



Syllabus

Course Name in Chinese ()	AA		Academic Year/Semester		103/1
Course Name in English ()	Introduction to Probability				
Course Code	AM_2080AA	Department & Year		Course-Offering Department	
Type	Program	Credit(s)/Hour(s)	3.0/3.0		
Instructor	/				
Prerequisite	/# ()/# ()				
Course Description					
<p>Probability is a foundation for scientific investigation under uncertainty. Besides, it is the backbone of statistics which is yet another important and powerful principle and toolbox for data science. This course serves as the first course to probability. The topics can be categorized into</p> <ol style="list-style-type: none"> 1. Probability 2. Discrete Distributions 3. Continuous Distributions 4. Bivariate Distributions 5. Distributions of Functions of Random Variables 6. Limiting Theorem 					
Course Objectives					
<p>The objective of this course is to help students learn the basic concepts and the theoretical development in probability theory, and get necessary background to take further courses in probabilities and statistics. The contents focus on basic materials, including following important topics: axioms of probability, conditional probability and independence, random variables, expectation, variance, discrete random variables and probability distributions, continuous random variables and probability distributions.</p>					
Basic Learning Outcomes					Correlation between Course Objectives and Dept.'s Education Objectives
A	Have well-founded background in mathematics and be capable of logical reasoning.				
B	Have the knowledge of probability and statistics and the related field, and the corresponding application ability.				
C	Be able to use computer software for statistical computation in real applications.				
Illustration		Highly correlated		Moderately correlated	
Teaching Schedule & Content					
Week	Subject/Topics				Remarks

Grading & Assessments Supplemental instructions

Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.)

Probability and Statistical Inference. Hogg and Tanis (2014), 8th Edition, Prentice-Hall (Text Book. earlier versions borrowable at AMoffice Library)

Teaching Aids & Teacher's Website (Personal website can be listed here.)

<http://faculty.ndhu.edu.tw/~chtsao/edu/14/isp/isp.html>

(Supplemental instructions)