

Mass Spectrometry KA7004/KA7003 Autumn 2017

Preliminary schedule 2017-10-05

Course meetings, all compulsory for KA7004, * compulsory for KA7003					
Tue	31/10	09.00-10.00	* Roll call, Introduction to the course	UN	B237
		10.00-	Lab safety and risk assessment of lab work 1-4	HG/FM/JG	B237
Wed	1/11	09.00- 12.00	* MS instrumentation, analyzers	UN	B237
Thu	2/11		* Homework		
Fri	3/11	09.00-12.00	* MS instrumentation, analyzers continued	UN	B237
		13.00-14.00	Exam on lab safety	FM/JG	
Mon	6/11	09.00-12.00	* Scan techniques and LC/MS: ESI, APCI, APPI	UN	B237
Tue	7/11		* Home work (Note:lab for Gr 1 and 4)		
Wed	8/11	09.00-12.00	* Continuation LC/MS techniques	UN	B237
Thu	9/11	09.00-12.00	* GC/MS EI, PICI, ECNI	UN	B237
Fri	10/11		* Homework (Note: lab for Gr 2 and 3)		
Mon	13/11	09.00-12.00	* Continuation of GC/MS techniques	UN	B237
Tue	14/11	09.00-12.00	* Quantitative MS	UN	B237
Wed	15/11	09.00-12.00	* EI fragmentation and interpretation	UN	B237
Thu	16/11		Literature research for project starts here, groupwise		
Fri	17/11	09.00-12.00	* EI fragmentation and interpretation	UN	B237
Mon	20/11	09.00-12.00	* EI interpretation exercises	UN	B237
Tue	21/11	09.00-12.00	* Interpretation exercises	UN	B237
Wed	22/11	09.00-12.00	* Homework	UN	B237
Thu	23/11	09.00-17.00	Labs and project work all day		
Fri	24/11	09.00-12.00	* Interpretation exercises	UN	B237
Mon	27/11	09.00-17.00	Project work all day		
Tue	28/11	09.00-12.00	* CID fragmentation at LC/MS	UN	B237
Wed	29/11	09.00-12.00	Follow-up of projects with teachers/presentations	FM/JG/UN	B237
Thu	30/11	09.00-12.00	* Peptide fragmentation	UN	B237
Fri	1/12	09.00-12.00	* Biomolecular MS	UN	B237
Mon	4/12	09.00-12.00	Presentations of results from lab 1-4/peer review	JG/FM	B237
Tue	5/12	09.00-11.00	* MALDI	UN	B237
Wed	6/12	09.00-12.00	* Interpretation and other MS exercises	UN	B237
Thu	7/12	09.00-17.00	Project work all day		
Fri	8/12	09.00-12.00	* Less common techniques/state-of-the-art/consultation	UN	B237
Mon	11/12	09.00-17.00	Project work all day/Demos		
Tue	12/12	09.00-17.00	Project work all day/Demos		
Wed	13/12	09.00-10.00	Conclusions from Demos	JG/FM/UN	B237
Thu	14/12		Day off/exam prep		
Fri	15/12	09.00-14.00	* Exam		B237
Christmas holidays					
Mon	8/1	09.00-17.00	Project work/consultation report/report writing		
Tue	9/1	09.00-17.00	Project work/consultation report/report writing		
Wed	10/1		Deadline 1st version of group report		
Thu	11/1		Preparation for project presentations		
Fri	12/1	09.00-14.00	Project presentations	UN/FM/JG	B237

* = Mandatory also for KA7003

UN= Ulrika Nilsson, Course director, lecturer

JG= Johan Gustavsson, Lab assistant

FM= Farshid Mashayekhy Rad, Lab assistant

HG= Hanna Gustavsson

LAB SCHEDULE

Lab groups 1-4, Project and demo groups A-D 4 students/group

		Lab 1	Lab 2			
		FM	JG			
Mon	6/11	13:00-17:00	1	4		
Tue	7/11	09:00-13:00	1	4		
Wed	8/11	13:00-17:00	2	1		
Thu	9/11	13:00-17:00	2	1		
Fri	10/11	09:00-13:00	3	2		
Mon	13/11	13:00-17:00	3	2		
Tue	14/11	13:00-17:00	4	3		
Wed	15/11	13:00-17:00	4	3		
Thu	16/11	Literature research for project				
		Lab 3	Lab 4	Projects A-D		
Fri	17/11	13:00-17:00			Risk assessment needs to be approved before project lab work!	
Mon	20/11	13:00-17:00	1	4	↓	
Tue	21/11	13:00-17:00	2	1		
Wed	22/11	Homework, no lab work				
Thu	23/11	09:00-17:00	3	2		
Fri	24/11	13:00-17:00	4	3		
Mon	27/11	09:00-17:00				
Tue	28/11	13:00-17:00				
Wed	29/11	13:00-17:00				
Thu	30/11	13:00-17:00				
Fri	1/12	13:00-17:00				
Mon	4/12	13:00-17:00				
Tue	5/12	12:00-17:00				
Wed	6/12	13:00-17:00				
Thu	7/12	09:00-17:00				
Fri	8/12	13:00-17:00				
Demo						
Mon	11/12	09:00-17:00	A,B			
Tue	10/12	09:00-17:00	C,D			
Wed	13/12	10.30-17:00				
Thu	14/12	Exam prep, no lab work				
Fri	15/12	Exam, no lab work				
Christmas holidays						
Mon	8/1	09:00-17:00	Project work/consultation report/report writing			
Tue	9/1	09:00-17:00	Project work/consultation report/report writing			
Wed	10/1	No lab work				
Thu	11/1	No lab work				
Fri	12/1	No lab work				

Lab 1: Scan techniques with LC/MS triple-quad, microLC

Lab 2: Scan techniques with GC/MS, identification and quantification

Lab 3: ESI/MS, peptides and proteins, sequencing, QToF

Lab 4: LC/ESI-MS, MSn, ion pair chromatography, LTQ ion trap

Demo: MALDI/MS and ion mobility MS, Orbitrap MS