Course Syllabus

[SCIENCE & MATHS PROGRAM]

[CHEM 2000 L: Organic Chemistry Lab]

ACADEMIC YEAR 2018-2019
[FALL 2018]

COURSE SYLLABUS

1. COURSE INFORMATION

Classes held: TR; 1:30pm – 4:20pm; Organic Chemistry Lab
Credits: 4
Prerequisite: Pre-laboratory activities and Organic chemistry Lecture

2. FACULTY INFORMATION

Faculty Name:	Dr. Waziha Farha
Email:	waziha.farha@auw.edu.bd
Office Location:	610H (UG Faculty)
Office Hours:	MWTR 10:00 am - 11:30 am; T 2:30pm – 4:30pm, or by appointment
Qualifications:	Ph.D. in Agricultural Chemistry, M.Sc. in Organic Chemistry, B.Sc. in Chemistry
Areas of Expertise:	Bio-chemistry, Organic Chemistry, Medicinal Chemistry, Environmental Chemistry, Plant Science
Profile:	A strong theoretical and research knowledge of organic, inorganic, analytical, and environmental chemistry. Successfully trained in systematic approach and diligent handling of Chemicals and Chemistry laboratory equipment and observation 5 years of research experience, collaborated with supporting institutions, fellow scientists, and undergraduate research students
Research Interest:	Green chemistry; Pesticide science, Plant science, Food safety

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3. TEXT AND OTHER COURSE MATERIALS

Recommended Text:

(**1**). *Follow course Instructor's LAB classes*, (**2**). ***The systematic identification of organic compounds***, Shriner, Hermann, Moral, Curtin and Fuson, Wiley Student Edition (8th Ed.), 2004 (latest edition is preferred).

Students will be given documents and links of the content by the instructor on requirement.

Information about LAB safety: Apron, Safety glasses, Hand gloves and following LAB safety instructions

4. COURSE OBJECTIVES AND DESCRIPTION

- To perform and identify functional groups in organic compounds by chemical tests in the laboratory with related reactions.
- To learn and perform practical techniques employed for systematic processes for the identification of unknown organic solid and liquid compounds.
- Identify organic compounds by physical and chemical experimental methods.
- Synthesis of organic derivatives (optional).
- Develop experimental skills like collection, analysis of data, the ability to draw conclusions

5. LEARNING OUTCOMES

Student Learning Outcomes	**Method of Assessment**
. Understand the preliminary laboratory techniques of organic chemistry.	Pre-lab activities, post-lab activities (based on text books and handouts) lab report, maintaining lab notebooks, quiz, assignments and exams.
. Being able to perform the practical chemical techniques	Practical exams (Practical exams (performing the experiment, written and viva on each experiment)
. Develop experimental skill and research potential	Lab reports
. Present article on different topics	Presentation evaluation
. Learn management of infrastructure and disciplinary regulations of the lab	Evaluation of lab and post lab cleaning and disciplinary activities

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6. ATTENDANCE REQUIREMENT & GRADING POLICY

Lab attendance is mandatory and more than two unexcused absence will result in automatic failure of the lab and thus the course. Roll calls will be taken in the beginning of the class and lab will be closed exactly at the starting time. Pre-lab and post lab activity questions will be based on the preparation for the lab and the day's lab activities.

- **Proper medical documents should be placed in case of absence in the lab due to illness.**

Quizzes:
There will be specific time for short-quizzes at the beginning of each lab.

Exam:
There will be *one/two practical exams* during the term.

Grades:
Student grades will be determined by the following method:

1. Class Participation =10%
2. Pre-LAB (short quizzes) =10%
3. Quizzes / Midterm exams =20%
4. LAB Report =20%
5. Presentation =20%
6. Practical Exam =20%

TOTAL = 100% (33% of course grade)

Students must pass both the *lecture* and the *LAB* to pass the course.

Students are expected to abide by the academic code of honesty for all of your class works quizzes and exams.

Letter Grade	GPA	Percentage
A+	4.3	98-100
A	4.0	94-97
A-	3.7	90-93
B+	3.3	87-89
B	3.0	84-86
B-	2.7	80-83
C+	2.3	77-79
C	2.0	74-76
C-	1.7	70-73
D+	1.3	67-69
D	1.0	64-66
D-	0.7	60-63
F	0.0	Less than 60

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**** Final LAB Exam/ Presentation: TBA**

7. CONTACT WITH YOUR PROFESSOR

Face to face conversation with the instructor during office hours or by fixing appointment through email is preferred. In case of an emergency you may email your instructor after office hours accepting some delay in response.
In terms of a group response or reporting experimental observations, one or more representatives will communicate with the instructor by face to face meeting or by email during office hours.

Instructor will give the feedback on academic progress of students in the class or by email.

8. COURSE SCHEDULE

Lab 01:

Student Learning Objective:	Understanding Structures of Organic Compounds (molecule kit)
Required Readings:	Study materials suggested and/or provided by the Instructor

Lab 02:

Student Learning Objective:	Understanding Isomerism and Stereochemistry (molecule kit)
Required Readings:	Study materials suggested and/or provided by the Instructor

Lab 03:

Student Learning Objective:	Determination of Boiling Point of an Organic Compound
Required Readings:	Study materials suggested and/or provided by the Instructor

Lab 04:

Student Learning Objective:	Systematic Analysis of an Unknown Organic Compound
Required Readings:	Study materials suggested and/or provided by the Instructor

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Lab 05:

Student Learning Objective:	Functional Group Analysis of Organic Compounds
Required Readings:	Study materials suggested and/or provided by the Instructor

Lab 06:

Student Learning Objective:	Addition Reaction – Iodine Value of a Cooking Oil
Required Readings:	Study materials suggested and/or provided by the Instructor

Lab 07:

Student Learning Objective:	Hydrolysis of Methyl Salicylate
Required Readings:	Study materials suggested and/or provided by the Instructor

Lab 08:

Student Learning Objective:	Synthesis of Aspirin
Required Readings:	Study materials suggested and/or provided by the Instructor

Lab 09:

Student Learning Objective:	Esterification Experiment
Required Readings:	Study materials suggested and/or provided by the Instructor

Lab 10:

Student Learning Objective:	Preparation of Soap
Required Readings:	Study materials suggested and/or provided by the Instructor

Required Readings:

--- Lab Handouts and document shared by the instructor
--- Additional text books and contents or links will be provided by the instructor when required.

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Note: **This schedule is subject to changes during the semester and topics and methodologies for lab practices may be changed by the instructor according to the lab capacity and availability of particular contents. Each missed class by the instructor will be made up in appropriate time during the semester.**

9. ASSESSMENT METHODS

Assessment methods: Attendance, Pre-lab, Post-lab (summarizing the day's experimental methodology before entering the lab, answering provided questions in handouts, filling the result sections following each experiment), Lab report, Unannounced Quiz, Article presentation, Final Practical Exam.
The type of questions includes brief discussions, analytical questions and calculations, drawing figures and graphs.
No assignments, quizzes and exams will be taken as a supplement (in case of absence) if the instructor is not previously informed or excuse the absence.

10. KEY DATES & DEADLINES

Aug 26	Semester Begins
Sept 10	Deadline for Add/Drop
Oct 18	Last day of withdrawal of course with 'W' grade
Oct 21-25	Fall break
Oct 31	Writing assignment deadline
Dec 6	Last day of class
Dec 9-13	Assessment

11. PLAGIARISM & ACADEMIC INTEGRITY

All members of the AUW Community are bound by the Academic Honor Code published in the Academic Bulletin (http://www.auw.edu.bd/academics/course-bulletin/).

The integrity of students' academic work is very important to AUW faculty. Universities are based upon the fundamental principle that the work presented truly belongs to the author, because the academic community revolves around ideas and creativity. Each person's ideas are his or her

contribution to the academic community. Therefore, taking another person's ideas and representing them as one's own is a serious form of dishonesty. Similarly, cheating (copying someone else's work, asking for answers, sharing answers, etc.) and other forms of dishonesty (falsifying data, making up references, etc.) are also serious breaches of this honor code.

Plagiarism is intentionally or unintentionally taking credit for another's words or ideas. You may not plagiarize in your academic work, and you must adhere to the following:

- When you use someone else's words (whether they are from a distinguished author or a classmate's paper), place the words you have copied in quotation marks and provide the appropriate citation of author and source. A good guideline to use to avoid plagiarism is to make sure quotes of three or more sequential words from someone else are put into quotation marks.
- If you paraphrase (reword) another person's ideas, then you must also cite the source. Paraphrasing must involve changing the words and sentence structure of the original source.
- Cite materials you copy or paraphrase from the Internet, even if the author is not identified.

The various academic disciplines (humanities, social sciences, sciences) use slightly different formats for footnotes, endnotes, and bibliographies. Your professor for a particular class will tell you which format he or she wants you to use in that class.

Copying, asking for answers, sharing answers, and any other form of cheating (misrepresenting your own work and knowledge) on exams or quizzes are all forms of academic dishonesty.

Other Forms of Academic Dishonesty

1. Making up references, quoting wrong sources, etc.
2. Falsifying data.
3. Misrepresenting your situation to be excused from academic work.
4. Submitting the same paper in more than one class.
5. Informing a student in a later class about questions on tests or quizzes.
6. Misrepresenting your academic work or qualifications in any way.

Full details about plagiarism, academic dishonesty and penalties are available in the Academic Honor Code in the Academic Bulletin.

12. STRATEGIES TO PREVENT PLAGIARIM & VIOLATIONS OF ACADEMIC INTEGRITY

"Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Any suspected instance of academic dishonesty will be reported to the Appropriate Personnel/Committee. During regular class sessions, cell phones must be either in „vibrate mode" or turned off. Calls cannot be answered. Cell phones must be **turned off** and **enclosed** in a case, book bag, briefcase, or the like during tests and exams. YOU are responsible for ensuring this policy is followed. Students MAY **NOT** have cell phones, electronic dictionaries, calculators, pagers or other "information rich" devices (anything that can receive and/or store many pages of text) in their possession during tests and exams.

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13. CLASS BEHAVIOUR

. Students WILL NOT eat or drink in lab.
. Students WILL NOT disrupt class during lab.
. Students WILL NOT be allowed into lab once the door is closed.
. Students without a lab notebook, lab coat and/or close toed shoes WILL NOT be allowed in lab.
. Students endangering others in lab will be dismissed immediately.
. Students must wear proper personal protective equipment as required for individual experiment and do not use any jewelries and ornaments. Long hair must be tied back.
. Students WILL NOT perform any experiment in absence of lab persons. At least one lab person must be present while working in the lab.
. Students must clean up their work places and all the equipments they use for the experiments.
. Students will be responsible for their conduct in lab and damage of the instruments they use.
. Students cannot take anything out of the lab or use any equipment without the permission of the lab officers.

14. OTHER IMPORTANT INFORMATION

Announcements related to the course will be sent through group email.