



## Organic Chemistry II - Syllabus

Organic Chemistry II, CHEM 341, Spring 2025

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Instructor	Syed Mehdi
E-mail	sm649@evansville.edu
Course Meeting Days and Time	Monday 8:30 AM – 12:00 AM Lecture (in-person)
Required Experiential Learning Dates	Wednesday 8:30 AM – 12:30 AM Lab (in-person)
Office Hours	Monday – Thursday 1:30 PM – 3:00 PM (online teams) or by Appointment

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### Catalogue Description:

Studies the reactions of organic and bioorganic molecules organized around mechanistic principles. Introduces multistep syntheses and synthetic strategies. Laboratory includes studies of reactions, synthesis, and identification of compounds. Four hours lecture, four hours lab. Prerequisite: Chemistry 240 with a grade of C– or better. Fall.

### Credit Hour Policy Statement:

This class meets the federal credit hour policy through a combination of lecture + laboratory (or lecture + practicum) for a total of 45-75 hours of supervised learning activities for each credit.” (Def 1 & 2)

### Course Learning Objectives:

Describe and apply the chemistry and characteristic reactions of common organic functional groups.

- Evaluate and apply theoretical and mechanistic principles underlying organic molecules and their reactions.
- Express and apply fundamental nomenclature and spectroscopic principles for the naming, differentiation, and identification of organic molecules.
- Formulate and practice good habits for the preparation, separation, analysis, and purification of organic molecules, as well as collecting and recording laboratory data.
- Formulate, practice, and apply the skills necessary to plan and execute multistep syntheses of polyfunctional organic molecules.

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### Methods of Instructions:

During class meeting, major concepts will be reinforced via lecture, discussion, problem solving worksheets, and activities. Laboratory experiments are designed to enhance, reinforce or supplement classroom material.

### EXAMS

Exam dates are dependent on how we are progressing through the material, but generally I will announce the date of an exam a week or more in advance.

Exam questions and problems are from textbook chapters, assignments, and lecture material. Students are expected to read the chapters assigned. I will announce any chapter topics that may be skipped.

## ASSIGNMENTS

There will be graded homework assignments. Assignments will be posted on the CHEM 341 Blackboard page in the respective Unit module. *Assignments are due the same day as the exam for that unit, and must be submitted electronically to our Blackboard page.*

**ASSIGNMENT LATE POLICY:** Assignments must be submitted by the due date (date of exam for that unit). There will be an automatic 20% deduction for late assignment submissions. No assignment is accepted 2 weeks after the exam date for units 1, 2, and 3. No assignment is accepted after the date of exam 4.

## LAB EXPERIMENT + LAB REPORT

The lab component comprises 100 points of your overall course grade. The Multi-Step Benzoin experiment counts 25 pts of the 100 pt total, and all steps (lab periods) must be completed to receive full credit.

Each scheduled experiment includes performing the experiment in Lab, recording data and observations in a lab notebook, and submitting the required formal Lab Report.

Lab Notebook - a Lab Notebook is required. You may use a laptop or tablet, or an inexpensive composition notebook. Scientific Calculator - you will need a scientific calculator to perform calculations for labs.

Failure to perform the scheduled experiment OR submit a Lab Report will result in a Zero (0) for that Lab Experiment/Lab Period.



A formal Lab Report is **required** for assigned experiments. During each experiment record data/observations/sketches in your lab notebook. Afterwards, you will use the data/observations in your notebook to type a formal Lab Report. The Lab Report must follow the format and guidelines provided in our Blackboard class site. More information about writing the lab report will be provided.

**Textbooks and Required Reading:**

Textbook: Organic Chemistry, 2 edition by Janice Gorzynski Smith

**Course Schedule:**

<b>January</b>
Syllabus & Review Oxidation & Reduction Reactions – chapter 12 Conjugation and Dienes – chapter 14 Mass Spec, IR, and NMR Review Exam 1 - TBA
<b>February</b>
Benzene – chapter 15 Electrophilic Aromatic Substitution Reactions – chapter 16 Carboxylic Acids – chapter 19 Review Exam 2 - TBA
<b>March</b>
Carbonyl Chemistry – chapter 17 Aldehydes and Ketones – chapter 18 Carboxylic Acid Derivatives – chapter 20 Review Exam 3 - TBA



## April

Carbohydrates – chapter 26

Amino Acids and Proteins – chapter 27

Lipids

Review

Exam 4 - TBA

## Lab Experiments

Aspirin Synthesis by Microscale

TLC of Food Colors

The Effect of pH on Sodium Benzoate

Video Lab – TBA

The Extraction of Caffeine from Black Tea

Aspirin Tablet Purity by Titration

Synthesis of 4-acetoxybenzoic Acid

Nutmeg Lab

Multi-step Coenzyme Synthesis of Benzoin and Derivatives (Zotero)

Video Lab - TBA

The instructor reserves the right to determine and/or change the number of experiments or assignments assigned during the semester.

The instructor reserves the right to change calendar dates for lesson topics and/or exams.

### Grading Criteria:

Exams	400 pts
Assignments	100 pts
Experiment and Lab Reports*	100 pts*



Total Points	600 pts
A: $\geq 540$ pts   B: 480-539   C: 420-479   D: 360-419   F: $< 360$	

\* The Multi-Step Benzoin experiment counts 25 pts of the 100 pt total, and must be completed to receive full credit.

#### **Withdrawal and Attendance policies:**

Harlaxton College expects regular class attendance by all students. Students are considered sufficiently mature to appreciate the necessity of regular and punctual attendance, to accept this personal responsibility and to accept the consequences of failure to attend. When absences occur due to emergency or medical reasons, students are expected to notify their instructors of the absence prior to class or to seek the assistance of the College nurse or a member of the Student Experience Team for help in notifying instructors.

Instructors have the authority to grant excused absences for medical, psychological, or personal reasons upon review of appropriate documentation and professional recommendation supporting such a request. In the event of long-term illness, reasonable accommodations will be made to allow a student to complete a course. In these cases, the Dean will need to approve the long term nature of the accommodation.

The Dean of Harlaxton College has the authority to grant excused absences for medical, psychological, or personal reasons.

Each instructor is expected to maintain an attendance policy in keeping with the nature of the Harlaxton program and may consider it in evaluating performance in their courses.

#### **Policy Governing Unexcused Absences:**

Harlaxton College operates an attendance policy that is binding on all faculty and students. The number of unexcused absences that are allowed before incurring a penalty is related to the number of times a class meets each week. For courses which meet three times a week, students are allowed a maximum of three unexcused absences during the semester without attracting penalty points. For courses meeting twice a week two such absences are permitted, and for courses meeting once a week a single absence is allowed. Additional unexcused absences will attract a grade penalty.

**ASSIGNMENT LATE POLICY:** Assignments must be submitted by the due date (date of exam). There will be an automatic 20% deduction for late assignment submissions. No assignment is accepted 2 weeks after the exam date for exams 1, 2, and 3. No assignment is accepted after the date of exam 4.

**LAB REPORT LATE POLICY:** Lab Report due dates are scheduled by the instructor. There is an automatic 20% deduction for late Lab Report submissions

**For CHEM 341 meeting twice a week two absences are permitted. Additional unexcused absences (lab or lecture) will lower your overall grade average by one letter grade.**

**Note- all lab periods of the Multi-Step Synthesis of Benzoin and Derivatives must be completed to receive credit for the lab. All or nothing.**



### **Policy Governing Excused Absences.**

- Excused absences are not given to facilitate student travel independent of College-sponsored travel.
- Students may be permitted to miss class because of participation in academic field trips.
- Instructors must co-ordinate and confirm academic fieldtrips with the Dean, prior to the commencement of the Semester to ensure their inclusion in the Semester timetable.
  
- Where authorization for an academic fieldtrip is requested after the commencement of the semester, the request must be submitted to the Dean.

The following information is required:

- Purpose and brief description of the official Harlaxton event or academic fieldtrip.
- Dates, location, and times (as applicable).
- Alphabetical list of students involved [Last Name/First Name] along with their student identification number.

If approval is granted:

- Instructors affected will be notified at least one week prior to the class period during which absence is anticipated, or as soon as possible.
- Missed class time due to student participation is to be considered an excused absence.
- The grade of a student may not be lowered in any class due to excused absences.
- It is the student's responsibility - to take the initiative by consulting with their instructors before the absence occurs, and - to do what is required by the instructor to make up all missed assignments and/or examinations.
- Instructors are required to assist students in these occasional situations of excused absences.

### **Honor Code:**

All students at the University of Evansville agree to the University honor code: *I will neither give nor receive unauthorized aid, nor will I tolerate an environment that condones the use of unauthorized aid.*

**AI may be used only with prior permission or direction by the instructor.**

- All work submitted in this course must be your own.
- The use of generative AI composition tools, such as those offered by ChatGPT, Google Bard etc. is prohibited in this course except for specific assignments and subject to the instructor's guidelines.
- Work generated by such tools without proper attribution is plagiarism and, thereby, a breach of the University's Plagiarism and Academic Honesty policy.

### **Disability Policy:**

It is the policy and practice of the University of Evansville to make reasonable accommodations for students with properly documented disabilities. Students should contact Disability Services within the Office of Counseling Services by calling 812488-2663 to seek services or accommodations for disabilities. Written notification to faculty from Disability Services is required for academic accommodations.

The University of Evansville Disability Services office will share the request for academic accommodations with the Academic Support team at Harlaxton College. Staff members at Harlaxton will meet individually with students to discuss needs and provide additional information related to examinations or other assessments.



Students from partner institutions should provide the appropriate letter of accommodation from their institution to the Academic Support team at Harlaxton College.

#### **Non-Discrimination Statement**

The University of Evansville expects all members of its community to treat each other with respect and civility. Harassing behaviours directed towards any member of our community will not be tolerated. As part of its commitment to non-discrimination, the University specifically prohibits harassment based on any other characteristics set forth in its non-discrimination statement as follows: including race, color, gender, gender identity and expression, sexual orientation, creed or religion, national origin, age, disability, veteran status and all federally protected groups/classes. Any form of harassment undermines the mission of the University and negatively impacts the University community as a whole.

#### **Prohibited Conduct and Confidentiality**

The University of Evansville is committed to fostering an atmosphere free from harassment and discrimination. This commitment includes identifying problems that may lead to sexual harassment and misconduct, as well as other forms of harassment and discrimination, by creating an atmosphere in which the entire University community is sensitive to preventing prohibited conduct. Additionally, the University is committed to providing support and resources to individuals who have experienced prohibited conduct. This commitment includes effectively responding when a student, visitor, guest or program participant is the victim of prohibited conduct.

All campus employees, students, and guests are required to abide by the Title IX and Other Sexual Harassment and Misconduct Policy, the Harassment and Discrimination Policy, and the Consensual Sexual or Romantic Relationships Between Employees and Students Policy. Violation of these policies could result in disciplinary action, up to and including expulsion for students and termination for employees.

Faculty members at the University of Evansville are considered "Responsible Employees" under the applicable federal guidelines and the University's policies. This means that I am unable to offer you confidentiality if you report any incidence of prohibited conduct to me as defined by Title IX statute. If I am made aware of a violation, I am required to report any known information to the Office of Institutional Equity.

You may choose to report the violation yourself the following ways:

Email: · Annie Sills, Assistant Director of Institutional Equity and Title IX Coordinator: [cs175@evansville.edu](mailto:cs175@evansville.edu) ·

Keith Gehlhausen, Executive Director of HR and Institutional Equity: [kg77@evansville.edu](mailto:kg77@evansville.edu) ·

Title IX: [titleix@evansville.edu](mailto:titleix@evansville.edu)

Phone: 812-288-5261

Online: <https://www.evansville.edu/safety/report.cfm>

You may also choose to speak with a Confidential Resource. Confidential Resources are required to maintain confidentiality and cannot report violations to the Office of Institutional Equity: **University of Evansville**

- Counseling Services: [counselingservices@evansville.edu](mailto:counselingservices@evansville.edu), 812-488-2633
- Health Center Professionals: [healthcenter@evansville.edu](mailto:healthcenter@evansville.edu), 812-488-2033
- University Chaplain: [chaplain@evansville.edu](mailto:chaplain@evansville.edu), 812-488-5262

#### **Harlaxton College**

- College Nurse: Lesley Selby, RGN, +44 01476 403027, [lseyby@harlaxton.ac.uk](mailto:lseyby@harlaxton.ac.uk)
- Counselling Services: [counselling@harlaxton.ac.uk](mailto:counselling@harlaxton.ac.uk)

