

(SYLLABUS)

1.

(Course Title)		(Instructor)			
(Year)	2022	(Semester)	2	(Course No.)	2150034001
(Class)	01	(Open to)	3 IT	(Course Classification)	-IT
(Credit)	3.0		03		100
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(Office)	051306	(Telephone)	02-820-0710	(e-mail)	chlee@ssu.ac.kr
	(PBL				
	(*) (ABEEK Classification)		(*) (ABEEK Requirement)		
(Course Description)	Scikit Learn 가				

	IT

가	(100)	
	100	100

(Required Texts)		* /Hands-On Machine Learningwith Scikit Learn & Tensorflow/Aurelien Geron/O ' reilly/2019/2/
	()	* /Python for Data Analysis/Wes McKinney/O reilly/2018/2/
	Python	Python
	Engaged learning	
	가 : 35%, 35%, 10%, 30%	

(SYLLABUS)

2.

(Week)	(Keyword)	(Description)		(Texts)
01	Introduction	Introduction, Types of machine learning, Machine learning application		1, ,
02	ML Tools, Data analysis	: NumPy, Pandas		4,5, ,
03	Classification	Binary classifier, Performance measure, Problem: 가	, , , , ,	3, ,
04	Classification	Multiclass classifier, Error analysis, Problem: 가	, , , , , ,	3, ,
05	Training model, Regression	Linear Regression, Gradient descent, Regularization, Learning curves, Problem: 가	, , , , ,	4, ,
06	Training model, Regression	Multiclass regression, Logistic and Softmax regression, Problem:	, , , , , ,	4, ,
07	SVM, KNN	Linear SVM, Nonlinear SVM, SVM regression, k-Nearest Neighbor , Problem: – dataset ML	, , , , , ,	5, ,
08		()		10/22() 3-5:30 가 10 24 () 6-8:30
09	Decision tree	Decision Tree, Estimating class probabilities, Regularization, Problem: decision tree	, , , , , ,	6, , ,
10	Ensemble learning	Ensemble learning, Bagging and pasting, Random forest, Problem: Ensemble learning	, , , , , ,	7, , ,
11	End-to-end project	Data preparation, Examples of end-to-end machine learning project, Problem:	, , , , , ,	2, , ,
12	Unsupervised Learning	Unsupervised learning , Clustering , Problem: unsupervised learning	, , , , , ,	9 , , ,
13	Unsupervised Learning	Clustering : K-means, DBSCAN, Problem:	, , , , , ,	9 , , ,
14		()		12/10() 3-5:30
15	Dimensionality reduction	Main approaches and PCA	, , , , ,	8 , , ,

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3. ()

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	Open-ended problem		
	Teamwork		
	Communication skills		