

COURSE: Machine Learning Applications		
DEGREE: Data Science and Engineering	YEAR: 3	TERM: 2

WEEKLY PLANNING								
WEEK	SESSION	DESCRIPTION	TEACHING (mark X)		SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	WEEKLY PROGRAMMING FOR STUDENT		
			L E C T U R E S	S E M I N A R S		DESCRIPTION	CLASS HOURS (1,66=50+50 min)	HOMEWORK HOURS (Max. Estim. 6,5h)
1	1	Introduction: applications of machine learning	X			Reviewing machine learning concepts and tools	1,66	6,5
	2	Data curation and cleaning (DCC): Organizing data		X	Comp. room	Working with python.	1,66	
2	3	DCC: Data from multiple sources: entity recognition and disambiguation	X			Reading, working with data and python notebooks	1,66	6,5
	4	DCC: Data cleaning		X	Comp. room	Working with python.	1,66	
3	5	DCC: Outlier detection. Imputation of missing and corrupt data	X			Working with python.	1,66	6,5
	6	DCC: Lab exercises		X	Comp. room	Lab work	1,66	
4	7	Natural Language Processing (NLP): Introduction to text analysis	X			Basic readings	1,66	6,5
	8	NLP: Tokenization, Stemming, Lemmatization, Stopword removal.		X	Comp. room	Lab work with Python NLTK	1,66	
5	9	NLP: Topic Models: Latent Semantic Indexing	X			Studying topic models	1,66	6,5
	10	NLP: PoS tagging, Word nets, n-grams		X	Comp. room	Lab work with Python NLTK	1,66	
6	11	NLP: Topic Models: Latent Dirichlet Allocation	X			Studying topic models	1,66	6,5
	12	NLP: Working with topic models		X	Comp. room	Lab work with Python NLTK	1,66	
7	13	NLP: Word and Document Embeddings	X			Redings on word embeddings	1,66	6,5
	14	NLP: Using Word and Document Embeddings		X	Comp. room	Lab work	1,66	
8	15	NLP: Sequential Text Processing with Neural Networks	X			Study work	1,66	6,5
	16	NLP: Lab project		X	Comp. room	Lab project	1,66	
9	17	NLP: Lab project	X		Comp. room	Lab project	1,66	6,5
	18	NLP: Lab project		X	Comp. room	Lab project	1,66	
10	19	Recommendation Systems (RS): Introduction	X			Study work	1,66	6,5
	20	Lab Exam		X	Comp. room	Exam preparation	1,66	
11	21	RS: Content-Based RS	X			Study work	1,66	6,5

WEEKLY PLANNING								
WEEK	SESSION	DESCRIPTION	TEACHING (mark X)		SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	WEEKLY PROGRAMMING FOR STUDENT		
			L E C T U R E S	S E M I N A R S		DESCRIPTION	CLASS HOURS (1,66=50+50 min)	HOMEWORK HOURS (Max. Estim. 6,5h)
	22	RS: Content-Based RS		X	Comp. room	Working with python.	1,66	0,5
12	23	RS: Collaborative Filtering	X			Study work	1,66	6,5
	24	RS: Collaborative Filtering		X	Comp. room	Working with python.	1,66	
13	25	RS: Hybrid Systems	X			Study work	1,66	6,5
	26	RS: Lab project		X	Comp. room	Lab project	1,66	
14	27	RS: Lab project	X		Comp. room	Lab project	1,66	6,5
	28	RS: Lab project		X	Comp. room	Lab project	1,66	
	29	RS: Lab project		X	Comp. room	Lab project	1,66	3,25
Subtotal 1							48	94
Total 1 (Hours of class plus student homework)							142	
15		Tutorials, handing in, etc				Handing in lab project.	3,6	-
16	17	Assessment			ss + comp. Ro	Theoretical and lab exams.	4	10
18								
Subtotal 2							8	10
Total 2 (Hours of class plus student homework)							18	
TOTAL (Maximun 160 horas)							160	