

## (SYLLABUS)

1.

(Course Title)		(Instructor)			
(Year)	2023	(Semester)	2	(Course No.)	2150085101
(Class)	01	(Open to)		(Course Classification)	-IT / -
(Credit)	3.0		03		100
					/ /
(Office)	051306	(Telephone)	02-820-0710	(e-mail)	chlee@ssu.ac.kr
	(FL), (PBL)		+		
	(*) (ABEEK Classification)		(*) (ABEEK Requirement)		
(Course Description)	Scikit Learn 가				

가	

가	( 100 )	( 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 : 50%, 10%, 15%, 25%	

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2.

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

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3. ( )

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	Open-ended problem		
	Teamwork		
	Communication skills		