Part IIB syllabuses; links to on-line resources

Published on CUED undergraduate teaching (http://teaching.eng.cam.ac.uk)

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Note that all modules are assessed by 100% Coursework, or 100% Examination, or 75% Examination and 25% Coursework. In all cases, the definitive form of assessment is given in the Faculty Board's Modules & Sets document. The Faculty Board also publish an outline of the coursework requirements for Part IIB 100% coursework modules but you should see the module syllabus pages for further details.

Interactive booklists for Part IIB are available on Moodle.

Group A: Energy, Fluid Mechanics and Turbomachinery

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<th>Term (set)</th>
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Group B: Electrical Engineering

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<th>Prerequisites Assumed</th>
<th>Useful</th>
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<td>4B6</td>
<td>Solid state devices and chemical/biological sensors</td>
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<td>Exam</td>
<td>3B5, 3B6</td>
<td>Moodle</td>
<td>Prof. D. Chu</td>
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### Module: Photonic systems
- **Code**: 4B11
- **Term**: M(5)
- **Form of assessment**: Exam
- **Prerequisites**: Assumed 3B6
- **On-line resources**: Moodle
- **Leader**: Prof. T. Wilkinson

### Module: Electronic sensors and instrumentation
- **Code**: 4B13
- **Term**: L(1)
- **Form of assessment**: Exam
- **Prerequisites**: Assumed 3B1
- **On-line resources**: Moodle
- **Leader**: Dr P A Robertson

### Module: Renewable electrical power
- **Code**: 4B19
- **Term**: M(2)
- **Form of assessment**: Exam
- **Prerequisites**: Assumed 3B3, 3B4, 3B6
- **On-line resources**: Moodle
- **Leader**: Dr T. Flack

### Module: Analogue integrated circuits
- **Code**: 4B21
- **Term**: M(3)
- **Form of assessment**: Exam
- **Prerequisites**: Assumed 3B1, 3B5
- **On-line resources**: Moodle
- **Leader**: Prof. A. Nathan

### Module: Flexible Electronics
- **Code**: 4B22
- **Term**: L(5)
- **Form of assessment**: Exam
- **Prerequisites**: Assumed 3B5
- **On-line resources**: Moodle
- **Leader**: Dr F Torrisi

### Module: Optical Fibre Communication
- **Code**: 4B23
- **Term**: L(2)
- **Form of assessment**: Exam and coursework
- **Prerequisites**: Assumed 3B6, 3F4
- **On-line resources**: Moodle
- **Leader**: Dr S J Savory

### Module: Radio frequency systems
- **Code**: 4B24
- **Term**: L(4)
- **Form of assessment**: Exam and coursework
- **Prerequisites**: Assumed 3B1
- **On-line resources**: Moodle
- **Leader**: Dr M J Crisp

### Module: Embedded systems for the internet of things
- **Code**: 4B25
- **Term**: M(7)
- **Form of assessment**: Coursework
- **Prerequisites**: Assumed 3B2
- **On-line resources**: Moodle
- **Leader**: Dr P Stanley-Marbell

### Group C: Mechanics, Materials and Design

#### Module: Designing with composites
- **Code**: 4C2
- **Term**: M(3)
- **Form of assessment**: Exam and Coursework
- **Prerequisites**: Assumed 3C6
- **On-line resources**: Moodle
- **Leader**: Dr A Markaki

#### Module: Electrical and nano materials
- **Code**: 4C3
- **Term**: M(8)
- **Form of assessment**: Exam
- **Prerequisites**: Assumed 3C6
- **On-line resources**: Moodle
- **Leader**: Dr J H Durrell

#### Module: Design methods
- **Code**: 4C4
- **Term**:able M(2)
- **Form of assessment**: Exam
- **Prerequisites**: Assumed 3C6
- **On-line resources**: Moodle
- **Leader**: Dr J. Cullen

#### Module: Design case studies
- **Code**: 4C5
- **Term**: L(4)
- **Form of assessment**: Coursework
- **Prerequisites**: Assumed 4C4
- **On-line resources**: Moodle
- **Leader**: Dr P Kristensson

#### Module: Advanced linear vibrations
- **Code**: 4C6
- **Term**: M(4)
- **Form of assessment**: Exam and Coursework
- **Prerequisites**: Assumed 3C6
- **On-line resources**: Moodle
- **Leader**: Prof. J. Woodhouse

#### Module: Random and non-linear vibrations
- **Code**: 4C7
- **Term**: M(5)
- **Form of assessment**: Exam and Coursework
- **Prerequisites**: Assumed 3C6
- **On-line resources**: Moodle
- **Leader**: Prof. R. Langley

#### Module: Vehicle Dynamics
- **Code**: 4C8
- **Term**: L(8)
- **Form of assessment**: Exam and Coursework
- **Prerequisites**: Assumed 3C5, 3C6
- **On-line resources**: Moodle
- **Leader**: Prof D Cebon

#### Module: Continuum mechanics
- **Code**: 4C9
- **Term**: L(7)
- **Form of assessment**: Exam
- **Prerequisites**: Assumed 3C7, 3D7
- **On-line resources**: Moodle
- **Leader**: Dr G McShane

#### Module: MEMS: design
- **Code**: 4C15
- **Term**: L(2)
- **Form of assessment**: Exam and Coursework
- **Prerequisites**: Assumed 3C6
- **On-line resources**: Moodle
- **Leader**: Prof A. Seshia

### Group D: Civil, Structural and Environmental Engineering

#### Module: Construction engineering
- **Code**: 4D4
- **Term**: L(4)
- **Form of assessment**: Coursework
- **Prerequisites**: Assumed 3D1, 3D2, 4D16
- **On-line resources**: Moodle
- **Leader**: Dr I Brilakis

#### Module: Foundation engineering
- **Code**: 4D5
- **Term**: L(5)
- **Form of assessment**: Exam
- **Prerequisites**: Assumed 3D2
- **On-line resources**: Moodle
- **Leader**: Dr G. Biscontin

#### Module: Dynamics in civil engineering
- **Code**: 4D6
- **Term**: L(2)
- **Form of assessment**: Exam and
- **Prerequisites**: Assumed 3D7, 3D2, 3D4
- **On-line resources**: Moodle
- **Leader**: Prof. G.
### Group E: Management and Manufacturing

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<thead>
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<th>Module Code</th>
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<th>Term (set)</th>
<th>Form of assessment</th>
<th>Prerequisites Assumed</th>
<th>On-line resources</th>
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<tr>
<td>4E1</td>
<td>Innovation and strategic management of intellectual property</td>
<td>M(9)</td>
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<td>Dr F Tietze</td>
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<td>4E4</td>
<td>Management of technology</td>
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<td>Dr T. Minshall</td>
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<td>4E5</td>
<td>International Business</td>
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<td>Coursework</td>
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<td>Dr J.J. Kroezen</td>
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<td>Prof S. Ansari</td>
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<td>Project management</td>
<td>L(9)</td>
<td>Coursework</td>
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<td>Moodle</td>
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### Group F: Information Engineering

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<td>4F1</td>
<td>Control system design</td>
<td>M(7)</td>
<td>Exam and Coursework</td>
<td>3F1, 3F2</td>
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<td>Dr I Lestas</td>
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<td>4F2</td>
<td>Robust and nonlinear systems and control</td>
<td>L(7)</td>
<td>Exam</td>
<td>3F2</td>
<td>Moodle</td>
<td>Dr F F Forni</td>
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<td>4F1-2</td>
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<td>Exam</td>
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<td>Prof. R. Cipolla</td>
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### Module: Probabilistic Machine Learning
- **Code:** 4F13
- **Term:** M(1)
- **Form of assessment:** Coursework
- **Prerequisites:** 3F3
- **On-line resources:** Machine learning lecture notes
- **Leader:** Prof C. Rasmussen

### Module: Computer Systems
- **Code:** 4F14
- **Term:** L(5)
- **Form of assessment:** Exam and Coursework
- **Prerequisites:** Part I Digital circuits and computing
- **On-line resources:** Moodle
- **Leader:** Dr A H Gee

### Group G: Bioengineering

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### Group I: Imported Modules

Note that these modules are all imported from other courses, and hence might be timetabled at unusual times and in unusual places, and have a different course structure to other IIB modules. Also, many of them have a cap on numbers. However, they do provide a tremendous opportunity to learn about a wider range of technology than the Engineering Tripos would otherwise provide.

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<th>Module</th>
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### Group M: Multidisciplinary Modules

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