KA7002   Chemometrics (15 hp) VT21

Week #	Day		Morning	Afternoon
6	Monday	08-feb	Intro (MM) & Statistics of repeated measures (MM)	Independent self study
	Tuesday	9-Feb	Hypothesis testing (MM)	Independent self study
	Wednesda	10-Feb	Intro to R and Lab 1.1 (KS & MM)	Independent self study
	Thursday	11-Feb	Independent study (lab write-up)	Independent self study
	Friday	12-Feb	ANOVA (MM)	Independent self study
7	Monday	15-feb	Non-parametric tests (MM)	Independent self study
	Tuesday	16-feb	Independent study (exercises)	Independent self study
	Wednesda	17-feb	Calibration and Quantification (MM)	Independent self study
	Thursday	18-feb	Lab 1.2 - Regression dilution (KS & MM)	Independent self study
	Friday	19-feb	Lab 1.3 - Data imputation (KS & MM)	Independent self study
8	Monday	22-feb	Lab 1.4 - ANOVA, non-parametric tests and regression	Independent self study
	Tuesday	23-feb	Review (MM)	Independent self study
	Wednesda	24-feb	Independent study & exercises	Independent self study
	Thursday	25-feb	Exam Part 1 (MM)	Independent self study
	Friday	26-feb	Lecture 2.1 - Intro to design of expriments (MM)	Independent self study
9	Monday	01-mar	Lab 2.1 - Factorial Design (MM & KS)	Independent self study
	Tuesday	02-mar	Independent study (lab write-up)	Independent self study
	Wednesda	03-mar	Lecture 2.2 - Fractional Factorial & Mixture Designs (MM)	Independent self study
	Thursday	04-mar	Lab 2.2 - Mixture Design (MM & KS)	Independent self study
	Friday	05-mar	Lecture 2.3 - Green chemistry principles (MM)	Independent self study
10	Monday	08-mar	Lecture 2.4 - Introduction to MODDE (MM)	Independent self study
	Tuesday	09-mar	Lab 2.3 - Exp. Design and Robustness Testing with MODDE (MM & KS)	Independent self study
	Wednesda	10-mar	Independent study (lab write-up)	Independent self study
	Thursday	11-mar	Lecture 2.5 - Matrix Alg, multiple linear regression & identification of influential factors in screening designs	Independent self study
	Friday	12-mar	Lecture 2.6 - Response surface designs	Independent self study
11	Monday	15-mar	Lab 2.4 - Response surface design	Independent self study
	Tuesday	16-mar	Independent study (lab write-up)	Independent self study
	Wednesda	17-mar	Lecture and Lab 2.6 - Intro. to Bayesian Statistics (MM)	Independent self study
	Thursday	18-mar	Independent study	Independent self study
	Friday	19-mar	Exam on Part 2 (MM)	Independent self study

	Monday	22-mar	Lecture 3.1: Multilinear regression	Independent self study
	Tuesday	23-mar	Lab 3.1: MLR	Independent self study
12	Wednesda	24-mar	Lecture 3.2.1: Classification methods 1 (logistic regression, K-Nearest Neighbors, LDA)	Independent self study
	Thursday	25-mar	Lecture 3.2.2: Classification methods 2 (Decision Trees, Random Forest)	Independent self study
	Friday	26-mar	Lab 3.2: Classification methods	Independent self study
	Monday	29-mar	Independent study (lab write-up)	Independent self study
	Tuesday	30-mar	Lecture 3.3 Clustering methods (K-means and Hierarchical Clustering)	Independent self study
13	Wednesda	31-mar	Lab 3.3 Clustering methods Lab	Independent self study
	Thursday	01-apr	Lecture 3.4 Principal component analysis	Independent self study
	Friday	02-apr	Good Friday	
	Monday	05-apr	Easter Monday	
	Tuesday	06-apr	Lab 3.4 Principal component analysis	Independent self study
14	Wednesda	07-apr	Independent study (lab write-up)	Independent self study
	Thursday	08-apr	Lecture 3.5: Advanced regression methods (RFR, etc)	Independent self study
	Friday	09-apr	Lab 3.5: Advanced regression methods	Independent self study
	Monday	12-apr	Lecture & Lab 3.6: Applications of chemometrics in non-targeted HRMS (fragmentation trees, database m	Independent self study
15	Tuesday	13-apr	Independent study	Independent self study
	Wednesda	14-apr	Exam on Part 3 (AK)	