SABANCI UNIVERSITY - FACULTY OF FACULTY OF ENGINEERING AND NATURAL SCIENCES
ELECTRONICS ENGINEERING PROGRAM RECOMMENDED PROGRAM

Year -1 Freshman Semester-1

Course Code	Course Name	Course Type	Prerequisite Courses	SU Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ECTS (Total)
MATH101	Calculus I	University C.		3		6	6
NS101	Science of Nature I	University C.		4		6	6
CP101N	Civic Involvement Projects I	University C.		0			1
HIST191	Principles of Atatürk and the History of the Turkish Revolution I	University C.		2			3
SPS101	Humanity and Society I	University C.		3			6
TLL101	Turkish Language and Literature I	University C.		2			3
IF100	Computational Approaches to Problem Solving	University C.		3	5		5
*PROJ 201	*Undergraduate Project Course			1			1
			TERM TOTAL	17	5	12	30

The students have to take *Undergraduate Project Course (PROJ 201) on freshman or sophomore year.

Year -1 Freshman Semester-2

Course Code	Course Name	Course Type	Prerequisite Courses	SU Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ECTS (Total)
MATH102	Calculus II	University C.		3		6	6
NS102	Science of Nature II	University C.		4		6	6
AL102	Academic Literacies	University C.		3		6	5
HIST192	Principles of Atatürk and the History of the Turkish Revolution II	University C.		2			3
SPS102	Humanity and Society II	University C.		3			6
TLL102	Turkish Language and Literature II	University C.		2			3
PHYS113	Basic Concepts of Physics for Scientists and Engineers	Required C.	NS101 & MATH101	3			6
*PROJ 201	*Undergraduate Project Course			1			1
			TERM TOTAL	20		18	35

The students have to take *Undergraduate Project Course (PROJ 201) on freshman or sophomore year.

Year - 2 Sophomore Semester-3

Course Code	Course Name	Course Type	Prerequisite Courses	SU Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ECTS (Total)
*PROJ 201	*Undergraduate Project Course			1			1
CS201	Introduction to Computing	Core Elective	IF100	3	6		6
ENS 203	Electronic Circuits	Required C.	MATH102	3	6		6
ENS211	Signals	Required C.	MATH101	3	3	3	6
MATH212	Linear Algebra and Differential Equations	University C.	MATH102	4		7	7
MATH204	Discrete Mathematics	University C.		3		6	6
			TERM TOTAL	16	15	16	32

The students have to take *Undergraduate Project Course (PROJ 201) on freshman or sophomore year.

Year - 2 Sophomore Semester-4

Course Code	Course Name	Course Type	Prerequisite Courses	SU Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ECTS (Total)
*PROJ 201	*Undergraduate Project Course			1			1
ENS201	Electromagnetics I	Core Elective	MATH102 & NS101	3	4	2	6
EE202	Electronic Circuits II	Required C.	ENS203	3	6		6
EE200	Electronic Circuit Implementations	Required C.	ENS203	2	2		2
ENS206	Systems Modeling and Control	Core Elective	MATH102 & (MATH201 or MATH212)	3	2	4	6
MATH203	Introduction to Probability	University C.	MATH102	3		6	6
							0
			TERM TOTAL	15	14	12	27

The students have to take *Undergraduate Project Course (PROJ 201) on freshman or sophomore year.

Year - 3 Junior Semester-5

Course Code	Course Name	Course Type	Prerequisite Courses	SU Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ECTS (Total)
CS303	Logic and Digital System Design	Required C.		4	6	1	7
EE Track Elective		Core Elective		3	6		6
EE Track Elective		Core Elective		3	6		6
SPS303	Law and Ethics	University C.		3			5
EE Track or Area Elective				3	5	1	6
			TERM TOTAL	16	23	2	30

Year - 3 Junior Semester-6

Course Code	Course Name	Course Type	Prerequisite Courses	SU Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ECTS (Total)
EE308	Microcomputer Based System Design	Required C.	CS303	4	7		7
EE Track Elective		Core Elective		3	6		6
EE Track Elective		Core Elective		3	6		6
EE Track or Area Elective		Core/Area Elective		3	5	1	6
HUM2XX		University C.		3			5
EE395 - Summer Term					5		5
			TERM TOTAL	16	24	1	30

Year - 4 Senior Semester-7

Course Code	Course Name	Course Type	Prerequisite Courses	SU Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ECTS (Total)
ENS491	Graduation Project (Design)	Required C.	EE202 & ENS211	1	2		2
EE4XX		Core Elective		3	6		6
EE4XX		Core Elective		3	6		6
Free Elective		Free Elective		3			6
Area Elective		Area Elective		3	6		6
			TERM TOTAL	13	20	0	26

Year - 4 Senior Semester-8

Course Code	Course Name	Course Type	Prerequisite Courses	SU Credits	Engineering Credits (ECTS)	Basic Science Credits (ECTS)	ECTS (Total)
ENS492	Graduation Project (Implementation)	Required C.	EE202 & ENS211	3	5		5
EE4XX		Core Elective		3	6		6
Area Elective		Area Elective		3	6		6
Free Elective		Free Elective		3			6
Free Elective		Free Elective		3			6
			TERM TOTAL	15	17	0	29

BASIC SCIENCE CREDITS (ECTS) TOTAL: 66
ENGINEERING CREDITS (ECTS) TOTAL 118
SU CREDITS TOTAL: 128
ECTS TOTAL 240

TRACK ELECTIVE COURSES

DESCRIPTIONS: These are not official tracks but are suggestions for those interested in concentrating in a particular area in ELECTRONICS ENGINEERING

1. Suggested Courses for Electronics Engineering Track-1

Course Code	Course Name	Pre-requisit	SU Credits	ECTS	Engineering Credits (ECTS)	Basic Science Credits (ECTS)
EE301	Analog Integrated Circuits	EE202	3	6	6	0
EE307	Semiconductor Physics and Devices	ENS203	3	6	4	2
EE302	Digital Integrated Circuits	EE202	3	6	6	0
EE306	Introduction to Radio Frequency and Microwave Design	EE301 & ENS203	3	6	6	0
EE310	Hardware Description Languages	CS303	3	6	6	0

2. Suggested Courses for Electronics Engineering Track-2

Course Code	Course Name	Pre-requisit	SU Credits	ECTS	Engineering Credits (ECTS)	Basic Science Credits (ECTS)
EE311	Introduction to Signal Processing and Information Systems	ENS211	3	6	5	1
EE313	Introduction to Communication Systems	ENS211	3	6	5	1
EE312	Discrete-Time Signals and Systems	ENS211	3	6	5	1
EE314	Digital Communications	ENS211	3	6	4	2

EE4XX Courses

DESCRIPTIONS: At least 9 credits of core electives which should be from 400-level EE courses

Suggested for Elective Courses

Course Code	Course Name	Track	Pre-requisit	SU Credits	ECTS	Engineering Credits (ECTS)	Basic Science Credits (ECTS)
EE401	Very Large Scale Integrated System Design I	1	CS303 & EE302	3	6	6	0
EE402	Very Large Scale Integrated System Design II	1	EE401	3	6	6	0
EE403	Optoelectronics	1	EE307	3	6	4	2
EE404	Introduction to Microelectromechanical Systems	1	ENS203	3	6	6	0
EE406	Antennas and Propagation for Wireless Communication	1	EE301	3	6	6	0
EE407	Microelectronic Fabrication	1	EE307	3	6	6	0
EE409	Microwaves	1	ENS201	3	6	6	0
EE410	Information and Coding Theory	2	MATH201 & MATH203	3	6	5	1
EE411	VLSI Integrated Circuits	1	EE306	3	6	6	0
EE413	Wireless Communications	2	EE314	3	6	4	2
EE414	Multimedia Communication	2	CS201	3	6	6	0
EE415	Digital Speech and Audio Processing	2	EE312	3	6	6	0
EE417	Computer Vision	2	CS201	3	6	5	1
EE419	Signal Processing Design and Implementation	2	EE312	3	6	4	2
EE473	Biomedical Instrumentation	1	ENS203	3	6	4	2