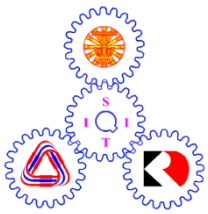

Sirindhorn International Institute of Technology
Thammasat University
School of Information, Computer and Communication Technology

ET601: Course Syllabus

Semester/Year: 2/2013

Course Title: Computer Applications for Engineers
Instructor: Asst. Prof. Dr.Prapun Suksompong (prapun@siit.tu.ac.th)
***Course Web Site*:** http://www2.siit.tu.ac.th/prapun/et601/

Please check the course web site regularly for updated information about this course.

Lectures

Time and Place: Wednesday 13:00-16:00 BKD 3206

Course Description: This course introduces engineers to the practical aspects of constructing computerized simulation studies to analyze and interpret real phenomena. This course explains how a computer can be used to generate random numbers, and how to use these random numbers to generate the behavior of a stochastic model over time. It presents the statistics needed to analyze simulated data as well as that needed for validating the simulation model.

Textbook: Sheldon M. Ross, Simulation, 5th ed. Academic Press, 2012.

Grading Policy: Coursework will be weighted as follows:

Assignments and In-Class Exercises	50%
Projects	50%

Course Outline

The following is a tentative list of topics with their corresponding chapters from the textbook by Ross [R]. Each topic spans approximately two weeks.

1. Course Introduction and Introduction to Randomness [2]
2. Classical Probability and Basic MATLAB Programming
3. Probability Foundations, Conditional Probability and Independence [2]
4. Random Numbers [3]
5. Discrete Random Variables: Generation, Average, and Expectation [2,3]
6. Continuous Random Variables: Generation, Average, Expectation, and Integration [2,4]
7. Discrete Event Simulation [7]
8. Selected Topics and Project Presentations