Engineering Tripos Part IB, 2P7: Probability, 2024-25

Course Leader

Dr T Savin [1]

Lectures

Dr T Savin [1]

Timing and Structure

Week 1, 1 lecture; weeks 2-4, 2 lectures per week. 7 lectures total. Weeks 1-4, one online Q&A session per week.

Aims

The aims of the course are to:

- Show how concepts of probability can be applied to engineering applications.

Objectives

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

- Explain and use simple ideas of probability, mean, variance, etc.
- Manipulate random variables and probability density functions.
- Solve simple statistical problems of engineering importance.

Content

Probability and Statistics

- Probability
- Conditional probability and independence
- Expectation of a random variable
- Probability density function for a continuous random variable
- Key discrete probability mass functions
- Key continuous probability density functions
- Functions of random variables
- Multivariate distributions
- Decision and estimation: basic definitions
- Tests of significance

Further Information

Further information, including details of each lecture and hand-outs are available on the course moodle site.

Booklists

Please refer to the Booklist for Part IB 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].

Last modified: 30/07/2024 08:50

Links
[1] mailto:ts573@cam.ac.uk
[2] https://teaching24-25.eng.cam.ac.uk/content/form-conduct-examinations