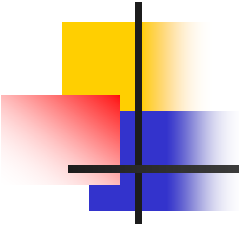
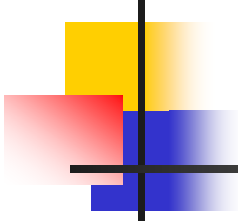


Stochastic Processes for Networking (網路之隨機程序)

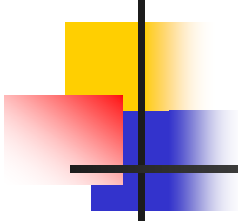


Instructor: Jung-Chun Kao (高榮駿)



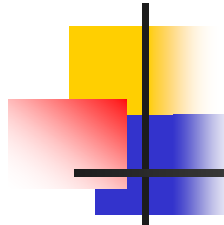
Course outline

- This is an applied math course for networking
- This course covers
 - Preliminaries (ch 1-3)
 - Random variables and stochastic processes
 - Probability and expectations
 - Probability inequalities
 - Poisson processes (ch 5)
 - Renewal processes (ch 7)
 - Discrete-time Markov chains (ch 4)
 - Continuous-time Markov chains (ch 6)
 - Generating random variables for simulation (ch 11)
 - This is optional if we have enough time



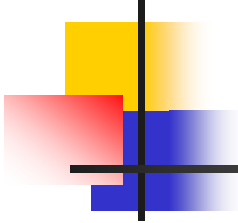
Prerequisite

- Required
 - Engineering mathematics
 - Calculus, probability, linear algebra, differential equations, ...
- Recommended but not required
 - Queueing theory



Logistics

- Instructor: Jung-Chun Kao (高榮駿)
 - Email: jungchuk@cs.nthu.edu.tw
 - Office hour: Tuesdays 5:30 – 6:30pm (台達館 609)
- TAs: See the class webpage for
 - TAs' names, office hours, and contact information
- Meeting times
 - Mondays 3:30 – 5:20pm (台達館 104)
 - Thursdays 2:20 – 3:10pm (台達館 104)
- Class webpage
 - eeclass (<https://eeclass.nthu.edu.tw>)
 - My personal homepage
(<http://www.cs.nthu.edu.tw/~jungchuk>)



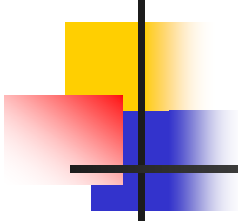
Textbook and references

- Textbook

- Sheldon M. Ross, "Introduction to Probability Models", Academic Press
 - 10th or 13th Edition

- References

- S. M. Ross, "Stochastic Processes", John Wiley & Sons, Inc., 1996
- Robert G. Gallager, "Discrete Stochastic Processes", Kluwer



Tentative grading policy

- Homework (10%)
 - No late homework is accepted!
- Exams (37.5% each)
 - 1 midterm exam on 10/27
 - 1 final exam on 12/15 (in the 16th week)
 - No make-up!
- Participation (15%)
 - No roll call; don't ask for leave