

**Syllabus for
CHM 2435-001
Survey of Organic Chemistry Laboratory
Fall 2009**

Description: CHM 2435 is a one semester organic chemistry laboratory designed to accompany CHM 2430. The laboratory will teach common organic laboratory techniques as well as illustrate some of the organic reactions discussed in CHM 2430. The course is assigned one credit hour.

Prerequisite: CHM (1410, 1415 or 1510, 1515), concurrent enrollment or prior credit in CHM 2430. Note that if you withdraw from CHM 2430, you must also withdraw from CHM 2435.

Course Goals: (1) Introduce and master the standard techniques used in the organic laboratory.
(2) Illustrate concepts learned in organic chemistry lecture course.

Labs: Time: 8:00 A.M. – 11:50 A.M Tuesday
Place: PSB 4180 (for pre-lab discussions and quizzes)
PSB 4170 (for lab)

Instructor: Dr. Ed Treadwell Office: 4450 Physical Sciences Building
Phone: 581-6229 E-mail: emtreadwell@eiu.edu
Office Hours: Mon 3:00-3:50 pm, Thurs 9:00-10:00 am
(Other times gladly considered by arrangement.)

Text: “The Organic Chem Lab Survival Manual” (Sixth Edition) by James W. Zubrick

Course Policies:

1. **Safety is very important.** A list of safety rules is included in the handouts. Breaches in the safety rules will result in immediate expulsion (without any warnings) from the lab for the day with no opportunity for making up the lab.
2. **Goggles policy:** When you are in the lab (**even for checking out**), goggles must be worn at all times. The only exceptions are when you are entering the lab for the first time or leaving the lab for the last time of the day. You will receive a verbal warning if you do not wear goggles. After your second verbal warning, you will lose two points from your lab score each time you do not wear goggles.
3. If you have any preexisting medical conditions or become pregnant, please notify me of these at once.
4. If you have a documented disability, and wish to discuss academic accommodations, please contact Dr. Treadwell as soon as possible.
5. You are responsible for all announcements made during class, whether you are present or not.
6. If you are absent because you were sick, you may take a makeup quiz if you provide an excuse that is *written* and *signed* by a medical official. If you must be absent for a quiz because of required travel with an athletic team, please plan to take the quiz or exam early. Authorized excusals for other absences will not be given. Lack of a valid reason for an absence will result in a zero score on the quiz that was missed.
7. If a lab is missed without an authorized excuse and is part of a multi-day lab, there will be no opportunity to make up the work done in the missed lab day. If you miss the first day of a lab without an authorized excuse, you will not be allowed to start the lab the following week and will receive a 0 for the lab.
8. In order to complete the experiments in the designated time frame, it is important to be in class on time. Repeated lateness will incur a loss of points. There will be a **2 point penalty** for every five minutes you arrive after 8:00 A.M. effected throughout the semester. After 3 occurrences, the penalty will increase to 5 points for every five minutes.
9. Beginning at 8 A.M. on the day they are due, reports turned in after the deadline will incur a 4 point **per** late-day penalty unless they were late because of an excused absence.
10. EIU's policy on academic integrity (as described in the EIU Undergraduate Catalog and Student Conduct Code) applies to all parts of the course.
11. There is a \$10 lab fee for chemicals and supplies. Breaking kit glassware will result in additional charges. Please note that if you withdraw from the course, you must check-out your drawer or else be charged a check-out fee.
12. Some of the chemicals you will be using can leave permanent stains or holes on your clothes should you spill them on yourself. For that reason, I would recommend that you wear a set of “old clothes” to lab that you won't mind throwing away if you have to, and to wash these clothes separately from the rest of your non-lab clothes.

Grading:

Item	Points
13 Data Sheets @ 4 pts each	52
13 Lab Reports @ 25 pts each	325
3 Quizzes @ 20 pts each	60
Cumulative Exam @ 40 pts	40
Total	477

Data Sheets:

At the end of each laboratory period, you will be required to hand in a “data sheet” that contains all the data that you accumulated during that lab period. If a data sheet is not handed in for a lab experiment, the lab report will not be graded and you will receive a zero for both the data sheet and the lab report for that experiment. Note that some experiments have more than one data sheet.

Lab Reports:

The lab reports contain spaces for the analysis of the data, as well as questions regarding the experiment or technique itself. Lab reports will usually be due on the Tuesday after a lab is completed, and the exact due dates are given on the lab schedule (next page).

Quizzes:

There will be 3 quizzes given throughout the semester, and they will usually be given at the beginning of class. Note that if you are late for class that day that you will not receive additional time for the quiz. The quizzes collectively make up approximately 15% of your grade.

Cumulative Exam:

There will be a cumulative exam given the last week of classes that will count for approximately 10% of your grade. Some of the questions for the exam will look remarkably similar to questions from the quizzes or the lab reports.

The normal grading scale will be used, where above 90% earns an “A”, 80 – 89 % earns a “B”, 70 – 79 % earns a “C”, 60 – 69 % earns a “D”, and below 60% earns an “F”.

CHM 2430/2435

Please note that departmental policy requires that if you drop CHM 2430, you must also drop this lab course. The stockroom personal will notify me as the withdrawal notices arrive.

Date	Exp	Topic or Experiment	Tie-in*	Report Due
Aug. 25		Orientation and Check-in. p. 1-5		-
Sept. 1	1	Recrystallization / Melting points p. 104-118, 87-92	-	Sept. 8
Sept. 8	2	Distillation of Hydrocarbons p. 164-169, 179-182, 154-161, 40-46	2.7	Sept. 15
Sept. 15	3	Isolation of the Components of Panacetin p. 126-138	11.8	Sept. 22
Sept. 22	Q1 4	TLC Analysis of Analgesics p. 218-233	-	Sept. 29
Sept. 29	5	Alkenes – Iodine Number	3.7a	Oct. 6
Oct. 6	6	Nitration of Aromatics	4.8, 4.9b, 4.11	Oct. 13
Oct. 13	7	Substitution of Alkyl halides	6.1-6.6	Oct. 20
Oct. 20	Q2 8	Synthesis of Phenactin p. 200-202	6.4, 8.5	Oct. 27
Oct. 27	9	Dehydration of 2-methylcyclohexanol	7.8	Nov. 3
Nov. 3	10	IR spectroscopy and GC analysis p. 270-276, 288-289, 250-259	12.4	Nov. 10
Nov. 10	Q3 11	Identification of Sugars	9.11, Ch. 16	Nov. 17
Nov. 17	12	Fischer Esterification	10.10	Dec. 1
Dec. 1	13	Aldol Condensation	9.17	Dec. 8
Dec. 8		Check-out, Cumulative Lab Final		-

* These are reference to sections of your CHM 2430 textbook, Organic Chemistry, a short course, 12th ed., by Hart, Craine, Hart, and Hadad