CHM 4230: 5682 CHM 5235: 5683

Organic Spectroscopy

Fall 2011

Tentative Syllabus (as of 08/20)

Dr. Joachim G. Schantl Instructor

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Monday, Wednesday, 8th period (3:00 – 3:50 p.m.), **Office Hours**

Friday. 3rd period (9:35 – 10:25 a.m.). Sisler Hall 329.

Or by appointment: Please inquire by e-mail, include "CHM 5235" or "CHM 4230"

in the subject line and suggest 2 or 3 times/dates in your message.

https://lss.at.ufl.edu/ Updated regularly with Announcements, Gradebooks (scores), e-Learning site

Resources (syllabus, lecture notes, problem sets, exams, handouts, etc.).

(1) "Organic Structure Analysis", 2nd Ed. (Crews, Rodriguez, Jaspars) **Text**

(2) "Structure Determination of Organic Compounds", 4th Ed. (Pretsch, Bühlmann,

Radertscher)

Books on Reserve Sign in to https://ares.uflib.ufl.edu/ to see the books available for two-hour check-out

at the Marston Science Library.

One year of Organic Chemistry (e.g., CHM 2210 / 2211) is necessary. **Prerequisites**

M, W, F 6th period (12:50–1:40 p.m.) in Leigh 207. Lecture

Course topics I. Strategies for Compound Identification

II. Nuclear Magnetic Resonance (¹H, ¹³C, other nuclei, 1D and 2D experiments)

III. Infrared Spectroscopy IV. Mass Spectrometry

V. Ultraviolet / Visible Spectroscopy

VI. Electron Paramagnetic Resonance

Class notes Class notes will be posted on e-Learning at least the day before the first class that

needs them. Revised notes (as necessary) will be posted there as well.

F 6th period (12:50–1:40 p.m.) in Leigh 207. **Problem Sessions**

Problem sessions attendance and participation is **required** for CHM 5235 students;

participation will be graded.

CHM 4230 students are strongly **encouraged** to attend the problem session.

Problem sets Problem sets will be posted on e-Learning roughly a week before the associated

problem session.

CHM 5235 problem sets are not collected.

CHM 4230 problem sets are due at the beginning of the associated problem

session (students may keep a copy) and can be turned in either in class or in my

office prior to class.

Exams are take home. They will be web posted after class on **Exams**

Monday, Sept. 26; Monday, Nov. 14; Monday, Dec. 5.

Exams are due at the beginning of the next class period (the following Wednesday).

Grading:	CHM 5235		CHM 4230		
	Exam 1	20%	Exam 1	20%	
	Exam 2	25%	Exam 2	25%	
	Exam 3	35%	Exam 3	35%	
	Problem session *	20%	Problem sets**	20%	

^{*}CHM 5235 students: Participation in the problem sessions is graded; problem sets are not collected.

Participation in the problem session is not required. However, attendance at the problem sessions is strongly encouraged.

Grading Scale:

Letter Grade Α A- B+ В B-C+ \mathbf{C} C-D+D D-E **Score Required** 92% 90% 87% 83% 80% 77% 73% 70% 65% 60% 55% <55%

Classroom etiquette Please come to class on time and adjust your cell phone so that it does not ring.

Student honor code See the UF Student Guide http://www.dso.ufl.edu/studentguide/ for details.

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

Tentative course schedule (as of 08/20)

Monday		Wednesday		Friday	
08/22	Spectroscopy intro	08/24	NMR intro, basic theory	08/26	NMR basic theory
08/29	¹ H chemical shift	08/31	¹ H chemical shift	09/01	PS #1
09/05	Labor Day – No classes	09/07	¹³ C chemical shift	09/09	PS #2
09/12	¹³ C chemical shift, ¹ H coupling	09/14	¹ H coupling/equivalence	09/16	¹⁹ F NMR (Prof. W. Dolbier)
09/19	¹ H coupling	09/21	¹ H coupling	09/23	PS #3
09/26	dynamic NMR – Exam #1 posted	09/28	Exam #1 due – 1D multiple pulse	09/30	1D multiple pulse
10/03	2D NMR	10/05	2D NMR	10/07	PS #4
10/10	2D NMR	10/12	2D heteronuclear correlation	10/14	PS #5
10/17	2D homonuclear correlation	10/19	TBA	10/21	TBA
10/24	MS	10/26	MS	10/28	PS #6
10/31	MS	11/02	MS	11/04	Homecoming – No classes
11/07	TBA	11/09	TBA	11/11	Veterans Day – No classes
11/14	IR – Exam #2 posted	11/16	Exam #2 due – IR	11/18	TBA
11/21	IR	11/23	TBA	11/25	Thanksgiving – No classes
11/28	UV	11/30	UV, ORD, CD	12/02	PS #7
12/05	Integrated problems – Exam #3 posted	12/07	Exam #3 due – TBA		

^{**}CHM 4230 students: Problem sets are collected (grading on problem sets is pass/fail).