

Mass Spectrometry KA7010KA/7011 Autumn 2019

Preliminary schedule 2019-10-02

Course meetings, all compulsory for KA7010, * compulsory for KA7011

Mon	4/11	09.00-09.50	* Roll call, Introduction to the course	UN	B237
		10.00- 12.30	Lab safety and risk assessment of lab work 1-4	HG/EE/JG	B237
		13.30- 16.30	Risk assessments	EE/JG	B237
Tue	5/11	09.00- 12.00	* MS instrumentation, analyzers	UN	B237
Wed	6/11	09.00-12.00	* MS instrumentation, analyzers continued	UN	B237
		13.00-14.00	Exam on lab safety	EE/JG	B237
Thu	7/11		* Homework (Note:lab for Gr 1 and 2)		
Fri	8/11	09.00-12.00	* MS instrumentation, analyzers continued	UN	B237
Mon	11/11	09.00-12.00	* Scan techniques and LC/MS: ESI, APCI, APPI	UN	B237
Tue	12/11		* Home work (Note: lab for Gr 3 and 4)		
Wed	13/11	09.00-12.00	* Continuation LC/MS techniques	UN	B237
Thu	14/11	09.00-12.00	* GC/MS EI, PICI, ECNI	UN	B237
Fri	15/11	09.00-12.00	* Continuation of GC/MS techniques	UN	B237
Mon	18/11	09.00-12.00	* Quantitative MS/Choice of projects	UN	B237
Tue	19/11		* Homework		
Wed	20/11	09.00-12.00	* EI fragmentation and interpretation	UN	B237
Thu	21/11	09.00-12.00	* EI fragmentation and interpretation	UN	B237
Fri	22/11	09.00-12.00	* Home work/project planning (Note: lab for Gr 5)		
Mon	25/11	09.00-12.00	* MS fragmentation and interpretation	UN	B237
Tue	26/11	09.00-12.00	* MS fragmentation and interpretation	UN	B237
Wed	27/11	09.00-12.00	* MS fragmentation and interpretation	UN	B237
Thu	28/11	09.00-12.00	* MALDI, State-of-the-art-techniques	UN	B237
Fri	29/11	09.00-12.00	Lit seminars includ. risk assessm for projects	UN/JG/EE	B237
Mon	2/12	09.00-12.00	* MS fragmentation and interpretation	UN	B237
Tue	3/12	09.00-12.00	* Biomolecular MS	UN	B237
Wed	4/12	09.00-12.00	Presentations of results from lab 1-4/peer review	UN/JG/EE	B237
Thu	5/12	09.00-12.00	* Interpretation and other MS exercises	UN	B237
Fri	6/12	09.00-12.00	* Interpretation and other MS exercises	UN	B237
Mon	9/12	09.00-17.00	Project work all day		
Tue	10/12	09.00-17.00	Project work all day		
Wed	11/12	09.00-17.00	Project work all day		
Thu	12/12	09.00-17.00	Project work all day		
Fri	13/12	09.00-17.00	Project work all day		
Mon	16/12		Project work all day		
Tue	17/12		Exam prep		B237
Wed	18/12	09.00-14.00	Exam		B237
Tue	7/1	09.00-17.00	Project work all day		
Wed	8/1	09.00-17.00	Project work all day		
Thu	9/1	09.00-17.00	Project work all day		
Fri	10/1	09.00-17.00	Project work all day		
Mon	13/1	09.00-17.00	Project work/consultation report/report writing		
Tue	14/1	09.00-17.00	Project work/consultation report/report writing, Deadline report 17.00		
Wed	15/1		Preparation for project presentations/revision of report		
Thu	16/1		Preparation for project presentations/ Deadline revised report		
Fri	17/1	09.00-14.00	Project presentations	UN/EE/JG	B237

* = **Mandatory for both KA7010 and KA7011**

LAB SCHEDULE

Lab groups 1-5, Demo groups A-D

Max 4 students/group

				Lab 1	Lab 2		
				EE	JG		
Thu	7/11	09.00-13.00		1	2		
Fri	8/12	13.00-17.00		1	2		
Mon	11/11	13.00-17.00		3	4		
Tue	12/11	09.00-13.00		3	4		
Wed	13/11	13.00-17.00		2	3		
Thu	14/11	13.00-17.00		2	3		
Fri	15/11	13.00-17.00		4	5		
Mon	18/11				5		
Tue	19/11				1		
Wed	20/11	13.00-17.00		4	1		
Thu	21/11	13.00-17.00		5			
Fri	22/11	09.00-13.00		5			
				Lab 3	Lab 4	Projects 1-5	
Mon	25/11	13.00-17.00		1	5	2,3,4 Finish project plan, risk assessment	
Tue	26/11	13.00-17.00		2	1	3,4,5 before project lab work!	
Wed	27/11	13.00-17.00		3	2	1,4,5	
Thu	28/11	13.00-17.00		4	3	1,2,5	
Fri	29/11	13.00-17.00		5	4	1,2,3	
Mon	2/12	13.00-17.00	Project 1-5				<div style="display: flex; align-items: center; justify-content: center;"> <div style="border-left: 1px solid black; height: 100%;"></div> <div style="margin-left: 10px;"> <p>Project lab work starts here</p> </div> </div>
Tue	3/12	13.00-17.00	Project 1-5				
Wed	4/12	13.00-17.00	Project 1-5				
Thu	5/12	13.00-17.00	Project 1-5				
Fri	6/12	13.00-17.00	Project 1-5				
				Project	Demo 1	Demo 2	
Mon	9/12	09.00-17.00	Project 1-5				<div style="display: flex; align-items: center; justify-content: center;"> <div style="border-left: 1px solid black; height: 100%;"></div> <div style="margin-left: 10px;"> <p>Project lab work</p> </div> </div>
Tue	10/12	09.00-17.00	Project 1-5				
Wed	11/12	09.00-17.00	Project 1-5				
Thu	12/12	09.00-17.00	Project	A,B	C,D		
Fri	13/12	09.00-17.00	Project	C,D	A,B		
Mon	16/12	09.00-17.00	Project 1-5				<div style="display: flex; align-items: center; justify-content: center;"> <div style="border-left: 1px solid black; height: 100%;"></div> <div style="margin-left: 10px;"> <p>Project lab work</p> </div> </div>
Tue	17/12	Exam prep, no lab					
Wed	18/12	Exam, no lab					
Tue	7/1	09.00-17.00					<div style="display: flex; align-items: center; justify-content: center;"> <div style="border-left: 1px solid black; height: 100%;"></div> <div style="margin-left: 10px;"> <p>Project lab work</p> </div> </div>
Wed	8/1	09.00-17.00					
Thu	9/1	09.00-17.00					
Fri	10/1	09.00-17.00					

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

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