

Al Ghurair University
College of Engineering and Computing
Bachelor of Science in Electrical and Electronics Engineering
Eight-Semester Curriculum Plan

YEAR	First Semester				Second Semester			
	Course Code	Course Title	Credits	Pre requisite	Course Code	Course Title	Credits	Pre requisite
FIRST YEAR	CHM 111	General Chemistry	3	None	ENL 102	Communication Skills	3	None
	MAT 111	Calculus I	3	None	MAT 112	Calculus II	3	MAT 111
	PHY 111	Engineering Physics I	3	None	MAT 113	Linear Algebra and Complex Variables	3	MAT 111
	SAT 103	Computer Application and Technology	3	None	ENG 131	Introduction To Programming	3	SAT 103
	SAT 102	Fundamentals of Statistics	3	None	PHY 112	Engineering Physics II	3	PHY 111
	SAT 105	General Science	3	None	ENG 126	Engineering Thermodynamics	2	PHY 111
					ENG 127	Workshop Skills	1	None
		Total Credits	18			Total Credits	18	
SECOND YEAR	ENL 101	English Composition	3	None	ENG 252	Electronics I	3	ENG 241
	MAT 214	Differential Equations	3	MAT 112	ENG 232	Engineering Graphic	2	SAT 103
	ENG 241	Circuit Analysis I	3	PHY 112	MAT 216	Introduction to MATLAB	1	MAT 113
	ENG 251	Digital Logic Design	3	SAT 103	ENL 104	Research and Learning Skills	3	None
	ENL 103	Technical Writing	3	None	ENG 242	Circuit Analysis II	3	ENG 241
	SAH 101	UAE Society	3	None	SAH 103	Reasoning and Critical Thinking	3	None
				PHY 111	SAH 102	Islamic Studies	3	None
		Total Credits	18			Total Credits	18	
THIRD YEAR	ENG 343	Signals and Systems	3	MAT 214	EEE 361	Measurements and Instrumentation	3	ENG 242 +ENG 354
	ENG 354	Microprocessor Programming and Interfacing	3	ENG 251	EEE 396	Internship	3	>= 80 Credits
	EEE 341	Electromechanical Energy Conversion	3	ENG 242	EEE 353	Electronics II	3	ENG 252 +ENG 242
	EEE 344	Electromagnetic Fields and Waves	3	ENG 242	EEE 362	Automatic Control Engineering	3	ENG 343
	MAT 318	Mathematical Methods	3	MAT 214	EEE 324	Engineering Management	3	ENG 323
	ENG 323	Engineering Economics	2	None	MAT 317	Probability Theory	3	SAT 102
		Total Credits	17			Total Credits	18	
FOURTH YEAR	EEE 497	Senior Year Project Design	3	>= 100 Credits	EEE 498	Graduation Project	3	EEE 497
	EEE 455	Digital Systems	3	EEE 353	EEE 472	Digital Signal Processing	3	ENG 343
	EEE 471	Communication Systems	3	ENG 343	EEE 442	Power Electronics	3	EEE 341+ EEE 353
	ENG 425	Social and Ethical Issues in Engineering	2	ENG 323	EEE 4xx	Elective III	3	*
	EEE 4xx	Elective I	3	*	EEE 4xx	Elective IV	3	*
	EEE 4xx	Elective II	3	*				
		Total Credits	17			Total Credits	15	

* Consent of the student academic advisor.

Elective Courses for EEE

Program	Course Code	Course Title	Credits	Pre requisite
	EEE 461	Fuzzy Logic & Neural Networks	3	EEE 362 & MAT 216
	EEE 443	Electrical Power Engineering	3	EEE 341
	EEE 444	Power System Analysis	3	EEE 443
	EEE 445	High Voltage Engineering	3	EEE 443
	EEE 446	Power Plant Technology	3	EEE 341
	EEE 447	Electrical Machine Drives	3	EEE 443
	EEE 448	Renewable Energy Systems	3	EEE 341
	EEE 462	Computer Control	3	EEE 362+ ENG 354
	EEE 463	Programmable Logic Controller	3	EEE 362+ ENG 354
	EEE 464	Process Control	3	EEE 362
	EEE 465	Virtual Instrumentation	3	EEE 361+ ENG 354
	EEE 466	System Identification	3	EEE 362+ ENG 343
	EEE 467	Adaptive Control	3	EEE 362
	EEE 473	Digital Communication Systems	3	EEE 471
	EEE 474	Electronic Communication Systems Design	3	EEE 471
	EEE 475	Data Communication	3	EEE 471
	EEE 476	Communication Networks	3	EEE 475
	EEE 477	Field Theory and Transmission lines	3	EEE 344
	EEE 478	Microwave Engineering	3	EEE 477