

Engineering Tripos Part IA, Product Design, 2020-21

Lecturer

[Dr N Crilly](#) [1]

Timing and Structure

8 lectures, 2 lectures per week, weeks 5-8 Lent term.

Aims

The aims of the course are to:

- Instil an appreciation of engineering design
- Introduce a basic systematic design process

Objectives

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

- Define a problem statement for a simple engineering product
- Specify a requirements list
- Analyse the functional requirements of the product
- Generate and evaluate suitable design concepts
- Embody the design concept with attention to key design principles
- Consider the needs of different people who must interact with the product
- Present a design solution in the form of sketches and drawings
- Communicate the design process clearly to others

Content

1. The context, nature and challenges of design.
2. The design process
3. Task clarification
4. Conceptual design
5. Embodiment design
6. Designing for people
7. Design representations

Booklists

Please refer to the Booklist for Part IA Courses for references to this module, this can be found on the associated Moodle course.

Examination Guidelines

Please refer to [Form & conduct of the examinations](#) [2].

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Links

[1] <mailto:nc266@cam.ac.uk>

[2] <https://teaching.eng.cam.ac.uk/content/form-conduct-examinations>