

# 01204312 Probability and Random Processes

1<sup>st</sup> semester 2011 (June – September)

**Section 1:** for CPE Students; **Section 450:** for IUP Students

## Instructor Information

Instructor: Associate Prof. Anan Phonphoem, Ph.D. (รศ.ดร.อนันต์ พลเพิ่ม)  
Office: Building 15, Room 407 (and Room 710: IWING Lab)  
Office Hours: Monday 12:00 – 2:00 PM or by appointment  
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## Course Information

Lecture: Section 1: Wed 9 – 12 (Room 203) [ภาษาไทย]  
Section 450: Tue 9 – 12 (Room 204) [English Language]  
Class URL: <http://www.cpe.ku.ac.th/~anan>  
Prerequisite: 417168 Engineering Mathematics II  
Course Description: Probability; conditional probability and independence of events; random variables; distribution and density functions; functions of one random variable; multiple random variables; operations on one and multiple random variables; laws of large numbers; central limit theorem; random processes and their applications; application to computer engineering problems.  
Text Book: "Probability and Stochastic Processes: A Friendly Introduction for Electrical and Computer Engineers," Roy D. Yates and David J. Goodman, John Wiley & Sons, Inc., Second Edition, 2005, ISBN 0-471-45259-9  
Supplement: 1. "Probability, Random Variables, and Stochastic Processes," 3<sup>rd</sup> Edition, Athanasios Papoulis, McGraw-Hill  
2. "Probability and Random Process for Electrical Engineering," 2<sup>nd</sup> Edition, Alberto Leon-Garcia, Addison Wesley

## Grade

Midterm Exam: 40 %  
Final Exam: 40 %  
Homework: 15 %  
Attendance: 5 % If ((Attendance Score  $\geq$  85% ) and (You are the 1<sup>st</sup> rank for the particular grade))  
Then (one stop adjustment automatically) /\* e.g. "C+" becomes "B" \*/

## Grading Policy

- Your Grade is based on the overall class performance. However, the cumulative score **below 50%** is considered as **fail (F)**.
- An **"F"** grade will be given to any form of cheating (for all parties).
- Make-up exam will only be provided for restrict circumstances such as severe illness.
- You are not allowed to take a midterm exam if you miss more than 2 lectures and also not allowed to take final exam if you miss more than 4 lectures.

## Attendance Score

Description	Score (0 – 1)
0 – 15 min	1
15.01 – 100 min	$(100 - \text{MinLate})/100$
> 100 min	0
If missing class	
• with “letter of leave of absence in advanced”	0.5
• without “letter of leave of absence in advanced”	0

## Assignment Policy

- All hard-copy assignments must be handed in at the beginning of the class (> 15 min. is considered late). For soft-copy will be timed by the local time stamp.
- No Late assignment will be graded.
- No credit for plagiarism and considered as cheating.
- No credit for copying homework or assignment (for all copies) and considered as cheating.

## Tentative Course Schedule

Week	Class Date (Sec 450)	Class Date (Sec 1)	Note	Description
1	Tue, June 7	Wed, June 8		Intro to Prob - Set Theory
	<i>Tue, June 14</i>	<i>Wed, June 15</i>	<i>No Class</i>	<i>International Conference</i>
2			MakeUp	Conditional Prob
3	Tue, June 21	Wed, June 22		Prob Sequential
4	Tue, June 28	Wed, June 29		Discrete RV – 1
5	Tue, July 5	-		Discrete RV – 2
	<i>Tue, July 12</i>	<i>Wed, July 6</i>	<i>No Class</i>	<i>Graduation Ceremony</i>
5	-	Wed, July 13		Discrete RV – 2
6			MakeUp	
7	Tue, July 19	-		Multiple Discrete RV – 1
		<i>Wed, July 20</i>	<i>No Class</i>	<i>Computer Olympics</i>
	<i>Tue, July 26</i>	<i>Wed, July 27</i>	<i>No Class</i>	<i>Computer Olympics</i>
7	-			Multiple Discrete RV- 2
<b>Tue, Aug 2, 2011 (12:00 – 3:00 PM)</b>				<b>Midterm Exam</b>
8	Tue, Aug 9	Wed, Aug 10		Cont Random Variable – 1
9	Tue, Aug 16	Wed, Aug 17		Cont Random Variable – 2
10	Tue, Aug 23	Wed, Aug 24		Cont Random Variable – 3
11	Tue, Aug 30	Wed, Aug 31		Mult Cont RV – 1
12	Tue, Sep 6	Wed, Sep 7		Mult Cont RV – 2
13	Tue, Sep 13	Wed, Sep 14		Stochastic Process – 1
14	Tue, Sep 20	Wed, Sep 21		Stochastic Process – 2
<b>Sun, Oct 2, 2011 (1:00 – 4:00 PM)</b>				<b>Final Exam</b>