

(SYLLABUS)

1.

(Course Title)		(Instructor)			
(Year)	2026	(Semester)	2	(Course No.)	2150034001
(Class)	01	(Open to)	3 IT ,	(Course Classification)	-IT / -
/	3.0 / 03 / 3		100	가	가
					/ /
(Office)	051306	(Telephone)	02-820-0710	(e-mail)	chlee@ssu.ac.kr
	(FL), (PBL)				
	(*) (ABEEK Classification)			(*) (ABEEK Requirement)	
(Course Description)					

, 가	IT

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, Classification	ML tool , Binary classifier, Performance measure, Problem: 가	, , , , , ,	3, ,
03	Classification	Multiclass/multioutput classification, error analysis, Problem: ,	, ,	3 ,
04	Training model, Regression	Linear Regression, Gradient descent, Regularization, Learning curves, Problem: 가	, ,	4, ,
05	Training model, Regression	Multiclass regression, Logistic and Softmax regression, Problem:	, ,	4, ,
06	SVM	Linear SVM, Nonlinear SVM, SVM regression,	, ,	5, , 10/7 (11/22)
07	KNN, Decision tree	k-Nearest Neighbor , Decision Tree, Estimating class probabilities, Regularization, Project:	, ,	6, ,
08	Ensemble learning	Ensemble learning, Bagging and pasting, Random forest, Project:	, ,	7, ,
09	Unsupervised Learning	Unsupervised learning , Clustering , Clustering , K-means, DBSCAN, Project:	, , , , , ,	9, , (11 12)
10	End-to-end project ()	Framing problem, Data preparation, project: ,	, ,	2, , ,
11	End-to-end project ()	Select model and training, Evaluation, Project: 가, :	, ,	2, , ,
12	Dimensionality reduction, Data analysis	Main approaches and PCA, : NumPy/Pandas (1),	, ,	8, 4,5, , ,
13	Data analysis,	NumPy/Pandas (2), Project: 가,	, , , , , ,	4 , , ,
14	Data analysis,	NumPy/Pandas (3), Project: :	, ,	5, , ,
15	Data analysis,	NumPy/Pandas (4) (, Project:	, , , ,	5, 11/22() 4:00 -6:30: (,

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3. ()

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	Open-ended problem		
	Teamwork		
	Communication skills		