

Addendum to the Programme Specification

4448 MEng Electrical Engineering

This Addendum has been produced to highlight the key changes made to the existing Programme Specification as a result of the University's response to the Covid-19 Pandemic. You should read it in conjunction with the relevant Programme Specification from the year you started your programme.

[Programme Specification for entry in 2020-21](#)

[Programme Specification for entry in 2019-20](#)

[Programme Specification for entry in 2018-19](#)

University level information

In view of COVID-19, the University has had to make changes to some elements of programme delivery for 2020-21. These changes have included the method of delivery, such as face-to-face and online, and the number of modules available.

The University aims to provide as much of a face-to-face component to your education as prevailing conditions at the time allow, combined with its new blended approach that will develop active independent and group online learning.

As the COVID-19 pandemic develops, the University's response to this and other issues may likewise need to evolve. The University will consult with student representatives as necessary and appropriate and will communicate changes to you as soon as practicable so that you have the information you need to understand how a change may impact you and what steps you need to take next. The University remains committed to supporting you as you learn.

Programme Information

In light of Covid-19, there will be some changes to how some group work tasks and lab works will be organised. ECS aims to reopen the teaching laboratories and hold regular scheduled sessions in S1 2020-21, following social distancing rules and regulations. In some cases, laboratory experiments have been redesigned to be either software based or virtual. In other cases, you may be working on numerical data obtained from physical experiments.

All timetabled lectures that in a normal (i.e. face-to-face) situation could be recorded will be recorded, and will be made available to all students registered on the module. The lecturing team for each module will organise question-and-answer sessions, or discussion activities aimed at approximating as much as possible personal interaction, as it occurs during lectures or seminars. Where written examinations are unable to take place due to social distancing measures, an alternative form of assessment will be offered for 2020-21.

Please consider that some optional modules might have limited space available in 2020-21, based on available laboratory space.

Programme Structure

Where optional modules have been specified, the following is an indicative list of available optional modules, which are subject to change each academic year. Please note that, in some instances, modules have limited spaces available.

Programme:	MEng Electrical Engineering - 4448
Term:	2020-2021 Academic Session (202021)
Area title:	4448-1 - MEng Electrical Eng Part 1

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
ELEC 1028	TT Personal Tutorial	0	No	Full Academic Year
ELEC 1029	TT ELEC Labs Yr1	0	No	Full Academic Year
ELEC 1200	Electronic Circuits	15	Yes	Semester 1
ELEC 1201	Programming	15	Yes	Semester 1
ELEC 1202	Digitl Systms & Microprocessors	15	Yes	Semester 1
ELEC 1203	Mechanics	15	Yes	Semester 2
ELEC 1205	Solid State Devices	15	Yes	Semester 2
ELEC 1206	Electrical Materials & Fields	15	Yes	Full Academic Year
ELEC 1207	Electronic Systems	15	Yes	Semester 2
MATH 1055	Maths for Elec & Elec Eng	15	Yes	Full Academic Year
MATH 1061	Engineering Maths Workshop	0	No	Full Academic Year

Programme:	MEng Electrical Engineering - 4448
Term:	2020-2021 Academic Session (202021)
Area title:	4448-2 - MEng Electrical Eng Part 2

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
ELEC 2026	TT Electrical&Electro LabsYr2	0	No	Full Academic Year
ELEC 2206	Materials	15	No	Semester 2

ELEC 2208	Power Electronics and Drives	15	No	Semester 2
ELEC 2209	Engineering Design	15	No	Semester 1
ELEC 2210	Applied Electromagnetics	15	No	Semester 1
ELEC 2213	Electrical Machines	15	No	Semester 2
ELEC 2220	Control & Communications	15	No	Semester 1
ELEC 2229	Powr Circuits and Transmission	15	No	Semester 2
MATH 2047	Maths for Elec & Elec Eng II	15	No	Semester 1

Programme:	MEng Electrical Engineering - 4448
Term:	2020-2021 Academic Session (202021)
Area title:	4448-3 - MEng Electrical Eng Part 3

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
COMP 3200	Part III Individual Project	45	Yes	Full Academic Year
COMP 3219	Engineering Management & Law	15	No	Semester 1
ELEC 3211	High Voltage Engineering	15	No	Semester 2
ELEC 3214	Power Systems Technology	15	No	Semester 1

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule OPTIONAL	Select 2 modules One module in Semester 1 and one module in Semester 2		
COMP 3225	Natural Language Processing	15	Semester 2
ELEC 3201	Robotic Systems	15	Semester 1

ELEC 3205	Control System Design	15	Semester 1
ELEC 3206	Digital Control System Design	15	Semester 2
ELEC 3213	Power Systems Engineering	15	Semester 2
ELEC 3223	Introduction to Bionanotechnology	15	Semester 1
ENTR 3002	New Venture Development	15	Semester 2
LANG XX15	Language Module	15	Show Electives
MATH 3081	Operational Research	15	Semester 1
MATH 3082	Optimisation	15	Semester 2
MATH 3083	Advanced Partial Differential Equations	15	Semester 1
MATH 3084	Integral Transform Methods	15	Semester 2

Programme:	MEng Electrical Engineering - 4448
Term:	2020-2021 Academic Session (202021)
Area title:	4448-4 - MEng Electrical Eng Part 4

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
ELEC 6200	Group Design Project	45	Yes	Semester 1

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule OPTIONAL	Select 5 modules		
Rule SEMESTER 1	Select 1 Semester 1 module		
ELEC 6203	Microsensor Technologies	15	Semester 1
ELEC 6205	Bionanotechnology	15	Semester 1

ELEC 6217	Wireless Transceiver Design and Implementation	15	Semester 1
ELEC 6220	Power System Economics	15	Semester 1
ELEC 6221	Power Generation: Technology and Impact on Society	15	Semester 1
MATH 6141	Numerical Methods	15	Semester 1
Rule SEMESTER 2	Select 4 Semester 2 modules		
COMP 6228	Individual Research Project	15	Semester 2
ELEC 6204	Microfluidics and Lab-on-a-Chip	15	Semester 2
ELEC 6208	Bio/Micro/Nano Systems	15	Semester 2
ELEC 6212	Biologically Inspired Robotics	15	Semester 2
ELEC 6222	Power and Distribution	15	Semester 2
ELEC 6225	High Voltage Insulation Systems	15	Semester 2
ELEC 6226	Power Electronics for DC Transmission	15	Semester 2
ELEC 6227	Medical Electrical and Electronic Technologies	15	Semester 2
ELEC 6228	Applied Control Systems	15	Semester 2
ELEC 6245	Wireless Networks	15	Semester 2
MATH 6149	Modelling with Differential Equations	15	Semester 2