CHEM 026/028: OUTLINE OF ORGANIC AND BIOCHEMISTRY

Spring 2020

Lecture A: CHEM 26 (10101) & CHEM 28 (10092), M,W,F 8:30AM-9:20AM, E105 Innovation

Lecture B: CHEM 26 (10602) & CHEM 28 (10628), T,Th 8:30AM-9:45AM, E102 Innovation

GENERAL INFORMATION: (see also the CHEM 026 BlackBoard page)

Instructor: Steve Flemer **Email**: sflemer@uvm.edu

Office: 331 Innovation **Office Hours**: M W F 9:30 AM - 10:30 AM

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		(TTh; 8:30-9:45 AM)
Exam 1	Wed, Feb. 19; 105 Innovation	Wed, Feb. 19; 102 Innovation
Exam 2	Wed, Mar. 18; 105 Innovation	Wed, Mar. 18; 102 Innovation
Exam 3	Wed, Apr. 15; 105 Innovation	Wed, Apr. 15; 102 Innovation
Final Exam	Thursday, May 7; 7:30-10:15AM; E105 Innovation	Monday, May 4; 10:30AM-1:15PM; E102 Innovation

Absences from exams: Students with legitimate excuses (ie: a UVM-related conflict) may be permitted to take an exam sometime during the day that it is given to the rest of the class that evening. This must be cleared with the instructor first, however. **Makeup exams will only be administered after the scheduled exam time if a medical or family emergency precludes taking the exam at the scheduled time**.

Review Sessions: I will have an Exam Review Session on the Tuesday evening the day before impending exams (6:00-7:30PM in 207 Lafayette).

Problems: Exam questions will be modeled very closely to the type of problems you will encounter in the Practice Problems of each unit of study posted on BlackBoard. Solutions to all of these problems are included in these documents. While it is strongly suggested that you do as many problems as possible, the problems are not collected or graded.

Weekly Blackboard Quizzes: Each week, you will be responsible for taking a short online BlackBoard quiz covering the class material from the current week. Just click on the "Weekly Quiz" link on the left-hand side of the CHEM26 BlackBoard page and follow the instructions. These quizzes are open-book, but must be completed independently. Weekly quizzes will be available to take until Midnight of the Sunday prior to a new week of classes. A skipped or a missed quiz is given a zero.

REQUIRED COURSE MATERIALS:

Text: There is no textbook for the course. Each unit of study has a corresponding folder in the Course Materials section of the course's BlackBoard site, within which are educational notes for that unit. These notes, while helpful for following along with the material, should not be thought of as comprehensive. Your own written class notes should be the basic core of your study materials.

Lab Manual: Available for download from the class' BlackBoard site.

Bound Laboratory Notebook: Available at the UVM Bookstore. Required for recording data.

(Note: the last two items are not required for CHEM 28 students)

LABORATORY SCHEDULE

Week of:	Experiment	Description
27-29 Jan	**1**	Fractional Distillation of Wine **CHECK-IN**
3-5 Feb	**2**	Molecular Models
10-12 Feb	**3**	Isolation of Naproxen
17-19 Feb	**NO LABS**	(PRESIDENT'S DAY ON MON)
24-26 Feb	**4**	Dehydration of 2-methyl-2-butanol
2-4 Mar	**NO LABS**	(TOWN MEETING DAY ON TUES)
9-11 Mar	**NO LABS**	(SPRING BREAK)
16-18 Mar	**5**	TLC Analysis of Analgesics
23-25 Mar	**6**	Synthesis of Esters
30 Mar - 1 Apr	**7a** **7b**	Carbonyls (Tollen's Test) Carbohydrates (Benedict's Test)
6-8 Apr	**8**	Polymers
13-15 Apr	**9**	Isolation and Analysis of a Protein
20-22 Apr	**10**	Fats, Oils, & Soaps
27-29 Apr		**LAB CHECKOUT**

TENTATIVE LECTURE SCHEDULE

UNIT 1 (Introduction to Organic Chemistry – Saturated Hydrocarbons)

UNIT 2 (The Unsaturated Hydrocarbons)

UNIT 3 (Alcohols, Ethers, & Thiols)

Exam 1 (Wednesday, Feb. 19; 6:40-8:40PM)

UNIT 4 (Aldehydes & Ketones)

UNIT 5 (Carboxylic Acids & Esters)

UNIT 6 (Amines & Amides)

Exam 2 (Wednesday, Mar. 18; 6:40-8:40PM)

UNIT 7 (Carbohydrates)

UNIT 8 (Lipids)

UNIT 9 (Proteins)

UNIT 10 (Enzymes)

Exam 3 (Wednesday, Apr. 15; 6:40-8:40PM)

UNIT 11 (Genetics)

UNIT 12 (Anaerobic Energy Production)

UNIT 13 (Aerobic Energy Production)

UNIT 14 (Fatty Acid Energy Production)

Final Exam (Cumulative)