

SOR1211 - PROBABILITY

Lecturer/s:	Various
Credits:	2 ECTS
Prerequisites:	Pure or Applied Mathematics at the level requested for entry to Engineering and Technology Courses
Lectures:	14 hours, tutorials and computer lab sessions
Semester/s:	1

- Elementary Probability
 - Sample space, events and probability of events
 - Mutually exclusive and independent events
 - Combinatorial Probability
 - Bayes' Theorem
- Random Variables
 - Discrete and continuous random variables
 - Expectation and Variance
- Discrete Probability Distributions
 - Binomial Distribution
 - Poisson Distribution
 - Geometric Distribution
- Continuous Probability Distributions
 - Exponential Distribution
 - Normal Distribution

Method of Assessment: 100% Examination (*Duration:* 1½ hours)

Suggested Texts:

- Freund, J. E. and Miller, I. (1977) *Probability and Statistics for Engineers*, Prentice Hall Inc.
- Callender, J.T. and Jackson, R. (1996) *Exploring Probability and Statistics with Spreadsheets* – Prentice Hall Inc.
- Montgomery, D. and Runger, G. (1999) *Applied Statistics and Probability for Engineers – Second Edition*, Wiley
- Ross, S. M. (1999) *Introduction to Probability & Statistics for Engineers – Second Edition*, Academic
- Johnson, R. A. (1994) *Miller and Freund's Probability & Statistics for Engineers – Fifth Edition*, Prentice Hall Inc. Int. Paperback Editions
- Wilson, C. (1972) *Applied Statistics for Engineers – First Edition*, Applied Science Publishers
- Ross, Sheldon M. (2005) *Introductory Statistics – Second Edition*, Academic Press