

The required courses include:

Semester 1 (17.5 c.h.)

Course Code	Course Title	Credit Hours	Pre-requisites	Co-Requisites
EECE 1311	Electric Circuits	3		
MECH 1301	Statics	3		
MANU 1201	Engineering Drawing	2		
MATH 1310	Engineering Mathematics I	3		
LE 4000	English for Academic Writing	3		
LM 1030/31 LM 1040/41	Bahasa Melayu untuk Pelajar Asing/ Bahasa Melayu Nusantara	2		
CCXXXX	Co-Curricular	0.5		
TQ 1011	Tilawah Al-Quran 1	1		

LM1030* - for international students only (1 credit hours)

LM1040* - for nusantara students only (1 credit hours)

Semester 2 (16.5 c.h.)

Course Code	Course Title	Credit Hours	Pre-requisites	Co-Requisites
EECE 1101	Electrical Engineering Lab	1	EECE 1311	EECE 1312
EECE 1312	Electronics	3	EECE 1311	EECE 1101
EECE 1313	Programming for Engineers	3		
MECH 1302	Dynamics	3	MECH 1301	
MANU 1202	Workshop Technology	2	MANU 1201	
MATH 1320	Engineering Mathematics II	3	MATH 1310	
TQ 2011	Tilawah Al-Quran 2	1	TQ 1011	
CCXXXX	Co-Curricular	0.5		

Semester 3 (16.5 c.h.)

Course Code	Course Title	Credit Hours	Pre-requisites	Co-Requisites
EECE 2101	Electrical and Computer Eng. Lab-I	1	EECE 1101	EECE 2312 EECE 2313
EECE 2311	Digital Logic Design	3	EECE 1312	
EECE 2312	Circuit Analysis	3	EECE 1312 MATH 1320	EECE 2101
EECE 2313	Electronic Circuits	3	EECE 1312	EECE 2101
MATH 2310	Differential Equations	3	MATH 1320	
UNGS 2030	The Islamic Worldview	3		
CCXXXX	Co-Curricular	0.5		

Semester 4 (16.5 c.h.)

Course Code	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	EECE 2312 MATH 1320	
EECE 2316	Signals and Systems	3	EECE 2312	
MATH 2330	Computational Methods and Statistics	3	MATH 2310	
UNGS 2040	Islam, Knowledge and Civilization	3	UNGS 2030	
CCXXXX	Co-Curricular	0.5		

Semester 5 (17.5 c.h.)

Course Code	Course Title	Credit Hours	Pre-requisites	Co-Requisites
ECIE 3101	Computer and Information Eng. Lab I	1	EECE 2102	EECE 3313 EECE 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 Systems	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		UNGS 2040	
CCXXXX	Co-Curricular	0.5		

Semester 6 (16.5 c.h.)

Course Code	Course Title	Credit Hours	Pre-requisites	Co-Requisites
EECE 3102	Electrical and Computer Eng. Lab-III	1		EECE 3314 EECE 3315
EECE 3314	Digital Signal Processing	3	EECE 2316	EECE 3102
EECE 3315	Instrumentation and Control Systems	3	EECE 2316 EECE 2313	EECE 3102
ECIE 3316	Computer Architecture and Systems Design	3	EECE 2314	
ECIE 3300	Integrated Design Project	3	ECIE 3312	MANU 3318
MANU 3318	Engineering Economics and	3	MANU 3314	

	Management			
CCXXXX	Co-Curricular	0.5		

Industrial Training (5 c.h.)

Course Code	Course Title	Credit Hours	Pre-requisites	Co-Requisites
EITR 3541	Engineering Industrial Training	5	ECIE 3312 >90 c.h. completed	

Semester 7 (16 c.h.)

Course Code	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 Systems	3	ECIE 3312	
ECIE 4313	Computer Networking	3	ECIE 3313	
ECIE 43xx	Elective I	3		
ECIE 4398	Final Year Project I	3		

Semester 8 (17 c.h.)

Course Code	Course Title	Credit Hours	Pre-requisites	Co-Requisites
ECIE 4314	Operating System	1		
ECIE 43xx	Elective II	3		
ECIE 43xx	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	UNGS 2050	

LIST OF ELECTIVE COURSES

Elective courses are to be selected based on three main streams namely; 1) Electronics; 2) Software and Programming; and 3) Network and Security or under selected topics. Students are required to take at least two electives from the same stream.

ELECTRONICS

CODE	NAME	PRE-REQUISITE	CO-REQUISITE	CREDIT HOURS
ECIE 4341	Semiconductor Devices	EECE 1312		3
ECIE 4342	Microelectronics	EECE 2313		3
ECIE 4343	VLSI Design	EECE 2314		3

ECIE 4344	Embedded Systems	ECIE 3316		3
ECIE 4345	Microelectromechanical(MEM) Sensors, Actuators and Systems	EECE 2313		3

SOFTWARE AND PROGRAMMING

CODE	NAME	PRE-REQUISITE	CO-REQUISITE	CREDIT HOURS
ECIE 4346	Compiler Construction	EECE 3315		3
ECIE 4347	Computer Graphics	EECE 3314		3
ECIE 4348	Database Systems	ECIE 3312 MATH 2330		3
ECIE 4349	Data Mining	ECIE 3312		3
ECIE 4351	Object Oriented Programming with Java	ECIE 3312		3
ECIE 4352	Mobile Application Development	ECIE 3312		3
ECIE 4353	Parallel Computing	ECIE 3316		3

NETWORKING AND SECURITY

CODE	NAME	PRE-REQUISITE	CO-REQUISITE	CREDIT HOURS
ECIE 4354	Advanced Computer Networking	ECIE 4313		3
ECIE 4355	Wireless Networking Technologies	ECIE 3313		3
ECIE 4356	Network Performance Analysis	ECIE 3313 ECIE 3316		3
ECIE 4357	Information Security	MATH 2330		3

SELECTED TOPICS

CODE	NAME	PRE-REQUISITE	CO-REQUISITE	CREDIT HOURS
ECIE 4361	Advanced Instrumentation and Control	EECE 3315		3
ECIE 4362	Selected Topics in Computer and Information Engineering			3