

Academic Org: Fac Office of Engineering – Subject: Courses offered by Fac of Eng

Course: ENGG2760 **Course ID:** 013400 **Eff Date:** 2022-07-01 **Crse Status:** Active **Apprv. Status:** Approved **【Course Rev】**
Probability for Engineers 概率及其工程應用

A first course in the fundamentals of probability theory and their applications in engineering. Topics include sample space and events, counting, axioms of probability, conditional probability, independence of events, discrete and continuous distributions, random variables, joint distributions, and limit theorems.

本科教授概率論基礎及其在不同工程領域上的應用。內容包括：樣本空間與隨機事件、計數法則、概率公理、條件概率、獨立事件、離散與連續分佈、隨機變量、聯合分佈和極限定理。

Grade Descriptor: A

EXCELLENT – exceptionally good performance and far exceeding expectation in all or most of the course learning outcomes; demonstration of superior understanding of the subject matter, the ability to analyze problems and apply extensive knowledge, and skillful use of concepts and materials to derive proper solutions.

有關等級說明的資料，請參閱英文版本。

B

GOOD – good performance in all course learning outcomes and exceeding expectation in some of them; demonstration of good understanding of the subject matter and the ability to use proper concepts and materials to solve most of the problems encountered.

有關等級說明的資料，請參閱英文版本。

C

FAIR – adequate performance and meeting expectation in all course learning outcomes; demonstration of adequate understanding of the subject matter and the ability to solve simple problems.

有關等級說明的資料，請參閱英文版本。

D

MARGINAL – performance barely meets the expectation in the essential course learning outcomes; demonstration of partial understanding of the subject matter and the ability to solve simple problems.

有關等級說明的資料，請參閱英文版本。

F

FAILURE – performance does not meet the expectation in the essential course learning outcomes; demonstration of serious deficiencies and the need to retake the course.

有關等級說明的資料，請參閱英文版本。

Equivalent Offering:

Units: 2 (Min) / 2 (Max) / 2 (Acad Progress)
Grading Basis: Graded
Repeat for Credit: N
Multiple Enroll: N
Course Attributes:

Topics:

COURSE OUTCOMES

Learning Outcomes:

At the conclusion of the course, students should be able to
1. define and understand the fundamental concepts in probability
2. identify, formulate, and solve simple engineering problems involving randomness

Course Syllabus:

Provided by the course teacher(s) in the respective teaching term.

Assessment Type:

Essay test or exam : 65%
Homework or assignment : 25%
Others : 10%

Feedback for Evaluation:

Students may provide their feedback through office hours and course evaluation.

Required Readings:

To be provided by course instructor.

Recommended Readings:

1. Dimitri P. Bertsekas and John N. Tsitsiklis, Introduction to Probability, Athena Scientific, 2nd Edition, 2008
2. Sheldon M. Ross, A First Course in Probability, Pearson, 9th Edition, 2014
3. Richard A. Johnson, Irwin Miller, and John E. Freund, Miller and Freund's Probability and Statistics for Engineers, Pearson, 9th Edition, 2017

OFFERINGS

1. ENGG2760 Acad Organization=ENO; Acad Career=UG

COMPONENTS

LEC : Size=80; Final Exam=Y; Contact=2
TUT : Size=80; Final Exam=N; Contact=2

ENROLMENT REQUIREMENTS

1. ENGG2760 **Enrollment Requirement Group:**
Not for students who have taken ENGG2430 or 2450 or 2470 or ESTR2002 or 2005 or 2012 or 2018 or 2308 or 2362 or IERG2470 or MIEG2440

CAF

eLearning hrs for blended cls 0
No. of micro-modules 0
Research components (UG) 0%

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