

Engineering Tripos Part IA, The Engineer in Society, 2019-20

Module Leader

[Professor Tim Minshall](#) [1]

Aims

The aims of the course are to:

- Introduce students to the economic, social and technical context within which engineers work.
- Seek to provide a sense of the 'bigger picture' within which any engineering-related organisation operates.
- Show why an understanding of this context is important and to raise awareness of the non-technical competences that engineers need to develop in order to be successful.
- In summary, this module is about one key thing: Technical knowledge is necessary but not sufficient if you want to be a successful engineer.

Objectives

As specific objectives, by the end of the course students should be able to:

- Have a knowledge of the economic, industrial and social contexts of engineering.
- Be able to understand how these contexts influence engineering decisions.
- Be able to produce a non-technical report on topics related to these contexts.

Content

A combination of CUED teaching staff and industrial speakers will address the following topics:

Please note that the order of these talks may change based upon the availability of our guest speakers

1. **Introduction - what engineering really is**
2. **Economic context for engineering - everything is changing.**
3. **Engineering and ethics - Making difficult decisions**
4. **Engineering and entrepreneurship – How to make change happen.**
5. **Engineering and sustainability - Saving our future**
6. **Engineering, complex systems and development**
7. **Bioengineering - engineering + life sciences**
8. **Bringing it all together, and setting the coursework task**

ASSESSMENT

The topics for a report based on this lecture course will be set in the final lecture. Details on where and when to submit will be given at the final lecture and via email.

REFERENCES

Additional on-line resources for this module will be provided via Camtools

Examples papers

Please see the [Booklist for Part IA Courses](#) [2] for references for this module.

Examination Guidelines

Please refer to [Form & conduct of the examinations](#) [3].

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Links

[1] <mailto:thwm100@cam.ac.uk>

[2] <https://www.vle.cam.ac.uk/mod/book/view.php?id=364071&chapterid=42051>

[3] <https://teaching19-20.eng.cam.ac.uk/content/form-conduct-examinations>