

Addendum to the Programme Specification

7015 8729 MEng Biomedical and Electronic 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.

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, we may have redesigned some laboratory experiments to be 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.

In light of Covid-19, where written examinations are unable to take place due to social distancing measures, an alternative form of assessment will be offered for 2020-21.

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 Biomedical Electronic Eng
Term:	2020-2021 Academic Session (202021)

Area title: 8729-1 - MEng Biomedicl Electronic Eng P1

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
ELEC 1201	Programming	15	Yes	Semester 1
ELEC 1202	Digtl Systms & Microprocessors	15	Yes	Semester 1
ELEC 1203	Mechanics	15	Yes	Semester 2
ELEC 1206	Electrical Materials & Fields	15	Yes	Full Academic Year
ELEC 1211	Biomolecular Systems	15	Yes	Semester 1
ELEC 1212	Biomedical Eng Design	15	Yes	Semester 2
ELEC 1213	Sensor Interfaces	15	Yes	Semester 2
MATH 1055	Maths for Elec & Elec Eng	15	Yes	Full Academic Year

Programme: MEng Biomedical Electronic Eng - 7015

Term: 2020-2021 Academic Session (202021)

Area title: 7015-2 - MEng Biomedicl Elctronc Eng P2

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
BIOL 1025	Fundamentals of Cell Biol&Phys	30	No	Full Academic Year
ELEC 2024	TT Electronic Labs Yr2	0	No	Full Academic Year
ELEC 2216	Advanced Electronic Systems	15	No	Semester 2
ELEC 2221	Digital Syst & Signal Process	15	No	Semester 1
ELEC 2225	Health Tech Design Project	15	No	Semester 2
ELEC 2226	Biomedical Control	15	No	Semester 1

ELEC 2227	Semiconductor Devices and Sensors	15	No	Semester 2
MATH 2047	Maths for Elec & Elec Eng II	15	No	Semester 1

Programme:	MEng Biomedical Electronic Eng - 7015
Term:	2020-2021 Academic Session (202021)
Area title:	7015-3 - MEng Biomedical Electronic Eng P3

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
BIOL 2051	Principles of Neuroscience	15	No	Semester 1
COMP 3200	Part III Individual Project	45	Yes	Full Academic Year
COMP 3219	Engineering Management & Law	15	No	Semester 1
ELEC 3226	Biosensors and Diagnostics	15	No	Semester 2

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule 1	Select 30 credits Fifteen credits in Semester 1 and fifteen credits in Semester 2		
Rule SET 1	Select 15 to 30 credits		
BIOL ----	A maximum of 15 credits in any level NOF6 module in subject BIOL ("Biology")		Show Electives
COMP 3212	Computational Biology	15	Semester 2
COMP 3215	Real-Time Computing and Embedded Systems	15	Semester 1
COMP 3222	Machine Learning Technologies	15	Semester 1

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 3208	Analogue and Mixed Signal Electronics	15	Semester 2
ELEC 3218	Signal and Image Processing	15	Semester 1
ELEC 3221	Digital IC and Systems Design	15	Semester 1
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
Rule SET 2	Select 0 to 15 credits		
LANG XX15	Language Module	15	Show Electives
UOSM ----	A maximum of 15 credits in any level NOF5 module in subject UOSM ("Broadening Horizons")		Show Electives

Programme:	MEng Biomedical Electronic Eng - 7015
Term:	2020-2021 Academic Session (202021)
Area title:	7015-4 - MEng Biomedical Electronic Eng P4

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
ELEC 6200	Group Design Project	45	Yes	Semester 1
ELEC 6204	Microfluidics & Lab-on-a-Chip	15	No	Semester 2
ELEC 6251	Medical Sensors & Instruments	15	No	Semester 2

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule 1	Select 45 credits Fifteen credits in Semester 1 and thirty credits in Semester 2		
Rule SET 1	Select 15 to 45 credits		
COMP 6228	Individual Research Project	15	Semester 2
ELEC 6201	Microfabrication	15	Semester 1
ELEC 6203	Microsensor Technologies	15	Semester 1
ELEC 6206	Nanofabrication and Microscopy	15	Semester 2
ELEC 6208	Bio/Micro/Nano Systems	15	Semester 2
ELEC 6212	Biologically Inspired Robotics	15	Semester 2
ELEC 6213	Image Processing	15	Semester 2
ELEC 6228	Applied Control Systems	15	Semester 2
ELEC 6230	VLSI Systems Design	15	Semester 1
ELEC 6231	VLSI Design Project	15	Semester 2
ELEC 6233	Digital Systems Synthesis	15	Semester 2
ELEC 6237	Secure Hardware and Embedded Devices	15	Semester 1
Rule SET 2	Select 0 to 30 credits		
BIOL ----	A maximum of 15 credits in any level NQF7 module in subject BIOL ("Biology")		Show Electives
MATH 6141	Numerical Methods	15	Semester 1
MATH 6149	Modelling with Differential Equations	15	Semester 2