H. Timetable: The lecture consists of 1.5 hr. sessions and two short workshops (45 h). The time and content is distributed as follows:

	Organic Spectroscopy:		
Lecture 0	Introduction to the course	1 h	Aug 21
	Infrared spectroscopy (IR)		
Lecture 1	Introduction, theory and basic concepts	1.5 h	Aug 23
Lecture 2	IR spectral interpretation, group frequencies and IR fingerprints	3 h	Aug 28, 29*
Lecture 3	Pulsed IR spectroscopy (FT-IR)	1.5 h	Aug 30
Workshop	IR spectroscopy: Structural problems Workshop	2 h	TBA
	Nuclear Magnetic Resonance (NMR):		
Lecture 4	Introduction and theory	3 h	Sept 4, 6
Lecture 5	Proton NMR spectral interpretation	3 h	Sept 11, 13
Lecture 6	Coupling and first order analysis	1.5 h	Sept 18
Lecture 7	Second order spectral analysis and NMR spectrum simulation	1.5 h	Sept 20
Lecture 8	Carbon-13 NMR (^{13}C NMR)	3 h	Sept 25, 27
Lecture 9	Carbon-13 empirical rules and NMR spectra calculations	1.5 h	Oct 2, 4
Workshop	NMR structural problems Workshop	2 h	TBA
	Exam 1		**TBA**
Lecture 10	Chemical shift reagents and stereochemistry determination	1.5 h	Oct 9
Lecture 11	Pulsed nuclear magnetic resonance (FT-NMR)	3 h	Oct 11, 16
Lecture 12	Relaxation	1.5 h	Oct 18
Lecture 13	FT NMR Experimental Parameters	3 h	Oct 23, 25
Lecture 14	**Modern 1D NMR techniques:** Gated Decoupling, APT, DEPT, and 1D NOE	4.5 h	Oct 30 Nov 1, 6, 8
	NMR in Two Dimensions (2D NMR)		
Lectures 15	COSY, HETCOR, NOESY, HMQC and HMBC	4.5 h	Nov 13, 15, 20
Lectures 16	Gradients NMR spectroscopy	1.5	Nov 27
	Mass Spectrometry (MS):		
Lecture 17	Introduction, theory and modern techniques (EI, CI, FAB, SIMS, TOF, etc.)	3 h	Nov 29, Dec 4
Lecture 18	MS spectral interpretation and structure determination	3 h	Nov 6, 8*
Workshop	NMR structural problems Workshop	2 h	**TBA**
	Exam 2		**TBA**
	Student Presentations		**TBA**