Department of Electrical and Electronic Engineering

Scheme For The Award Of Honours

Academic Year 2016/17

B.Eng. in Electronic and Information Engineering (HG65)

M.Eng. in Electronic and Information Engineering (GH56)

M.Eng. in Electronic and Information Engineering with a Year Abroad (HG6M)

Also applies to the corresponding degrees under the former name of Information Systems Engineering

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1 Main changes since 2015-16 include:
ECTS credits per module in the 4th year have been updated to reflect the study equivalent of the module.
The year weightings have been adapted and are now in line with the FoE.
The results of the 3rd year Group projects (GP) and Industrial placement (IP) are allocated to the 3rd year and their weighting within the year is adapted to maintain their average weight within the degree.
Progression for the students doing the IP will be decided at the September examiners meeting.
Change of the ECTS allocated to the BEng project to reflect a full term’s work.
Change to the weighting of the final year project in the MEng stream.
Guidelines on maximum number of year 3 modules allowed to 4th year students.
Introduction

This document sets out the assessment structure of degrees awarded in Electrical and Electronic Engineering, including the criteria for progression and the criteria for the honours classifications. The degrees are composed of Parts corresponding to the years of the course: four Parts for a MEng and three Parts for a BEng.

For candidates at the end of the degree programme, a decision is made on whether the candidate has passed and if so, what classification of honours is to be awarded. These decisions are made by a board of examiners which normally meets one week after the end of the summer term and is composed of all teaching staff involved with the degree programmes plus two external examiners appointed from other UK universities. The mitigating circumstances panel will give advice to the board of examiners on how mitigating circumstances, formally notified in advance by a candidate, are to be taken into consideration.

The award of honours is based on the following mark boundaries. These are the same boundaries as used for the grade letters for reporting examination marks throughout the degree programme.

- First class honours: $A > 70\%$
- Second class honours (upper division): $70 > B > 60\%$
- Second class honours (lower division): $60 > C > 50\%$
- Third class honours: $50 > D > 40\%$
- Fail: $40 > E$

Final marks are not divulged to students by assessors or the Board of Examiners. The Registrar will release the marks confirmed at the Examiners' Meeting to individual students in accordance with the procedures of Imperial College.

All marks are held in the database to full machine precision. Occasionally, and for display purposes only, the marks will be rounded up to 0, 1 or 2 decimal places. The final course overall mark will be calculated from the full-precision marks and not from the displayed marks. Note that marks for any examination, project, coursework, or other assessed work may be moderated (scaled up or down) if deemed appropriate by the Board of Examiners. Standard formulae are used for moderation and are described in the student handbook. Marks gained at any other institution (such as during a year abroad) should be treated with particular caution as they are likely to be moderated before being incorporated into the overall results.

For candidates not in their final year, the board of examiners will make a decision on whether the candidate may progress to the next Part using the criteria set out later in this document. Mitigating circumstances, notified in advance, will be taken into account.

SQTs (1st and 2nd year only): If you are unsuccessful in any of your exams, it is possible, but not guaranteed, that you are allowed to resit. In the case of a marginal fail in one, or exceptionally two, modules, the examiners may set a supplementary qualifying test (SQT) to allow you to reach the pass mark (40\%) and progress to the next Part without delay. SQTs are held at the end of August/early September.

Resits: If you do not meet the progression requirements, you may be invited to temporarily leave the college and resit all exams the following summer. In this case, marks will not be capped at 40\% and the achieved marks will count towards the final degree. We will contact you after the examiners’ meeting to discuss your options. If you fail your resit exams, no SQTs nor further resits will be offered and you will be required to withdraw from college.

In the final year for MEng and BEng, and the third year for MEng, individual course modules have no pass mark, and individual exams below 40\% simply result in a lower module aggregate.

Further information on assessment, mitigating circumstances, moderation of marks, the considerations undertaken by the board of examiners and the arrangements for resits and SQTs is available in the student handbook.

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2 http://www3.imperial.ac.uk/electricalengineering/teaching/undergraduate/assessment
3 http://www3.imperial.ac.uk/registry/exams/resit
4 This means that you will not be registered as a student for the autumn and the spring term (thus you are not in attendance). You will be expected back in the summer term for the revision lectures and the exams.
Degree Part Weightings and ECTS

These tables summarise how marks in the various Parts are weighted when combined into a total for the degree programme and how ECTS\(^5\) are allocated for each Part. References to MEng apply equally to the Technical and Year Abroad streams. Additional ECTS can be earned as described in the student handbook\(^6\). From the 2013/14 intake onwards, year weightings are harmonised across all engineering degrees in the Faculty of Engineering.

<table>
<thead>
<tr>
<th>Weightings</th>
<th>Part I</th>
<th>Part II</th>
<th>Part III</th>
<th>Part IV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEng</td>
<td>12.5%</td>
<td>37.5%</td>
<td>50%</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>MEng</td>
<td>11.1%</td>
<td>22.2%</td>
<td>33.3%</td>
<td>33.4%</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ECTS (from 2016 intake onwards)</th>
<th>Part I</th>
<th>Part II</th>
<th>Part III</th>
<th>Part IV</th>
<th>Total</th>
<th>Bologna Compliant(^7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEng</td>
<td>60</td>
<td>60</td>
<td>66</td>
<td></td>
<td>186</td>
<td>Yes</td>
</tr>
<tr>
<td>MEng with Industrial Placement (IP)</td>
<td>60</td>
<td>60</td>
<td>90</td>
<td>66</td>
<td>276</td>
<td>Yes</td>
</tr>
<tr>
<td>MEng with Group Project (GP)</td>
<td>60</td>
<td>60</td>
<td>66</td>
<td>66</td>
<td>252</td>
<td>No, another 18 ECTS are needed(^8)</td>
</tr>
</tbody>
</table>

Note that in third and fourth year some variation of the ECTS can exist for some optional modules, notably those offered by another department. This can lead to an ECTS total slightly higher than those listed in the table.

1 ECTS is equivalent to 25-30 hrs of study (incl. lectures, study groups, classes, tutorials, labs and self-study).

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\(^5\) European Credit Transfer and Accumulation System - [http://ec.europa.eu/education/ects/ects_en.htm](http://ec.europa.eu/education/ects/ects_en.htm)

\(^6\) [http://www3.imperial.ac.uk/electricalengineering/teaching/undergraduate/ectsextracreditscheme1](http://www3.imperial.ac.uk/electricalengineering/teaching/undergraduate/ectsextracreditscheme1)

\(^7\) [http://www.imperial.ac.uk/electrical-engineering/study/current-students-course-handbook/ects/](http://www.imperial.ac.uk/electrical-engineering/study/current-students-course-handbook/ects/)

\(^8\) Additional ECTS can be obtained by e.g. assessed UROP projects.
# Part 1

## Modules

<table>
<thead>
<tr>
<th>Term</th>
<th>Name</th>
<th>Weighting (%)</th>
<th>ECTS</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE1-1</td>
<td>Autumn Circuit Analysis</td>
<td>7.5</td>
<td>5</td>
<td>2 hour exam</td>
</tr>
<tr>
<td>EE1-2</td>
<td>Autumn Digital Electronics</td>
<td>7.5</td>
<td>5</td>
<td>2 hour exam</td>
</tr>
<tr>
<td>EE1-7</td>
<td>Autumn Software Engineering</td>
<td>7.5</td>
<td>5</td>
<td>Coursework in computing lab + computer based tests</td>
</tr>
<tr>
<td>EE1-12</td>
<td>Autumn User Centred Information Systems</td>
<td>7.5</td>
<td>5</td>
<td>Coursework</td>
</tr>
<tr>
<td>EE1-6</td>
<td>Spring Signals and Communications</td>
<td>7.5</td>
<td>5</td>
<td>2 hour exam</td>
</tr>
<tr>
<td>EE1-8</td>
<td>Spring Algorithms and Data Structures</td>
<td>7.5</td>
<td>5</td>
<td>Coursework in computing lab + computer based tests</td>
</tr>
<tr>
<td>EE1-9</td>
<td>Autumn &amp; Spring Computer Architectures and Systems</td>
<td>12.5</td>
<td>5</td>
<td>Coursework in computing lab + computer based tests + exam</td>
</tr>
<tr>
<td>EE1-10</td>
<td>Autumn &amp; Spring Mathematics</td>
<td>15</td>
<td>10</td>
<td>Two 2-hour exams</td>
</tr>
<tr>
<td>EE1-13</td>
<td>Autumn &amp; Spring Professional Engineering</td>
<td>7.5</td>
<td>5</td>
<td>Coursework</td>
</tr>
</tbody>
</table>

**Total** 80 50

## Practical Work

<table>
<thead>
<tr>
<th>Term</th>
<th>Name</th>
<th>Weighting (%)</th>
<th>ECTS</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE1-LABE</td>
<td>Autumn &amp; Spring Electrical Laboratory</td>
<td>10.0</td>
<td>5</td>
<td>Reports, Oral Examinations, Logbooks, Computer Based Test</td>
</tr>
<tr>
<td>EE1-PRJ</td>
<td>Autumn, Spring &amp; Summer Group Design Project</td>
<td>10.0</td>
<td>5</td>
<td>Reports and Oral Examinations</td>
</tr>
</tbody>
</table>

**Total** 20.0 10

## Pass Mark and Progression Criteria

In order to progress to Part II, students are normally required to achieve the following minimum marks:

a) 40% in each of the modules listed above.

For SQT and resit procedures: refer to page 2 of this document.
Part II

Modules

<table>
<thead>
<tr>
<th>Term</th>
<th>Name</th>
<th>Weighting (%)</th>
<th>ECTS</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE2-1</td>
<td>Autumn Digital Electronics II</td>
<td>6</td>
<td>4</td>
<td>2 hour exam</td>
</tr>
<tr>
<td>EE2-5</td>
<td>Autumn Signals and Linear Systems</td>
<td>6</td>
<td>4</td>
<td>2 hour exam</td>
</tr>
<tr>
<td>EE2-12</td>
<td>Autumn Object Oriented Software Engineering</td>
<td>6</td>
<td>4</td>
<td>2-hour exam</td>
</tr>
<tr>
<td>EE2-13</td>
<td>Autumn Computer Architecture II</td>
<td>6</td>
<td>4</td>
<td>1.5-hour exam</td>
</tr>
<tr>
<td>EE2-4</td>
<td>Spring Communication systems</td>
<td>6</td>
<td>4</td>
<td>2 hour exam</td>
</tr>
<tr>
<td>EE2-21</td>
<td>Spring Feedback Systems</td>
<td>4</td>
<td>3</td>
<td>1.5-hour exam</td>
</tr>
<tr>
<td>EE2-10C</td>
<td>Spring Algorithms and Complexity</td>
<td>4</td>
<td>3</td>
<td>1.5-hour exam</td>
</tr>
<tr>
<td>EE2-15</td>
<td>Spring Language Processors</td>
<td>6</td>
<td>4</td>
<td>Coursework + computer based tests</td>
</tr>
<tr>
<td>CO526</td>
<td>Spring Databases</td>
<td>6</td>
<td>4</td>
<td>2-hour exam</td>
</tr>
<tr>
<td>CO527</td>
<td>Spring Computer Networks and Distributed Systems</td>
<td>6</td>
<td>4</td>
<td>2-hour exam</td>
</tr>
<tr>
<td>EE2-8</td>
<td>Autumn &amp; Spring Mathematics</td>
<td>14</td>
<td>8</td>
<td>Two 1.5 hour exams &amp; coursework</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>70</strong></td>
<td><strong>46</strong></td>
<td></td>
</tr>
</tbody>
</table>

Practical Work

<table>
<thead>
<tr>
<th>Term</th>
<th>Name</th>
<th>Weighting (%)</th>
<th>ECTS</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE2-LABE</td>
<td>Autumn &amp; Spring Electrical Laboratory</td>
<td>12</td>
<td>6</td>
<td>Reports, Oral Examinations, Logbooks</td>
</tr>
<tr>
<td>EE2-ILABC</td>
<td>Autumn &amp; Spring Computer Laboratory</td>
<td>12</td>
<td>6</td>
<td>Computing assignments</td>
</tr>
<tr>
<td>EE2-PRJ</td>
<td>Summer Architecture Workshop</td>
<td>6</td>
<td>2</td>
<td>Presentations + interactive assessment</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
<td><strong>14</strong></td>
<td></td>
</tr>
</tbody>
</table>

Pass Mark and Progression Criteria

In order to progress to Part III of the BEng, students are normally required to achieve the following minimum marks:

a) 40% in each of the modules listed above (see note on compensation).

Compensation: 1 module (excluding maths) with a mark in the range 30% to 40% can be compensated (considered as a pass), if the exam aggregate is > 45%.

In order to progress to Part III of the MEng, students are normally required to achieve the following minimum marks:

a) 50% in mathematics.

b) 50% in the module total.

c) No module mark below 40% (see note on compensation).

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9 [http://www.theiet.org/academics/accreditation/policy-guidance/form_a_part2/5_3_progression_conditions.cfm](http://www.theiet.org/academics/accreditation/policy-guidance/form_a_part2/5_3_progression_conditions.cfm)
**Compensation**⁹: 1 module (excluding maths) with a mark in the range 30% to 40% can be compensated (considered as a pass), *if* the exam aggregate is > 45%.

In order to progress to Part III of MEng - year abroad, students are normally required to achieve the following minimum marks:

a) 55% in mathematics.

b) 55% in the module total.

c) No module mark below 40%.

d) No compensation.

In addition, there may be a minimum level of language ability specified for placements in particular universities abroad appropriate to their teaching language¹¹.

For SQT and resit procedures: refer to page 2 of this document.

If you fail your resit exams, no SQTs nor further resits will be offered and you will be required to withdraw from college.

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⁹ http://www.theiet.org/academics/accreditation/policy-guidance/form_a_part2/5_3_progression_conditions.cfm

¹¹ http://www.imperial.ac.uk/languages/year-in-europe/
Part III: BEng Electronic and Information Engineering

Modules

Candidates must take 7 modules\(^{12}\) subject to the following constraints:

- At least one is a technical option from the EEE department,
- At least one is a technical option is from the Computing department (DoC)
- Exactly one is a non-technical option from the humanities or the business school\(^{13}\).

Modules will be assessed through coursework, written examination, or combination of the two as laid down in the module description. Students may not sit the majority of a module's assessment and later decide not to use the module - for example, students cannot sit a December exam from Computing, then later decide to drop that module.

The aggregate of the module marks is weighted as 65% of Part III.

Modules carry 6 ECTS each and as a group carry 42 ECTS.

Individual Project

Candidates will choose a final year project topic from a list or propose their own project in consultation with an academic member of staff, in the beginning of spring term. The Individual project is weighted as 35% of Part III and carries 24 ECTS.

Final Assessment and Honours Classification

BEng Electronic and Information Engineering

To obtain an honours degree, a candidate must obtain at least 40% in Part III, normally by obtaining at least 40% in both the individual project and the module aggregate. There is no pass mark for individual modules, only for the module aggregate.

The marks from each Part are combined using the weightings defined on page 3 and the honours classification is bases on the mark boundaries defined on page 2.

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\(^{13}\) EEE students have to take on-line modules where they are available.
Part III: MEng Electronic and Information Engineering

Modules

Candidates must take 8 modules\(^\text{14}\), subject to the following constraints:

- At least one is a technical module from the EEE department,
- At least one is a technical module is from the Computing department (DoC)
- Exactly one is a non-technical module from humanities or the business school

Modules will be assessed through coursework, written examination, or combination of the two as laid down in the module description. Students may not sit the majority of a module’s assessment and later decide not to use the module – for example, students cannot sit a December exam from Computing, then later decide to drop that module.

Modules carry 6 ECTS each and as a group carry 48 ECTS

The aggregate mark for the modules is weighted as 77% of Part III.

Group Project or Industrial Placement

Candidates will choose either a group project (summer term) or industrial placement (6 months) that commences after the spring term of the third year. Note that students who are on the year abroad scheme must find information on the start date of the 1st term of the 4th year in the host university before committing to an IP. Project and placement marks will be based on reports. Both are weighted at 23%. The group project carries 18 ECTS and the industrial placement 42 ECTS.

Pass Mark and Progression Criteria

In order to progress to Part IV of the MEng (incl. Year Abroad streams), candidates must achieve at least 40% in the Part III Aggregate. There is no pass mark for individual modules, only for the module aggregates. In addition, candidates must achieve at least 40% in the group project/industrial placement.

\(^{14}\) http://intranet.ee.ic.ac.uk/electricalengineering/eecourses_t4/crslistug.asp?c=J3
Part IV: MEng Electronic and Information Engineering

Lecture Modules
Candidates must take a minimum of 7 modules\(^{15}\), subject to the following constraints:

- At least one is a technical option from the EEE department,
- At least one is a technical option is from the Computing department (DoC),
- Exactly one is a non-technical option from the Horizons or Business school modules.

Candidates may choose an additional (eighth) option: the optional extra course may be EEE, DoC or non-technical. The number of modules that can be chosen from EEE part III is restricted to 1.

The average mark will be calculated according to the following formula.

\[
\text{average} = \frac{\text{sum of all module marks}}{7 + \frac{n_{\text{extra}}}{2}}
\]

where \(n_{\text{extra}}\) is the number of extra courses taken and equals 0 or 1.

The denominator of the average is the minimum number of modules (7) plus 0.5 if an extra course is taken. This formula can reward taking an extra course, but students should be aware that, if the extra workload reduces their performance across all of their modules, the overall mark may be lower. Students cannot opt out once course module registration is closed.

Modules will be assessed through coursework, written examination, or a combination of the two as laid down in the module description. Students may not sit a module's assessment and later decide not to use the module - for example, students cannot sit a December exam from Computing, or take a 100% coursework module in Autumn term, then later decide to drop that module.

The average module mark is weighted as 60\% of Part IV.

The 6 technical modules carry 6 ECTS each. Modules from other departments (business school, horizons and IDX) may carry 6 or 7.5 ECTS. The 6-technical module minimum set will carry at least 36 ECTS. The total ECTS may depend on the modules taken. The additional module, if taken, will earn additional ECTS.

Project
Candidates will choose a final year project topic from a list or propose their own project in consultation with an academic member of staff, in the beginning of autumn term. The individual project is weighted as 40\% of Part IV and carries 24 ECTS.

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Final Assessment and Honours Classification
MEng Electronic and Information Engineering

To obtain an honours degree, a candidate must obtain at least 40\% in Part IV, normally by obtaining at least 40\% in each of the elements: module aggregates and individual project. There is no pass mark for individual modules, only for the module aggregates.

The marks from each Part are combined using the weightings defined on page 3 and the honours classification is bases on the mark boundaries defined on page 2.


Non-technical modules are those offered by the Business school or Horizons
Part IV: MEng Electronic and Information Engineering
Year Abroad Stream

University Aboard
Candidates in the 4th year will only be allowed on the year abroad programme after interview with the department’s Year Abroad Course Director in the 3rd year.

Candidates must take a programme of examined modules selected from the courses offered by the overseas university equivalent to five modules from the Electrical and Electronic Engineering fourth year. In addition, candidates must complete a dissertation and an individual project. The selection of examined modules is to be approved in each case by the Year Abroad Course Director.

Assessment is based on a written report in the language of study and an oral presentation of the project work in English. The project mark awarded will be determined by the Board of Examiners taking into account the marks awarded by the overseas university together with any supporting written comments.

The ECTS points gained during the year abroad will depend on the programme of work agreed with the host university.

The table below present the weighting of the elements of the Year Abroad.

<table>
<thead>
<tr>
<th>Description</th>
<th>Location</th>
<th>Weighting within studies abroad</th>
<th>Weighting within Part IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Modules</td>
<td>Host Institution</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>Individual Project</td>
<td>Host Institution</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>Dissertation</td>
<td>Host Institution</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>Host Institution</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Final Assessment and Honours Classification
MEng Electrical & Electronic Engineering – Year Abroad stream

To obtain an honours degree, a candidate must obtain at least 40% in Part IV, normally by obtaining at least 40% in the module aggregates and at least 40% in the individual project.

The marks from each Part are combined using the weightings defined on page 3 and the honours classification is bases on the mark boundaries defined on page 2.