Engineering Tripos Part IIA Project, GB1: Optical Fibre Link, 2018-19

Leader

Prof T D Wilkinson [1]

Timing and Structure

Thursday 9-11, and afternoons and Monday 11-1

Prerequisites

3B1 & 3B2 essential

Aims

The aims of the course are to:

- To introduce the basics of communications system design
- To provide practical experience of electronic circuit design and construction
- To provide experience of optoelectronic technologies and their applications.

Content

Students work in groups to construct the system, but will be expected to manage the different stages of the design and construction appropriately. All reports are done individually, although drawings may be shared between groups.

Week 1

System outline and basic driver/encoder. First interim report.

Week 2

Receiver design and proposal for optional extension. Second interim report.

Week 3

System test circuitry and general testing. Optional design/construction.

Week 4

Final testing and finale: link up of individual systems. Final report.

MINI-LECTURES

Mini-lectures on optical communication system design and circuit design for the basic building blocks will be integrated into the first two weeks of the project.

Coursework

Coursework	Due date	Marks
Interim report 1	Thursday 16 May 2019	15
Interim report 2	Thursday 23 May 2019	15
Final summary report	4pm Thursday 6 June 2019	50
	Approximately 30% or marks are based on group work and 70% on individual elements.	

Examination Guidelines

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

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Links
[1] mailto:tdw13@cam.ac.uk
[2] https://teaching.eng.cam.ac.uk/content/form-conduct-examinations