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Fall 2015

CHEM 6117

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University of New Orleans

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Chemistry 6117, Mass Spectrometry
Fall 2015
Mon & Wed 6-7.15 PM; Meets in CB 306

Instructor: Gérard Bastian
Office: Chemistry building Room 237
Office Hours: 9 AM – 6 PM
Tel.:
E-mail: gbastian@uno.edu

TAs: No Teaching Assistant.

Prerequisite: CHEM 4110 or consent of department. A detailed examination of the theory, principles, and instrumentation of modern mass spectrometry. Three hours of lecture.

Description: Basic course about Mass Spectrometry. Different types of Mass Spectrometers and different types of applications. Some courses will be exercises and practice in the lab.

Credit: 3 units

Text:

Student Learning Objectives

Students who complete this course should have a basic understanding of structural chemistry, organic chemistry reactions and chemical interactions.

Attendance Policy

Attendance will be taken each class period. 10% of your final grade will be based on attendance/participation.

Exam Schedule

Final Exam – Dec. 7-9 (during normal course time)

Grading

Course grades will be determined from exam grades, attendance, publication presentation and comments and participation. Course grades will be assigned based on the following table:

| | |
|--------------------------------|-----|
| Publication analysis | 45% |
| Final Exam | 45% |
| Attendance/Participation | 10% |

Grading scale: 80-100% = A; 60-79% = B; 40-59% = C; 20-39% = D

Homework

Read and learn the course; prepare the publication analysis everyone will get before fall break.

Lab Reports

No lab reports.

Accommodations

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities should contact the Office of Disability Services as well as their instructors to discuss their individual needs for accommodations. For more information, please go to <http://www.ods.uno.edu>.

Classroom Conduct and Safety

Cell phones should be turned **OFF** before entering class. All safety rules must be followed at all times. Unsafe behavior will result in dismissal from a lab session or the course. Safety goggles must be worn at all times in the lab. Long pants and closed shoes are required.

Academic Integrity

Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the Student Code of Conduct for further information. The Code is available online at <http://www.studentaffairs.uno.edu>.

Plagiarism is a serious offense that can result in failure in a course and dismissal from the university.¹ Students must make special efforts to learn what constitutes plagiarism and how to properly utilize and cite the work of others.

“Plagiarize 1. To steal and use (the ideas or writings of another) as one’s own. 2. To appropriate passages or ideas from (another) and use them as one’s own . . . To take and use as one’s own the writings or ideas of another.” - definition from *The American Heritage Dictionary of the English Language*, W. Morris, Ed. American Heritage Publishing Company, Inc. and Houghton Mifflin Company: New York, 1969.

Verbatim, or word for word copying, is the most obvious form of plagiarism. However, substantially copying the ideas or presentation of another, even when wording has been changed, can also constitute plagiarism.

¹International students who are dismissed from the university can lose their visa status, requiring them to return to their home country.

CHEM 6117 Fall 2015 - Approximate Course Schedule

| Date | Lab | Topic/Title | |
|------------------|---------------|---|--|
| Aug 18-20 | | No courses | |
| Aug 24-27 | | Course 1: Introduction to Mass Spectrometry | |
| Aug 31-Sept 2 | | Course 2: Ionization Techniques | |
| <i>Sept 7</i> | | No course | |
| Sept 9 | | Course 3: Analyzers in Mass Spectrometry | |
| Sept 14-16 | | No Courses | |
| Sept 21-23 | | Course 4: Detectors in Mass Spectrometry, lab practice | |
| Sept 28-30 | | Course 5: Definitions (1) | |
| Oct 5-7 | | Course 6: Definitions (2) | |
| Oct 12-15 | | No Courses | |
| <i>Oct 15-16</i> | <i>No Lab</i> | <i>Fall Break, No labs Oct 13-15; no classes Oct 15-16</i> | |
| Oct 19-21 | | Course 7: Rules in Mass Spectrometry | |
| Oct 26-28 | | Revisions, exercises and lab practice | |
| <i>Oct. 30</i> | | <i>Spring registration opens</i> | |
| Nov 2-4 | | Course 8: GC-MS vs LC-MS | |
| Nov 9-11 | | Course 9: Resolution in LC-MS-MS, ICP-MS and AAS | |
| Nov 17-19 | | Course 10: NMR Spectroscopy (Proton and Carbon) | |
| <i>Nov 26</i> | <i>No Lab</i> | <i>Thanksgiving Break; no labs Nov 24-26; no classes Nov. 26-27</i> | |
| Nov 30-Dec 2 | | Publication presentation and discussion | |
| Dec. 7-9 | | Final Exam | |