

ISTANBUL AREL UNIVERSITY
FACULTY OF ENGINEERING & ARCHITECTURE
DEPARTMENT OF COMPUTER ENGINEERING
2011-2012 ACADEMIC YEAR

I. YEAR

1 st Semester					2 nd Semester						
Code	Course Name	T	P	C	ECTS	Code	Course Name	T	P	C	ECTS
CEN101	Computer Engineering Orientation	3	0	3	5	CEN102	Algorithms and Programming	2	2	3	5
CEN103	Introduction to Information Technologies	2	2	3	4	CEN104	Probability and Statistics	2	2	3	4
CEN105	Discrete Mathematics	3	0	3	5	ENG106	Communication Skills and Academic Reporting-II	2	2	3	3
ENG105	Communication Skills and Academic Reporting-I	2	2	3	3	MTH102	Calculus-II	3	2	4	5
MTH101	Calculus-I	3	2	4	5	MTH108	Physics-II	3	2	4	5
MTH107	Physics-I	3	2	4	5	MTH111	Linear Algebra with Matlab	2	2	3	5
TRL101	Turkish Languages-I	2	0	2	3	TRL101	Turkish Languages-II	2	0	2	3
TOPLAM		18	8	22	30	TOPLAM		16	12	22	30

II. YEAR

3 rd Semester					4 th Semester						
Code	Course Name	T	P	C	ECTS	Code	Course Name	T	P	C	ECTS
AHR101	Principles of Atatürk and History of Reforms-I	2	0	2	3	AHR102	Principles of Atatürk and History of Reforms-II	2	0	2	3
CEN201	Object Oriented Programming-I	2	2	3	5	CEN210	Object Oriented Programming-II	2	2	3	5
CEN203	Operating Systems	3	0	3	4	CEN212	Data Structures	2	2	3	5
EEN209	Electronic Devices and Circuits	3	0	3	5	CEN214	System Programming	2	2	3	5
EEN216	Introduction to Digital Design	3	2	4	5	CEN216	Computer Organization	3	0	3	4
ENG205	Professional English-I	2	2	3	3	EEN208	Signal and Systems	2	2	3	5
MTH211	Differential Equations	2	2	3	5	ENG206	Professional English-II	2	2	3	3
TOPLAM		17	8	21	30	TOPLAM		15	10	20	30

III. YEAR

5 th Semester					6 th Semester						
Code	Course Name	T	P	C	ECTS	Code	Course Name	T	P	C	ECTS
CEN301	Database Management Systems	2	2	3	5	CEN302	Computer Graphics	3	0	3	6
CEN303	Data Communications and Computer Networks	3	0	3	6	CEN304	Software Engineering	3	0	3	6
EEN305	Microprocessors	3	2	4	6	CEN306	Numerical Analysis for Computer Engineers	2	2	3	5
	Technical Elective Course-I	3	0	3	5		Technical Elective Course-III	3	0	3	5
	Technical Elective Course-II	3	0	3	5		Technical Elective Course-IV	3	0	3	5
	Social Elective Course-I	3	0	3	3		Social Elective Course-II	3	0	3	3
CEN381	Summer Training-I	0	0	0	0						
TOPLAM		17	4	19	30	TOPLAM		17	2	18	30

IV. YEAR

7 th Semester					8 th Semester						
Code	Course Name	T	P	C	ECTS	Code	Course Name	T	P	C	ECTS
CEN491	Selected Topics in Computer Engineering	1	4	3	7	CEN492	Graduation Project	1	4	3	12
CEN401	Formal Languages and Automata	3	0	3	5		Technical Elective Course-VIII	3	0	3	5
	Technical Elective Course-V	3	0	3	5		Technical Elective Course-IX	3	0	3	5
	Technical Elective Course-VI	3	0	3	5		Technical Elective Course-X	3	0	3	5
	Technical Elective Course-VII	3	0	3	5		Social Elective Course-IV	2	0	2	3
	Social Elective Course-III	2	0	2	3						
CEN481	Summer Training-II	0	0	0	0						
TOPLAM		15	4	17	30	TOPLAM		12	4	14	30

Total Credit (8 Semesters)	153
Total Lecture Hours (Theory + Practical Work)	179
Total ECTS	240

Technical Elective Courses					
Code	Course Name	T	P	C	ECTS
CEN350	Artificial Intelligence	3	0	3	5
CEN351	Real Time Systems	3	0	3	5
CEN352	Computational System Programming	3	0	3	5
CEN353	Web Programming	2	2	3	5
CEN354	Visual Based Programming	3	0	3	5
CEN355	Assembly Language	3	0	3	5
CEN356	Human Computer Interaction	3	0	3	5
CEN357	Software Requirement Analysis	3	0	3	5
CEN358	Information System Analysis and Design	3	0	3	5
CEN359	Project Management	3	0	3	5
CEN360	Modeling Languages	2	2	3	5
CEN361	Software Quality Assurance and Testing	3	0	3	5
CEN450	Optimization Techniques	3	0	3	5
CEN451	Computer Network and Security	3	0	3	5
CEN452	Data Mining	3	0	3	5
CEN453	Introduction to VLSI Design	3	0	3	5
CEN454	Wireless Communications	3	0	3	5
CEN455	Introduction to Robotics	3	0	3	5
CEN456	Parallel Computing	3	0	3	5
CEN457	Embedded System Design	3	0	3	5
CEN458	Network Programming	3	0	3	5
CEN459	Image Processing	3	0	3	5
CEN460	Distributed Systems	3	0	3	5
CEN461	Neural Networks	3	0	3	5
CEN462	Image Acquisition and Reconstruction	3	0	3	5
CEN463	Speech and Audio Processing	3	0	3	5
CEN464	Introduction to Fuzzy Systems	3	0	3	5
CEN465	Communication Techniques & Protocols	3	0	3	5
CEN466	Medical Image Processing	3	0	3	5
CEN468	Computer Vision and Pattern Recognition	3	0	3	5
CEN470	Introduction to Cryptography	3	0	3	5

Social Elective Courses					
Code	Course Name	T	P	C	ECTS
EAR101	History of Civilisation	3	0	3	3
BUS112	History of Philosophy and Science	3	0	3	3
BUS216	Fundamentals of business Administration	3	0	3	3
BUS109	Economics	3	0	3	5