

FACULTY OF ENGINEERING

DEPARTMENT OF ELECTRONIC AND ELECTRICAL ENGINEERING

ELECTRICAL AND MECHANICAL ENGINEERING

Master of Engineering in Electrical and Mechanical Engineering

Master of Engineering in Electrical and Mechanical Engineering with International Study

Bachelor of Engineering with Honours in Electrical and Mechanical Engineering

Bachelor of Engineering in Electrical and Mechanical Engineering

Diploma of Higher Education in Electrical and Mechanical Engineering

Certificate of Higher Education in Electrical and Mechanical Engineering

These regulations are to be read in conjunction with [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.](#)

Mode of Study

1. The programme is available by full-time study only.

Place of Study

2. The MEng in Electrical and Mechanical Engineering with International Study requires study at an approved institution abroad. Such study will normally extend over a minimum period of 30 weeks. Subject to availability of an approved curriculum (including any project), study abroad can be undertaken during third, fourth or fifth years of the programme. Study abroad may comprise two exchanges with different institutions of one semester each, not necessarily during the same year.

3. **First Year** - All students shall undertake modules amounting to 130 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
16132	Engineering Mechanics 1	1	20
56110	Engineering Industry and Profession	1	10
EE107	Electronic and Electrical Principles 1	1	20
EM105	Electrical and Mechanical Techniques and Design 1	1	20
ME101	Heat and Flow 1	1	10
MM113	Engineering Mathematics 1E	1	20
MM114	Engineering Mathematics 2E	1	20
ME107	Experimental and Laboratory Skills	1	10

4. **Second Year** - All students shall undertake modules amounting to 130 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
16232	Engineering Mechanics 2	2	20
19207	Electromagnetism	2	10
56213	Engineering Design and Manufacture	2	10
EE269	Electronic and Electrical Principles 2	2	20
EM270	Digital Electronics and Programming Design	2	20
EM271	Electronic and Mechanical Techniques and Design 2	2	10
ME203	Heat and Flow 2	2	20
MM213	Engineering Mathematics 3E	2	20

5. **Third Year** - All students shall undertake modules amounting to 140 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
EE312	Instrumentation and Microcontrollers	3	20
EM301	Engineering Analysis	3	20
56324	Engineering Innovation and Management	3	10
EM305	Engineering Computing	3	10
EM310	Signals and Systems	3	10
ME305	Dynamics 3	3	10
EM304	Integrated Design	3	20
	Elective Modules		20

Optional Modules

20 credits chosen from:

Module Code	Module Title	Level	Credits
EE311	Electronic and Electrical Principles 3	3	20

ME301	Heat and Flow 3	3	20
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Exceptionally, such other modules totalling no more than 20 credits as approved by the Programme Leader.

For MEng in Electrical and Mechanical Engineering with International Study, students who elect to undertake study abroad during third year shall follow an approved curriculum which is equivalent to that specified in these regulations.

6. **Fourth Year** - All students shall undertake modules amounting to 120 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
EM401	Individual Project	4	40
EM402	Systems Engineering	4	20

Optional Modules

10 credits chosen from:

Module Code	Module Title	Level	Credits
ME415	Strategic Analysis of Engineering Business Case Studies	4	10
ME416	Engineering Ethics	4	10

Plus 50 credits comprised from modules listed in section 7 of the Electronic and Electrical Engineering regulations or section 6 of the Mechanical Engineering regulations.

Optional modules in Fourth Year and Fifth Year must be approved by the Programme Leader and achieve an acceptable balance between the two disciplines. Normally no fewer than 40 credits at Level 4 or above must be taken from optional modules taught by each of the two associated Departments: Electronic and Electrical Engineering, and Mechanical and Aerospace Engineering.

Optional Modules at Level 4:

Electronic and Electrical Engineering, as specified in section 7 of the Electronic and Electrical Engineering regulations.

Mechanical and Aerospace Engineering, as specified in section 6 of the Mechanical Engineering regulations.

Exceptionally, such other modules totalling no more than 20 credits as approved by the Programme Leader.

For MEng in Electrical and Mechanical Engineering with International Study, students who elect to undertake study abroad during fourth year shall follow an approved curriculum which is equivalent to that specified in these regulations.

7. **Fifth Year** - All students shall undertake modules amounting to 120 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
EM501	Group Project	5	40
EM502	Advanced Systems Engineering	5	20

Optional Modules

60 credits comprised from modules listed in section 7 of the Electronic and Electrical Engineering regulations or section 6 of the Mechanical Engineering regulations.

For MEng in Electrical and Mechanical Engineering with International Study, students who elect to undertake study abroad during fifth year shall follow an approved curriculum which is equivalent to specified in these regulations.

Optional modules in Fourth Year and Fifth Year must be approved by the Programme Leader and achieve an acceptable balance between the two disciplines. Normally no fewer than 40 credits at Level 4 or above must be taken from optional modules taught by each of the two associated Departments: Electronic and Electrical Engineering, and Mechanical and Aerospace Engineering.

Optional Modules at Level 5:

Electronic and Electrical Engineering, as specified in section 7 of the Electronic and Electrical Engineering regulations.

Mechanical and Aerospace Engineering, as specified in section 6 of the Mechanical Engineering regulations.

Exceptionally, such other modules totalling no more than 20 credits as approved by the Programme Leader.

Progression

8. To progress to the second year of the programme, see [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.](#)
9. To progress to the third year of the programme, see [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.](#)
10. To progress to the fourth year of the programme, see [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.](#)
11. To progress to the fifth year of the programme, see [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level;](#) and must include the Individual Project.

12. **MEng in Electrical and Mechanical Engineering with International Study:** In order to progress to a period of study abroad, a student must normally have passed all modules from the programme curriculum. Any student who does not meet this requirement may be required to transfer to another programme not requiring study abroad.

Final Assessment and Classification

13. The final classification for the chosen degree in Electrical and Mechanical Engineering will normally be based on the first assessed attempt at compulsory and optional modules taken in the fourth and fifth years.

Award

14. **MEng:** In order to qualify for the award of the degree of MEng in Electrical and Mechanical Engineering, a candidate must have accumulated no fewer than 640 credits from the programme curriculum including those for the Individual Project EM401 and the Group Project EM501.
15. **MEng in Electrical and Mechanical Engineering with International Study:** In order to qualify for the award of the degree of MEng in Electrical and Mechanical Engineering with International Study, a candidate must have accumulated no fewer than 640 credits from the programme curriculum and must normally have undertaken successfully no fewer than 30 weeks of approved study abroad.
16. **BEng with Honours:** In order to qualify for the award of the degree of BEng with Honours in Electrical and Mechanical Engineering, a candidate must have accumulated no fewer than 520 credits from the programme curriculum including those for the Individual Project EM401.
17. **BEng:** In order to qualify for the award of the degree of BEng in Electrical and Mechanical Engineering, see [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#).
18. **Diploma of Higher Education:** In order to qualify for the award of a Diploma of Higher Education in Electrical and Mechanical Engineering, see [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#).
19. **Certificate of Higher Education:** In order to qualify for the award of a Certificate of Higher Education in Electrical and Mechanical Engineering, see [General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level](#).