Department of Electronic & Electrical Engineering

Information for NTU Students applying to the University of Strathclyde on an Exchange Basis Subject Selections

- Prior to considering the selection of modules while at Strathclyde it is first important to understand the EEE teaching programme and structure. The EEE degree programme has a clear defined structure and students are required to take modules at the appropriate level in each academic year.

- Module syllabus are designed to ensure that a coherent curriculum is presented to all students and thus there are **academic constraints** as well as **timetable constraints** associated with selecting modules.

- The EEE department has organised subject selection for NTU students into **Option sets**.

- A student will **assign themselves to a particular option set (menu) and choose modules from the option set as defined**. It is **NOT possible** to "**mix**" modules from different module sets.

- Any module choice is subject to timetabling and we do not guarantee that all combinations of modules within an option set will timetable.

Semester 1

Options

Option A

This is for students attending the University for the **Autumn semester only** and represents a module set associated with level 1 or level 2 students.

56213 ENGINEERING DESIGN AND MANUFACTURE 10 credits of 10
EE269 ELECTRONIC AND ELECTRICAL PRINCIPLES 2 10 credits of 20**
EE270 DIGITAL ELECTRONIC SYSTEMS 10 credits of 20
EE273 ENGINEERING DESIGN FOR SOFTWARE DEVELOPMENT 2 10 credits of 20*
EE106 ENGINEERING DESIGN FOR SOFTWARE DEVELOPMENT 1 10 credits of 20*
*Cannot take both EE106 or EE273

Department of Electronic & Electrical Engineering

EE108 ELECTRONIC SYSTEMS 10 credits of 10**
** cannot take EE108 and EE269
56110 ENGINEERING INDUSTRY AND PROFESSION 10 credits of 10
56213 ENGINEERING DESIGN AND MANUFACTURE 10 credits of 10 (tbc – may move to S2)
MM113ENGINEERING MATHEMATICS 1E 20 credits of 20
Or ONE non-EEE module (S1 only – 10 or 20 credits)

Where it states 10 credits of 20 indicates that the class runs over 2 semesters but UNITEN students take the first half. Single semester students should select courses amounting to 60 Strathclyde credits/30 ECTS credits.

Option B

This is for students attending the University for the **Autumn semester only** and represents a module set associated with level 2 or level 3 students.

EE311 ELECTRONIC AND ELECTRICAL PRINCIPLES 3 10 credits of 20
EE312 INSTRUMENTATION AND MICROCONTROLLERS 10 credits of 20
EE313 ENGINEERING ANALYSIS 10 credits of 20
EE315 ANALOGUE AND DIGITAL SYSTEM DESIGN 10 credits of 20
EE317 RENEWABLE ENERGY TECHNOLOGIES 10 credits of 20
EE320 SIGNALS AND COMMUNICATIONS SYSTEMS 10 credits of 20
56110 ENGINEERING INDUSTRY AND PROFESSION 10 of 10
EE273 ENGINEERING DESIGN FOR SOFTWARE DEVELOPMENT 2 10 credits of 20
Or ONE non-EEE module (S1 only – 10 or 20 credits)

Where it states 10 credits of 20 indicates that the class runs over 2 semesters but NTU students take the first half. Single semester students should select courses amounting to 60 Strathclyde credits/30 ECTS credits.

Department of Electronic & Electrical Engineering

Semester 2

Option C
This is for students attending the University for the **Spring semester only** and represents a module set associated with level 2 or level 3 students.

19207 ELECTROMAGNETISM 10 credits of 10
19222 ELECTRICAL MACHINES & CONTROL 10 credits of 10
EE269 ELECTRONIC AND ELECTRICAL PRINCIPLES 2 10 credits of 20
EE270 DIGITAL ELECTRONIC SYSTEMS 10 credits of 20
MM114 ENGINEERING MATHEMATICS 1E 20 credits of 20
EM310 SIGNALS AND SYSTEMS 10 credits of 10
EE313 ENGINEERING ANALYSIS 10 credits of 20
PH167 PHYSICAL ELECTRONICS 10 credits of 10
PH260 PHYSICAL ELECTRONICS 10 credits of 10 (tbc – may move to S1)
or ONE non-EEE module (S2 only – 10 or 20 credits)

Where it states 10 credits of 20 indicates that the class runs over 2 semesters but NTU students take the second half. Single semester students should select courses amounting to 60 Strathclyde credits/30 ECTS credits.

Department of Electronic & Electrical Engineering

Full Year

Options

Option D

This is for students who are attending for **both semesters**. In this option the student joins at level 3 and takes 120 credits from the following subjects

EE311 ELECTRONIC AND ELECTRICAL PRINCIPLES 3 20 credits of 20
EE312 INSTRUMENTATION AND MICROCONTROLLERS 20 credits
of 20 EE313 ENGINEERING ANALYSIS 20 credits of 20
EE315 ANALOGUE AND DIGITAL SYSTEM DESIGN 20 credits of
20 EE317 RENEWABLE ENERGY TECHNOLOGIES 20 credits of
20 EE320 SIGNALS AND COMMUNICATIONS SYSTEMS 20
credits of 20
56324 ENGINEERING INDUSTRY AND PROFESSION 10 of 10 (tbc – may move to S1)
EE273 ENGINEERING DESIGN FOR SOFTWARE DEVELOPMENT 2 10 credits of 20
Or ONE non-EEE module (10 or 20 credits)

Option E

This is for students who are attending for **both semesters**. In this option the student joins at level 4 and takes 120 credits from the following subjects

EE470 INFORMATION TRANSMISSION AND SECURITY 20 credits of 20
EE471 COMMUNICATIONS NETWORKS 20 credits of
20 EE469 DIGITAL SIGNAL PROCESSING 20 credits of
20 EE468 ANALOGUE SYSTEMS 20 credits of 20
EE473 PHOTONIC SYSTEMS 20 credits of 20
EE472 CONTROL PRINCIPLES 20 credits of 20
EE474 ROBOTICS: SYSTEMS AND CONTROL 20 credits of 20
EE466 POWER ELECTRONICS, MACHINES & APPLICATIONS 20 credits of 20
EE467 POWER SYSTEM DESIGN, OPERATION AND PROTECTION 20 credits of 20
19496 ENGINEERING PROJECT – 40 credits

Department of Electronic & Electrical Engineering

EEE Programme – Level 1 to Level 4

The table below represents a summary on a level by level basis of all modules offered by the EEE department to its UG students.

Year 1 - EEE							
Code	**Title**	**Level**	**Credits**	**Pre- Requisites**	**S1 & S2**	**S1**	**S2**
PH167	Physical Sciences	1	10	None		No	**Option C**
56110	Engineering Industry and Profession	1	10	None		**Option A/B/D**	No
EE105	Electronic and Electrical Techniques and Design 1	1	20	None	No	No	No
EE106	Electronic Design for Software Development 1	1	20	None	Yes	Yes	No
EE107	Electronic and Electrical Principles 1	1	20	None	No	No	No
EE108	Electronic and Electrical Principles 1	1	20	None	No	**Option A**	No
MM113	Engineering Mathematics 1E	1	20	None	No	**Option A**	No
MM114	Engineering Mathematics 2E	1	20	None	No	No	Option C
Year 2- EEE							
Code	**Title**	**Level**	**Credits**	**Pre- Requisites**	**S1 & S2**	**S1**	**S2**
PH260	Physical Electronics	2	10	PH167		No	**Option C**
19207	Electromagnetism	2	10	EE105		No	**Option C**
56213	Engineering Design and Manufacture	2	10			**Option B**	**Option C**
EE269	Electronic and Electrical Principles 2	2	20	EE107		**Option A**	**Option C**
EE271	Electronic and Electrical Techniques and Design 2	2	10	EE105	No	No	No
EE270	Digital Electronic Systems	2	20	EE107		**Option A**	**Option C**
EE273	Electronic Design for Software Development 2	2	20		**Option D**	**Option A**	**Option C**
MM213	Engineering Mathematics 2	2	20	MM113/114		No	No

Department of Electronic & Electrical Engineering

Year 3- EEE							
Code	**Title**	**Level**	**Credits**	**Pre- Requisites**	**S1 & S2**	**S1**	**S2**
EM310	Signals & Systems	3	10	EE269/MM213		No	**Option C**
EE311	Electronic and Electrical Principles 3	3	20	EE269	**Option D**	**Option B**	
EE312	Instrumentation and Microcontrollers	3	20	EE269/270	**Option D**	**Option B**	
EE313	Engineering Analysis	3	20	EE269/MM213	**Option D**	**Option B**	
EE318	Engineering Project	3	20		**Option D**	No	No
EE320	Signals & Communication Systems	3	20	EE269/MM213	**Option D**	**Option B**	
56324	Engineering Innovation and Management	3	20		**Option D**	No	**Option C**
EE315	Analogue and Digital System Design	3	20	EE269/270	**Option D**	**Option B**	
EE317	Renewable Energy Technologies	3	20	EE269	**Option D**	**Option B**	
Year 4- EEE							
Code	**Title**	**Level**	**Credits**	**Pre- Requisites**	**S1 & S2**	**S1**	**S2**
EE470	Information Transmission and Security	4	20	EE313/320	**Option E**		
EE471	Communications Networks	4	20	EE313/320	**Option E**		
EE469	Digital Signal Processing	4	20	EE313/320	**Option E**		
EE468	Analogue Systems	4	20	EE315/EE320	**Option E**		
EE473	Photonic Systems	4	20	EE313/320	**Option E**		
EE472	Control Principles	4	20	EE313/320	**Option E**		
EE474	Robotics: Systems and Control	4	20	EE312/313/320	**Option E**		
EE466	Power Electronics, Machines & Applications	4	20	EE311/19207	**Option E**		
EE579	Advanced Microcontroller Applications	5	20	EE312	**Option E**		
EE467	Power System Design, Operation and Protection	4	20	EE311	**Option E**		
19496	Engineering Project	4	40	EE269	**Option E**		