

OBR	
Received(time)	11:52 AM
Date	4/1/2008

**Ohio Articulation Number (OAN)
Course Submission Form
2005-2006**



College/Univ Ohio University
ersity _____

Course(s) Submitted(Title & Course #) Organic Chemistry; CHEM 305 for
Ohio Articulation Number OSC010

Date 02/06/06 Course 1 of a 5 Course OAN mapping.

Name and title of individual submitting on behalf of the college/university

Name Dr. Mark McMills Title Associate Professor

Address 194 Clippinger

E-mail mcmills@ohio.edu

Phone 740-517-8493

Fax _____

Credit Hours 3 qtr 3 sem _____

Lecture Hours _____

Laboratory Hours _____ (if applicable)

Pre-Requisites(s) Course work (if applicable)

CHEM 153 or with 153

Placement Score (if applicable)

(Name of test) _____

(Domain) _____ (Score) _____

Catalog/Course Description (Includes Course Title and Course #)

Organic Chemistry, CHEM 305; Organic chemistry for chemistry majors and other students wishing to acquire sound knowledge of classical and modern organic chemistry.

Texts/Outside Readings/Ancillary Materials

Organic Chemistry 2nd Edition by Joseph M. Hornback, Thomson

Learning/BrooksCole, 2006, OWL access code (packaged with book)
Pushing Electrons 3rd edition. Weeks (packaged with O-Chem book)
Suggested: Organic Model Kit (Darling)--these can be used during exams

Course Objectives and/or Plan of Work

Students must be proficient in all of the following:

- Theories of structure and bonding in organic compounds including Lewis structures and molecular orbital theories, hybridization, resonance.
- Acid-Base reactions of organic compounds.
- Stereochemistry, isomerism and conformational analysis.
- Nucleophilic substitution and elimination reactions.
- Chemistry of Alkanes, Alkenes and Alkynes
- Students must have familiarity with IUPAC nomenclature.
- Students must have understanding of curved arrow reaction mechanism with ability to apply these skills to new situations.
- Ability to design syntheses, use of retro-synthetic analysis.
- Understanding of stereochemical implications in organic reactions.
- Exposure to variety of applications of organic chemistry in society.

Description of Assessment and/or Evaluation of Student Learning

Exams I and II	50% (25% each exam)
Blackboard Homework	15%
Final Exam	35%

Master Syllabi and Working Syllabi (if both are used)

ORGANIC CHEMISTRY

CHEM 305 *Fall 2005*

MWF 1:10-2:00 AM, Clippinger 194

COURSE

OBJECTIVE: To learn and apply the fundamental concepts of organic chemistry to independently solve synthetic, structural and spectroscopic problems.

INSTRUCTOR: Dr. Mark McMills Email: mcmills@ohio.edu

OFFICE HOURS:

MWF 2:30-3:30pm 380 Clippinger or by appointment (517-8493)

TEXT: *Organic Chemistry 2nd Edition* by Joseph M. Hornback, Thomson Learning/BrooksCole, 2006, OWL access code (packaged with

book)
Pushing Electrons 3rd edition. Weeks (packaged with O-Chem book)
Suggested: Organic Model Kit (Darling)--these can be used during exams
Additional material may be posted on Blackboard

OWL: This is “**On-Line Web-Based Learning**” and will be used extensively during Organic Chemistry for graded tutorials and on-line problems. Each student will be required to use your OWL access code (packaged with each book) to register and complete all on-line assignments/problems. Detailed instructions for getting started with on-line assignments are available at <http://owl3.thomsonlearning.com/GettingStarted/>. For help with OWL, see contacts listed on the Login page.

BLACKBOARD: Blackboard (<http://mead.citl.ohiou.edu>) will be used in this course for posting of course-related materials.
For help with how to use Blackboard see the on-line manual or email helpdesk@ohio.edu or call 593-1222.

CLASS FORMAT: The class time will be comprised of lecture, active problem solving, and discussion. Lecture will focus on key aspects of each chapter, but all concepts from each chapter should be studied. ***Thorough preparation BEFORE class is expected (reading assigned text, working on assigned problems etc.)***
Tuesday lecture time will be used for problem solving and recitation only, no new material will be presented.

GRADES:

Exams I and II	50% (25% each exam)
Blackboard Homework	15%
Final Exam	35%

Grades will be assigned using **a scale no more stringent than:** A-, A (90-100 %); B-, B, B+ (80-89%); C-, C, C+ (70-79%); D-, D, D+ (60-69%); F (<60%). I reserve the right to scale appropriate for the class.

ATTENDANCE & EFFORT: Class attendance and **participation** is expected throughout the quarter. Only verifiable **serious** medical conditions, **extreme** family emergencies, or participation in University-sponsored activities are acceptable reasons for missing examinations. Make-up examinations will only be given in the rare cases that warrant it and solely at the discretion of the professor. **There will be NO OWL homework make-ups or late submissions.** Satisfactory progress throughout the quarter will require a minimum of 6-9 hours of active study per week.

ACADEMIC

MISCONDUCT: Cheating, dishonesty, plagiarism, or deception in fulfilling requirements will not be tolerated. Penalties include receiving an F (0 points) for the requirement, failing the course and/or referral to university judiciaries.

HOMEWORK: On-line homework will be taken at the OWL site and due as posted. There will be practice homework problems assigned from Hornback & other sources. **Graded** on-line homework problems are posted. The answers can be submitted at any time prior to the deadline (4pm on date listed).

IMPORTANT NOTICES:

Class will not be held on Friday November 11th, a University-wide Holiday

Each exam in Chem 305 will be comprehensive; the final exam given at the end of CHEM 307 will be the ACS standardized comprehensive exam covering the entire course sequence of Chem 305, 306, and 307.

The recording of and/or taking notes is greatly encouraged, but the resale of class notes is strictly forbidden!!!

Cell phones: To show consideration to your classmates please turn off any cell phone before coming to class. If the phone rings during class, I will confiscate it!!!!

All students with disabilities or special needs who need accommodation during the quarter please see me privately to make arrangements!

<i>Lecture Date</i>		<i>Lecture Topic</i>	<i>Required Reading</i>	<i>Text Problems*</i>
<i>September</i>	6	Introduction to Owl		
<i>September</i>	7	Chemical Bonds	Ch. 1	17-19, 21, 26
	9	Chemical Bonds		
	12	Organic Chemistry Overview	Ch. 2	17, 20, 21,
	14	Organic Chemistry Overview		37, 39, 46
	16	Orbitals & Bonding	Ch. 3	20, 21, 24, 26,
	19	Orbitals & Bonding		29, 31, 36, 40
	21	Orbitals & Bonding		
	23	Orbitals & Bonding		

<i>October</i>	26	Acid-Base Reaction	Ch. 4	28, 31, 37,	Sept. 30
	28	Acid-Base Reaction		40, 43, 47	
	30	Acid-Base Reaction			
	3	Hydrocarbons, Alkyl Halides & Alcohols	Ch. 5	25, 29, 30, 31,	
	5	EXAM #1 5:10-6:40 pm Morton 235			
	7	Hydrocarbons, Alkyl Halides & Alcohols		32, 35, 37, 39	
	10	Hydrocarbons, Alkyl Halides & Alcohols			Oct. 10
	12	Geometric Isomers & Conformations	Ch. 6	16-18, 21, 24, 27,	
	14	Geometric Isomers & Conformations		28, 29, 30, 32	
	17	Geometric Isomers & Conformations			Oct. 19
19	Chiral Molecules	Ch. 7	16, 17, 21, 23,	Oct. 25	
21	Chiral Molecules				
24	Chiral Molecules				
26	EXAM #2 5:10-6:40 pm Morton 235				
28	Nucleophilic Substitution	Ch. 8	28, 29, 37, 40, 41,		
31	Nucleophilic Substitution		47, 49, 51, 54, 56		
<i>November</i>	2	Nucleophilic Substitution			
	4	Nucleophilic Substitution			
	7	Elimination Reactions	Ch. 9	17, 18, 26,	
	9	Elimination Reactions		27, 31, 33	
	14	Elimination Reactions			Nov. 14
17	FINAL EXAM 4:40 pm Room TBA				

*Students are expected to work all the problems within the chapter text as well as the end of chapter.

Learning Outcomes for Chem 305

Students must be proficient in all of the following:

1. Theories of structure and bonding in organic compounds including Lewis structures and molecular orbital theories, hybridization, resonance.
2. Acid-Base reactions of organic compounds.
3. Stereochemistry, isomerism and conformational analysis.

4. Nucleophilic substitution and elimination reactions.
5. Chemistry of Alkanes, Alkenes and Alkynes
6. Students must have familiarity with IUPAC nomenclature.
7. Students must have understanding of curved arrow reaction mechanism with ability to apply these skills to new situations.
8. Ability to design syntheses, use of retro-synthetic analysis.
9. Understanding of stereochemical implications in organic reactions.
10. Exposure to variety of applications of organic chemistry in society.

Additional Documentation

--

OBR Use	Action
Approved	
Additional Information Requested	
Rejected	
Date	

Ohio Articulation Number Form Directions

This form is used to submit your course information to the Ohio Board of Regents, for all courses that make up OAN requirements. This document is a form, so the only fields that need to be filled in can be. When you open this, make sure the top of the screen, where the name of the document is displayed, says "Document1" or something similar to that. When you open this form from a location other than inside of word, it creates a blank template to fill in. Please fill it in with the appropriate course information from your institution. All of the fields in this document are expandable, and will grow to fit as much data in them as you need. Note that these fields are implemented as MS Word tables. Keep that in mind as you are copying and pasting between your syllabi and this form.

Once you are done entering your course information, you need to save this file. Since Word opened a blank version of this file, you will need to rename it to save it. Under file, choose "Save as" and then enter the name of the file. The naming scheme for this form is Institution-Year-OAN number-Course Title.

Example, if you were ABC Community College, and you were submitting your Calculus110 course, the name of the file would be ABC-2005-OMT005-Calculus110. If two (or more) courses are required to fulfill that same OAN, you would submit ABC-2005-OMT005-Calculus110Calculus111.

When you are done with your submissions, please send them electronically to the Ohio Board of Regents at atpanels@regents.state.oh.us so we can keep your information on file.

If you encounter any problems or have any questions, please contact any of the individuals listed below:

Jim Ginzer (614) 752-9486 jginzer@regents.state.oh.us

Sam Stoddard (614) 752-9532 sstoddard@regents.state.oh.us

Nick Wilson (614) 466-4158 nwilson@regents.state.oh.us