

# Addendum to the Programme Specification

5160 BEng Electrical 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.

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

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

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

## University level information

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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

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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. 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

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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.

<b>Programme:</b>	BEng Electrical & Elec. Eng - 5160
<b>Term:</b>	2020-2021 Academic Session (202021)
<b>Area title:</b>	5160-1 - BEng Elec & Elec Eng Part 1

Compulsory Modules

You must complete the following modules:

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

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule 1	<b>Select 1 core module</b>		
<a href="#">ELEC 1203</a>	Mechanics	15	Semester 2
<a href="#">ELEC 1204</a>	Advanced Programming	15	Semester 2

<b>Programme:</b>	BEng Electrical & Elec. Eng - 5160
<b>Term:</b>	2020-2021 Academic Session (202021)

**Area title:** 5160-2 - BEng Elec & Elec Eng Part 2

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
<a href="#">ELEC 2208</a>	Power Electronics and Drives	15	No	Semester 2
<a href="#">ELEC 2217</a>	Electrical & Electron Eng Desi	15	No	Semester 2
<a href="#">ELEC 2218</a>	TT EEE Labs Yr 2	0	No	Full Academic Year
<a href="#">ELEC 2219</a>	Electromagnetism for EEE	15	No	Semester 1
<a href="#">ELEC 2220</a>	Control & Communications	15	No	Semester 1
<a href="#">ELEC 2221</a>	Digital Syst & Signal Process	15	No	Semester 1
<a href="#">ELEC 2229</a>	Powr Circuits and Transmission	15	No	Semester 2
<a href="#">MATH 2047</a>	Maths for Elec & Elec Eng II	15	No	Semester 1

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule 1	<b>Select 1 Semester 2 module</b>		
<a href="#">ELEC 2201</a>	Devices	15	Semester 2
<a href="#">ELEC 2204</a>	Computer Engineering	15	Semester 2
<a href="#">ELEC 2206</a>	Materials	15	Semester 2
<a href="#">ELEC 2213</a>	Electrical Machines	15	Semester 2
<a href="#">ELEC 2216</a>	Advanced Electronic Systems	15	Semester 2
<a href="#">ELEC 2228</a>	Photonics I	15	Semester 2

**Programme:** BEng Electrical & Elec. Eng - 5160

**Term:** 2020-2021 Academic Session (202021)

**Area title:** 5160-3 - BEng Elec & Elec Eng Part 3

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
<a href="#">COMP 3200</a>	Part III Individual Project	45	Yes	Full Academic Year

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule 1	<p><b>Select 5 modules</b></p> <p><b>Three modules in Semester 1 and two modules in Semester 2.</b></p> <p><b>Minimum of one module from the following sets: 'electrical' or 'electrical and electronic'.</b></p> <p><b>Minimum of one module from the following sets: 'electronic' or 'electrical and electronic'.</b></p>		
Rule SET 1	<p><b>Select 0 to 3 modules</b></p> <p><b>Electrical</b></p>		
<a href="#">ELEC 3211</a>	High Voltage Engineering	15	Semester 2
<a href="#">ELEC 3213</a>	Power Systems Engineering	15	Semester 2
<a href="#">ELEC 3214</a>	Power Systems Technology	15	Semester 1
Rule SET 2	<p><b>Select 0 to 4 modules</b></p> <p><b>Electronic</b></p>		
<a href="#">ELEC 3202</a>	Green Electronics	15	Semester 2

<a href="#">ELEC 3203</a>	Digital Coding and Transmission	15	Semester 1
<a href="#">ELEC 3204</a>	Wireless and Optical Communications	15	Semester 2
<a href="#">ELEC 3207</a>	Nanoelectronic Devices	15	Semester 1
<a href="#">ELEC 3208</a>	Analogue and Mixed Signal Electronics	15	Semester 2
<a href="#">ELEC 3218</a>	Signal and Image Processing	15	Semester 1
<a href="#">ELEC 3219</a>	Advanced Computer Architecture	15	Semester 2
<a href="#">ELEC 3221</a>	Digital IC and Systems Design	15	Semester 1
<a href="#">ELEC 3223</a>	Introduction to Bionanotechnology	15	Semester 1
<a href="#">ELEC 3227</a>	Embedded Networked Systems	15	Semester 1
Rule SET 3	<b>Select 0 to 3 modules</b>  <b>Electrical and electronic</b>		
<a href="#">ELEC 3201</a>	Robotic Systems	15	Semester 1
<a href="#">ELEC 3205</a>	Control System Design	15	Semester 1
<a href="#">ELEC 3206</a>	Digital Control System Design	15	Semester 2
Rule SET 4	<b>Select 0 to 1 modules</b>		
<a href="#">COMP 3222</a>	Machine Learning Technologies	15	Semester 1
<a href="#">COMP 3223</a>	Foundations of Machine Learning	15	Semester 1
Rule SET 5	<b>Select 0 to 1 modules</b>		
<a href="#">COMP 3219</a>	Engineering Management and Law	15	Semester 1
Rule SET 6	<b>Select 0 to 2 modules</b>		
<a href="#">ANTH 2001</a>	Cosmology, Ritual and Belief	15	Semester 2

<a href="#">COMP 3212</a>	Computational Biology	15	Semester 2
<a href="#">COMP 3215</a>	Real-Time Computing and Embedded Systems	15	Semester 1
<a href="#">COMP 3217</a>	Security of Cyber Physical Systems	15	Semester 2
<a href="#">COMP 3225</a>	Natural Language Processing	15	Semester 2
<a href="#">COMP 3226</a>	Web and Cloud Based Security	15	Semester 1
<a href="#">ELEC 2201</a>	Devices	15	Semester 2
<a href="#">ELEC 2204</a>	Computer Engineering	15	Semester 2
<a href="#">ELEC 2206</a>	Materials	15	Semester 2
<a href="#">ELEC 2213</a>	Electrical Machines	15	Semester 2
<a href="#">ELEC 2216</a>	Advanced Electronic Systems	15	Semester 2
<a href="#">ELEC 2228</a>	Photonics I	15	Semester 2
<a href="#">LANG XX15</a>	Language Module	15	<a href="#">Show Electives</a>
<a href="#">MATH 3081</a>	Operational Research	15	Semester 1
<a href="#">MATH 3082</a>	Optimisation	15	Semester 2
<a href="#">MATH 3083</a>	Advanced Partial Differential Equations	15	Semester 1
<a href="#">MATH 3084</a>	Integral Transform Methods	15	Semester 2
<a href="#">UOSM 2004</a>	Global Health	15	Semester 1
<a href="#">UOSM 2017</a>	Intercultural Communication in a Global World	15	Semester 2
<a href="#">UOSM 2022</a>	Social Enterprise	15	Semester 1
<a href="#">UOSM 2031</a>	Engineering Replacement Body Parts	15	Semester 2