# 機率與統計 Probabilities and Statistics 資訊工程系四日二A 課號 2459

Instructor: 洪士程 副教授

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Room:理工大樓E726

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## Course Time & Office Hours

- **Course Time**
- Tuesday 1,2 (8:30 10:15)
- Classroom: T1-403
- Wednesday 8 (16:30 17:20)
- Classroom: T2-108
- Office Hours
- Tuesday 10:00-12:00

# **Credits**

Required or Elective

Required (必修)

Credits

3 Credits (三學分)

## Goal

- This course gives an introduction to the concepts of probability and the functions of random Variables..
- Give an introduction to:
- Introduction.
- Basic Probability.
- A Single Random Variable.
- Functions of a Random Variable and Expectations.
- Two Random Variables.
- Expectations and Functions.
- Characteristic Function.
- Multiple Random Variables.

#### Text Book

- Probability and Statistics for Engineering and Science, 8th Ed., 2012.
- Jay L. Devore
- Brooks Cole (俊傑書局代理)

#### Reference Books

Reference:

Introduction to Probability and Statistics, 4<sup>th</sup> edition, 2008.

J. Susan Milton and Jesse C. Arnold

Publisher: McGraw-Hill

# Schedule of Progress (1/2)

- Introduction to course (week 1)
- Chap 1 Overview and Descriptive Statistics (week 2)
- Chap 2 Probability (weeks 3,4)
- Chap 3 Discrete Random Variables and Probability Distributions (weeks 5,6)
- Chap 4 Continuous Random Variables and Probability Distributions (weeks 7,8)
- Midterm exam (week 9)

# Schedule of Progress (2/2)

- Chap 5 Joint Probability Distributions and Random Samples (weeks 10,11)
- Chap 6 Point Estimation (weeks 12,13)
- Chap 7 Statistical Intervals Based on a Single Sample (weeks 14,15)
- Chap 8 Tests of Hypotheses Based on a Single Sample (weeks 16,17)
- Final exam (week 18)

#### Resources

- Text Book
- Handout

http://lms.ctl.cyut.edu.tw/

LMS-數位學習系統

### Evaluation

- Quiz (30%)
- Participation (10%)
- Mid exam (30%)
- Final exam (30%)