

CURRICULUM STRUCTURE FOR COMPUTER AND INFORMATION ENGINEERING PROGRAMME

Total credit hours required: 139

SEMESTER III (16.5 c.h.)

Course Code	Course Title	Credit hours	Pre-requisites	Co-requisites
EECE 2101	Electrical and Computer Eng. Lab I	1	EECE 2312	EECE 2312 EECE 2313
EECE 2311	Digital Logic Design	3	EECE 1312	
EECE 2312	Circuit Analysis	3	EECE 1311	EECE 2101
EECE 2313	Electronic Circuits	3	EECE 1312	EECE 2101
MATH 2310	Differential Equations	3	MATH 1320	
UNGS 2030	The Islamic Worldview	3		
CC XXXX	Co-curriculum	0.5		

SEMESTER IV (16.5 c.h.)

Course Codes	Course Title	Credit Hours	Pre-Requisites	Co-Requisites
EECE 2102	Electrical and Computer Eng. Lab II	1	EECE 2311	EECE 2314
EECE 2314	Computer Organization and Microprocessors	3	EECE 2311	EECE 2102
EECE 2315	Engineering Electromagnetics	3	MATH 1320	
EECE 2316	Signal and Systems	3	EECE 2312	
MATH 2330	Computational Methods and statistics	3	MATH 2310	
UNGS 2040	Islam, Knowledge and Civilization	3	UNGS 2030	
CC XXXX	Co-curriculum	0.5		

SEMESTER V (17.5 c.h.)

Course Codes	Course Title	Credit Hours	Pre-Requisites	Co-Requisites
ECIE 3101	Computer and Information Eng. Lab I	1	EECE 2102	ECIE 3313 ECIE 3312
EECE 3311	Introduction to Electrical Power Systems	3	EECE 2312	
ECIE 3312	Data Structure and Algorithms Design	3	EECE 1313	ECIE 3101
ECIE 3313	Data and Communication System	3	EECE 2316	ECIE 3101
ECIE 3100	Seminar	1		
MANU 3314	Project and Operations Management	3	MATH 2330	
UNGS 2050	Ethics and Fiqh for Everyday Life	3	UNGS2040	
CC XXXX	Co-curriculum	0.5		

SEMESTER VI (16.5 c.h.)

Course Codes	Course Title	Credit Hours	Pre-Requisites	Co-Requisites
EECE 3102	Electrical and Computer Eng. Lab III	1		EECE3314 EECE 3315
EECE 3314	Digital Signal Processing	3	EECE 2316	EECE 3102
EECE 3315	Instrumentation and Control System	3	EECE 2316 EECE 2313	EECE 3102
ECIE 3316	Computer Architecture and System Design	3	EECE 2314	
ECIE 3300	Integrated Design Project	3	ECIE 3100	MANU 3318
MANU 3318	Engineering Economics and Management	3	MANU 3314	
CC XXXX	Co-curriculum	0.5		

INDUSTRIAL TRAINING (5 c.h.)

Course Codes	Course Title	Credit Hours	Pre-Requisites
EITR 3541	Engineering Industrial Training	5	ECIE 3312 >90 CH completed

SEMESTER VII (16 c.h.)

Course Codes	Course Title	Credit Hours	Pre-Requisites	Co-Requisites
ECIE 4101	Computer & Information Eng. Lab II	1	ECIE 3101	
ECIE 4311	Software Engineering Design	3	ECIE 3312	
ECIE 4312	Multimedia Information System	3	ECIE 3312	
ECIE 4313	Computer Networking	3	ECIE 3313	
ECE 43xx	Elective I	3		
ECIE 4398	Final Year Project I	3		

SEMESTER VIII (17 c.h.)

Course Codes	Course Title	Credit Hours	Pre-Requisites	Co-Requisites
ECIE 4314	Operating System	3		
ECIE xxxx	Elective II	3		
ECIE xxxx	Elective III	3		
ECIE 4399	Final Year Project II	3	ECIE 4398 EITR 3541	
MANU 4211	Technology Entrepreneurship	2	MANU 3318	
GENE 4100	Engineering and Professional Ethics	3	UNGS2050	

LIST OF ELECTIVE COURSES FOR COMPUTER AND INFORMATION ENGINEERING

The elective courses are divided into three groups or streams. This is to promote focus towards a particular area.

MICROELECTRONICS

Course Code	Course Title	Credit Hours	Pre-requisites	Co-requisites
ECIE 4341	Semiconductor Devices	3	EECE 1312	
ECIE 4342	Microelectronics	3	EECE 2313	
ECIE 4343	VLSI Design	3	EECE 2314	
ECIE 4344	Embedded Systems	3	ECIE 3316	
ECIE 4345	Microelectromechanical (MEM) Sensors, Actuators and Systems	3	EECE 2313	

SOFTWARE AND PROGRAMMING

Course Code	Course Title	Credit Hours	Pre-requisites	Co-requisites
ECIE 4346	Compiler Construction	3	EECE 3315	
ECIE 4347	Computer Graphics	3	EECE 3314	
ECIE 4348	Database Systems	3	ECIE 3312 MATH 2330	
ECIE 4349	Data Mining	3	ECIE 3312	
ECIE 4351	Object Oriented Programming with Java	3	ECIE 3312	
ECIE 4352	Mobile Application Development	3	ECIE 3312	
ECIE 4353	Parallel Computing	3	ECIE 3316	

NETWORKING AND SECURITY

Course Code	Course Title	Credit Hours	Pre-requisites	Co-requisites
ECIE 4354	Advanced Computer Networking	3	ECIE 3313	
ECIE 4355	Wireless Networking Technologies	3	ECIE 3313	
ECIE 4356	Network Performance Analysis	3	ECIE 3313 ECE 3316	
ECIE 4357	Information Security	3	MATH 2330	

SELECTED TOPICS

Course Code	Course Title	Credit Hours	Pre-requisites	Co-requisites
ECIE 4361	Advanced Instrumentation and Control	3	EECE 3315	
ECIE 4362	Selected Topics in Computer and Information Engineering	3		