Course No.	430.707A	Lecture No.	001	Course Title (Subtitle)	Pattern Recognition	Credit	3

Representative Instructor	Name	Choi, Jin Young post : Professor)		Homepage	pil.snu.ac.kr	
	E-mail	jychoi@snu.ac.kr		Phone No.	**010-4106-8372**	
	Interview Time/Place : Buld. 133, Room 406					

*1.Purpose of Course

Fundamental techniques for pattern recognition are introduced, including
Bayesian Decision Theory, Density Estimation, ML, Bayesian Learning, MAP, Histogram, PW, K-NN, GMM(EM), Feature Basis Learning (Subspace Learning), PCA, LDA, Linear Learning Machine, Linear Learning rules, Learning Theory (ERM, VC-dim, SRM, PACL), Deep Neural Networks, Support Vector Machine, Kernel Tricks, Markov Chain Mote Carlo, Bayesian Inference Network, Graphical Model. Variational Inference and so on.

*2.Materials and Reference

Pattern Classification and Machine Learning -Cristopher M. Bishop-Springer-2006

Pattern Classification-Richard O. Duda-Wiley-2001

*3.Evaluation Method

Attendance	Task	Medium	Final	Random Evaluation	Attitude	Other	Total
		30	30	40	0	0	100

기타 :

* 4. 강의계획

<div align="center">강의내용</div>

1 주:
  Introduction to Machine Learning for Pattern Recognition

2주:
  Review of Linear algebra

3주:
  Probability and Information Theory

4주:
  Bayesian Decision Theory

5주:
  Principal Component Analysis, Linear Discriminant Analysis

6주:
  Learning Rules

7주:
  Support Vector Machine

8주:
  Deep Convolutional Network

9주:
  Bayesian Network

10주:
  Parametric Density Estimation

11주:
  Non-parametric Density Estimation

12주:
  Markov Chain Monte Carlo

13주:
  Boltzman Machine

14주:
  Inference of Bayesian Net

15주:
  Bayesian Net Application: Traffic Pattern Analysis

5. 수강생 참고사항