Engineering Tripos Part IIA Project, GM2: Technology for the Poorest Billion, 2018-19

Leader

Dr S Sambandan [1]

Timing and Structure

Thursdays 11-1pm, and Mondays 9-11am plus afternoons.

Aims

The aims of the course are to:

- To introduce students to the challenges of designing and innovating with technology in the context of international development.
- To provide students with opportunities to learn hardware and software rapid prototyping skills.
- To develop students' skill with project development, open collaborations and documentations writing.

Content

The project brings hardware design challenges from international development and humanitarian contexts to undergraduate Engineers. Students will be challenged over the course of four weeks to prototype and test solutions using open source technologies, and document their progress. Students will be working in the Dyson Centre, and a limited budget will be available to them to create their prototype. The project is developed and offered in collaboration with the Centre for Global Equality. Principles of interdisciplinarity, openness and collaboration are key to successful international development projects. Students from all areas of engineering are welcome to join this team-based activity where complementary skills are an asset.

ACTIVITIES

1.Wed 23rd Jan 2019, LR10, 4pm: Lara Allen, Director of the Centre for Global Equality, will present some of the most pressing challenges faced by the poorest billion on the planet, and cover a number of success stories, but also highlight failures and works in progress.

2.Tue 5 March 2019, 3-6pm, LR11 : Open discussion about projects of interest and team activity.

3. Allotment of Projects: 9 May 11.00-13.00 in LR5

4.Project Week 1: Developing a proposal including costing. Identifying team strengths and weaknesses, setting up work-plan and roles for the project development.

5.Week 2/3: Early prototype development.

6.Week 3: Interim presentation, preliminary feedback from judging panel.

7.Week 3/4: Development of final prototype, project report, online documentation et video demonstration.

Coursework

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Published on CUED undergraduate teaching site (https://teaching24-25.eng.cam.ac.uk)

Coursework	Due date	Marks
Proposal/team presentation/Budget description	Thu 16 May 2019 11am-1pm (LR5)	15 (5 individual)
Interim Report Submission	Tue 28 May 2019 (submit via email) ss698@cam.ac.uk [2], lva20@cam.ac.uk [3]	15 (5 individual)
Feedback Meeting (Teams called in separately in slots)	Mon 3rd June, 2019, 11am-1pm (LR5)	No Marks
Presentations	Thu 6 June 2019, 11am-1pm (LT6)	20 (individual)
Final Report + Online Submissions	From 3rd June 2019 to on or before 6th Jun 2019	30

Examination Guidelines

Please refer to Form & conduct of the examinations [4].

Last modified: 11/05/2019 19:24

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