

(SYLLABUS)

1.

(Course Title)		(Instructor)			
(Year)	2024	(Semester)	2	(Course No.)	2150085101
(Class)	01	(Open to)	3, 4	(Course Classification)	-IT / -
/	3.0 / 03 / 3		100	가	가
(Office)		(Telephone)	028287150	(e-mail)	yoseob.han@ssu.ac.kr
	, (FL), (PBL), (TBL)		+		2023
	(*) (ABEEK Classification)		(*) (ABEEK Requirement)		
(Course Description)					

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가	(100)	(100%)
	50	50
	15	15
	25	25
	10	10

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(Required Texts)		* /Hands-On Machine Learningwith Scikit Learn & Tensorflow/Aurelien Geron/O'reilly/2018/2/
	()	* /Python for Data Analysis/Wes McKinney/O'reilly/2018/2/ * // /2023
	Python	Python
	Engaged learning	
	가	: 50%, 10%, 15%, 25%

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	Classification	Binary classifier, Performance measure, Problem: 가	, , , , ,	3
04	Classification, Training model	Multiclass/multioutput classification, error analysis, Training model, Problem:	, , , , ,	3,4
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, Decision tree	Linear SVM, Nonlinear SVM, SVM regression, k-Nearest Neighbor , Decision Tree, Estimating class probabilities, Regularization, Project:	, , , , ,	5,6
08	Ensemble learning	Ensemble learning, Bagging and pasting, Random forest, Project:	, , , , ,	7
09	Unsupervised Learning	Unsupervised learning , Clustering , Clustering , K-means, DBSCAN, Project:	, , , , ,	8
10	End-to-end project (Framing problem, Data preparation, project:	, , , , ,	2
11)	()	, ,	-
12	End-to-end project (Select model and training, Evaluation, Project: 가,	, , , , ,	2
13)	NumPy/Pandas (2) Project:	, , , , ,	4

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14	Dimensionality reduction	Main approaches and PCA, Project:	, , , , ,	9
15	Data analysis	NumPy/Pandas (3), Project:	, ,	5

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3. ()

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	Open-ended problem		
	Teamwork		
	Communication skills		