003	Software Engineering	Yazılım Mühendisliği	C	3	0	3	6	COM339
TE	Technical Elective	Teknik Seçmeli	E	3	0	3	5	
TE	Technical Elective	Teknik Seçmeli	E	3	0	3	5	
TE	Technical Elective	Teknik Seçmeli	E	3	0	3	5	
CHC100	Cyprus: History and Culture	Kıbrıs Kültürü ve Tarihi	E	2	0	0	2	
Total				16	2	15	30	
	8th Semester							
CODE	COURSE NAME	DERS ADI	C/E	T	P	C	E	
COM491	Engineering Design II	Mühendislik Tasarımı II	C	2	2	3	8	COM490
AII426	Economics For Engineers	Mühendisler için Ekonomi	E	3	0	3	5	
FE	Free Elective	Serbest Seçmeli	E	3	0	3	5	
TE	Technical Elective	Teknik Seçmeli	E	3	0	3	5	
TE	Technical Elective	Teknik Seçmeli	E	3	0	3	5	
AII439	Occupational Health and Safety	Mühendisler İçin İş Sağlığı	E	2	0	2	2	
Total				16	2	18	30	

YIT101, YIT102, AIT103, AIT104 are designated for oversee students (foreigners). AIT101, AIT 102, TUR101, TUR102 are designated for the students of Turkish nationality.

MT: Mathematics, BS: Basic Science, ECS: English Composition and Social Sciences, CS: Computer Science, OCE: Obligatory Computer Engineering Courses, ECE: Elective Computer Engineering Courses, BT: Bachelor's Thesis, SI: Summer Internship.

8.4. Types of Elective Courses

	Technical Electives					
CODE	COURSE NAME	DERS ADI	T	P	C	E
AII401	Microprocessor Systems	Mikroişlemci Sistemleri	3	0	3	5
AII402	Computer Graphics	Bilgisayar Grafikleri	3	0	3	5
COM410	Parallel Computer Architecture	Paralel Bilgisayar Mimarisi	3	0	3	5
COM414	Digital Control Systems	Dijital Kontrol Sistemleri	3	0	3	5
COM416	Computer Networks	Bilgisayar Ağları	3	0	3	5
AII404	Neural Networks	Sinir Ağları	3	0	3	5
AII405	Computer Hardware	Bilgisayar Donanımı	3	0	3	5
AII406	System Programming	Sistem Programlama	3	0	3	5
COM430	Programming Languages I	Programlama Dilleri I	3	0	3	5
AII407	Programming Languages II	Programlama Dilleri II	3	0	3	5
AII005	Internet Programming	İnternet Programlama	3	0	3	5
AII408	Advanced Object Oriented Programming	Gelişmiş Nesne Yönelimli Programlama	3	0	3	5
AII409	Object Oriented Programming II	Nesne Yönelimli Programlama II	3	0	3	5
COM447	Advanced Operating System	Gelişmiş İşletim Sistemi	3	0	3	5
AII411	Digital Signal Processing	Dijital Sinyal İşleme	3	0	3	5
AII412	Database Applications	Veritabanı Uygulamaları	3	0	3	5
AII413	Introduction to Artificial Intelligence	Yapay Zeka'ya Giriş	3	0	3	5
COM452	Introduction to Parallel Computing	Paralel Hesaplamaya Giriş	3	0	3	5
AII415	Decision Making	Karar Verme	3	0	3	5
COM454	Advanced Computer Architecture and Organization	Gelişmiş Bilgisayar Mimarisi ve Organizasyonu	3	0	3	5
AII417	Mobile Computing	Mobil Hesaplama	3	0	3	5
AII419	Digital Image Processing	Dijital Görüntü İşleme	3	0	3	5

COM471	Hardware Design using FPGAs	FPGA'ları Kullanarak Donanım Tasarımı	3	0	3	5
AII006	Web Design and Programming	Web Tasarımı ve Programlama	3	0	3	5
AII007	Multimedia Systems	Multimedya Sistemleri	3	0	3	5
AII435	Mechatronics	Mekatronik	3	0	3	5
AII423	Robotic Systems	Robotik Sistemler	3	0	3	5
AII445	Introduction to Machine Learning	Makine Öğrenmesine Giriş	3	0	3	5
AII439	Occupational Safety (Elective)	İş Sağlığı ve Güvenliği	2	0	3	3

Restricted Electives						
CODE	COURSE NAME	DERS ADI	T	P	C	E
MTH323	Numerical Analysis	Sayısal Analiz	3	0	3	4
COM315	Algoritms	Algoritmalar	3	0	3	4
AII217	Microbiology	Mikrobiyoloji	3	0	3	4
BME102	Biochemistry	Biyokimya	3	0	3	4

Free Electives						
CODE	COURSE NAME	DERS ADI	T	P	C	E
AII427	Management for Engineers	Mühendisler için Yönetim	3	0	3	5
BME102	One of Technical Electives	Teknik Seçmeli Derslerden Biri	3	0	3	5