



COURSE: Statistics for social sciences II: multivariate techniques		
DEGREE: International Studies (IS) / IS and Law / IS and Political Science	YEAR: 2 (3 for IS and Law)	TERM: 1

WEEKLY PLANNING								
I	SESSION	DESCRIPTION	GROUPS (mark X)		Special room for session (computer classroom, audio-visual classroom...)	WEEKLY PROGRAMMING FOR STUDENT		
			LECTURES	SEMINARS		DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)
1	1	Topic 1.1. Linear regression. Introduction; simple and multiple regression; motivation; graphical data analysis; model formulation; dummy variables; parameter interpretation; examples; applications.	X		online	Study of Topic 1.1	1,5	6
1	2	Practical class.		X		Exercises for Topic 1.1	1,5	
2	3	Topic 1.2. Fitting the model to the data; the least squares criterion; using the fitted model.	X		online	Study of Topic 1.2	1,5	6
2	4	Practical class.		X		Exercises for Topic 1.2	1,5	
3	5	Topic 1.3. Model assumptions; inference on model parameters I: confidence intervals; inference on the response.	X		online	Study of Topic 1.3	1,5	6

3	6	Practical class.		x		Exercises for Topic 1.3	1,5	
4	7	Topic 1.4. Inference on model parameters II: hypothesis testing; statistical significance of estimated parameters.	x		online	Study of Topic 1.4	1,5	6
4	8	Practical class.		x		Exercises for Topic 1.4	1,5	
5	9	Topic 1.5. Assessing model fit; ANOVA.	x		online	Study of Topic 1.5	1,5	6
5	10	Practical class.		x		Exercises for Topic 1.5	1,5	
6	11	Topic 1.6. Selection of predictor variables; multicollinearity; model diagnostics; model validation.	x		online	Study of Topic 1.6	1,5	6
6	12	Practical class.		x	virtual computer lab (through laptops in class)	Computer lab	1,5	
7	13	Topic 2.1. Binomial logistic regression. Motivation; model assumptions and formulation; parameter interpretation; examples; applications.	x		online	Study of Topic 2.1	1,5	6
7	14	1st midterm exam		x		1st midterm exam	1,5	
8	15	Topic 2.2. Fitting the model to the data; using the fitted model; inference on model parameters; statistical significance of estimated parameters.	x		online	Study of Topic 2.2	1,5	6
8	16	Practical class.		x		Exercises for Topic 2.2	1,5	
9	17	Topic 2.3. Assessing model fit; selection of predictor variables; multicollinearity.	x		online	Study of Topic 2.3	1,5	6
9	18	Practical class.		x		Exercises for Topic 2.3	1,5	
10	19	Topic 3.1. Principal component analysis. Motivation; formulation; variance explained; examples; applications.	x		online	Study of Topic 3.1	1,5	6
10	20	Practical class.		x		Exercises for Topic 3.1	1,5	
11	21	Topic 3.2. Deciding the number of components to	x		online	Study of Topic 3.2	1,5	6

		keep; component scores; interpretation of components; graphical representations.						
11	22	Practical class.		x		Exercises for Topic 3.2	1,5	
12	23	Topic 4.1. Cluster analysis. Motivation; k-means clustering	x		online	Study of Topic 4.1		6
12	24	Practical class.		x	virtual computer lab (through laptops in class)	Computer lab	1,5	
13	25	Topic 4.2. Hierarchical methods; similarity measures; dendrograms.	x		online	Study of Topic 4.2	1,5	6
13	26	Practical class.		x		Exercises for Topic 4.2xlu		
14	27	Topic 4.3. Applications and examples.	x		online	Study of Topic 4.3	1,5	6
14	28	2nd midterm exam		x		2nd midterm exam	1,5	
Subtotal 1							42	84
Total 1 (Hours of class plus student homework hours between weeks 1-14)							126	
15		Tutorials, handing in, etc				Tutorials		6
16		Assessment						
17							3	15
18								
Subtotal 2							3	21
Total 2 (Hours of class plus student homework hours between weeks 15-18)							24	
TOTAL (Total 1 + Total 2)							150	