Engineering Tripos Part IA, Computer-Aided Design, 2020-21

Lecturer

Dr Richard Roebuck [1]

Timing and Structure

This course involves: a single lecture in week 1 of Michaelmas Term; a Tutorials sheet to work though; a Tasks sheet on which you will be assessed. Help desk support is available through the term. Marking occurs at (or before) three fixed sessions.

Aims

The aims of the course are to:

- Gain a working knowledge of Computer-aided Design (CAD) solid modelling.
- Learn how to translate ideas, designs and real world items into shapes, assemblies and animations within a solid modelling environment.

Objectives

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

- Use our chosen professional CAD package to create models of engineering components and assemblies.
- Representing ideas, designs and real world items in the CAD environment in a range of ways.
- Create output from the CAD environment, including animations, so as to be able to communicate ideas in a range of ways.

Content

The IA Computer-aided Design (CAD) course runs in Michaelmas Term and focusses on learning, and being assessed on, the operation of a professional CAD package.

Michaelmas Term

- Introduction to Solidworks
- Creating parts
- Forming assemblies
- Outputting drawings
- "Revolving"
- "Sweeping"
- Shape creation involving repeated "patterns"
- Surface creation
- Forming sheet metal objects
- Using the "toolbox" of standard parts
- Using "design tables"

- Animating objects
- Analysing the motion of animated objects

Further notes

There is a [moodle](#) [2] page supporting the course.

Examination Guidelines

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

Last modified: 11/09/2020 21:50

Source URL (modified on 11-09-20): https://teaching.eng.cam.ac.uk/content/engineering-tripos-part-ia-computer-aided-design-2020-21

Links
[1] mailto:rlr20@cam.ac.uk
[2] https://www.vle.cam.ac.uk/course/view.php?id=69741#section-2
[3] https://teaching.eng.cam.ac.uk/content/form-conduct-examinations