강좌명	확률및랜덤변수	교강사명	서덕영		
이수구분	전공기초	학점	3		
주교재	서명	저자명	출판사	출판년도	비고
	Probability and Stochastic Processes 3ed Processes: a friendly introduction for electrical and computer engineering	R.D. Yates and D.J. Goodman	Wiley	2015	
수업개요	통신, 신호처리, 하드웨어 설계, 컴퓨터 네트워크 등의 연구 및 분석에 필요한 기본적인 확률 이론을 배운다. 특히, 공학에서 많이 다루는 확률 변수와 확률 밀도 함수를 이해하고 확률 계산 및 데이터 분석 능력을 기른다.				

차시	주차명	주차 강의별 설명	키워드
1	Introduction and probability, Set Theory, Probability axioms (Chapter 1)	Introduction of this class and basic theorem. Practice the programming about probability.	Introduction. Basic theorem C++ programming
2	Sequential elements (Chapter 2)	Understanding the sequential elements	Tree diagram, Counting method, Replacement
3	Dicrete random variables and PMFs (Chapter 3)	Study random variables and way to make the PMFs	Random variables, PMFs
4	Families of discrete rvs, functions of random variables (Chapter 3)	Study Discret rvs and Functions of random variables	Discret rvs. Functions of random variables
5	Expected value, variance, conditional pmfs (Chpater 3) Test #1	Understanding Expected value, variance and Conditional pmfs	Expected value, variance, Conditional pmfs
6	Continuous random variables : pdfs and expected values (Chapter 4)	Study continuous random variables and waty to make the pdfs	pdf, Expected value
7	Families of continous rvs : exponential & Gaussian (Chapter 4)	Study families of continuous rvs	Continuous rvs Exponential & Gaussian
8	Mixed rvs and conditioning (Chapter 5)	Study mixed rvs and conditioning	Mixed rvs Conditioning
9	Joint PMFs & PDFs (Chapter 5) Test #2	Understanding joint PMFs&PDFs	Joint PMFs Joint PDFs
10	Functions of two RVs and correlation, covariance (Chapter 6)	Understanding two RVs, correlation and covariance	RVs, Correlation Covariance
11	Conditioning, Conditional PDF/PMFs (Chapter 7)	Study Conditioning and Conditional PDF/PMFs	Conditioning, Conditional PDF, Conditional PMFs.
12	Independent RVs and Bivariate Gaussian PDFs (Chapter 7) Test #3	Study independent RVs and Bivariate Gaussian PDFs	ndependent RVs, Bivariate Gaussian PDFs
13	Random vectors and iid (Chapter 8)	Understanding Random vectors and iid	Random vectors jjd
14	Moment generating functions (Chapter 9)	Study characteristic of each moment generating functions	MGF of sum of independent RVs
15	Central Limit theorem and its applications (Chapter 9)	Introduction of central theorem and its apllications	Central theorem