Course ID:	Course Title:	Fall 2018
		Prerequisite: CHE 101/CHE 103
		Credits: 3

Class Information		Instructor Information		Important Dates	
Days:	W/F	**Instructor:**	Liza Abraham PhD (Course Coordinator) Rashid Khan PhD (Lab Instructor)	**First day of classes:**	Wed, Sept 5
Time:	1:00-2:15	**Email:**	labraham@ambrose.edu rashid.khan@ambrose.edu	**Last day to add/drop, or change to audit:**	Sun, Sept 16
Room:	A 2141	**Phone:**	403-410-2000 ext.6921	**Last day to request revised exam:**	Mon, Oct 22
Lab/ Tutorial:		**Office:**	A2160	**Last day to withdraw from course:**	Mon, Nov 12
	W 2:30-5:15 R 4:00-7	**Office Hours:**	Open Door Policy	**Last day to apply for coursework extension:**	Mon, Nov 19
Final Exam:	W December 12 1:00- 4:00			**Last day of classes:**	Tue, Dec 11

Course Description

This course review the basic principles of chemical bonding as they apply to organic molecules, and are introduced to the concept of stereochemistry, spectroscopy and reaction mechanisms.

Expected Learning Outcomes

Students should come out of this course will have a thorough understanding of the following:

- Acidity and Basicity - Brønsted–Lowry Acids and Bases and their Reactions, Acid Strength and pKa, Predicting the Outcome of Acid–Base Reactions, Factors That Determine Acid Strength, Common Acids and Bases
- Alkanes- Naming Alkanes and Cycloalkanes, Conformations of Acyclic Alkanes, Conformations of cyclohexane
- Stereochemistry- Chiral and Achiral Molecules, Labeling chiral Centers with R or S, Diastereomers, Meso Compounds, R and S Assignments in Compounds with Two or More chiral Centers and Disubstituted Cycloalkanes
- Spectroscopy-Mass spectroscopy: Mass Spectrometry and Fragmentation
  Infrared Spectroscopy: IR Absorptions , IR and Structure Determination

Nuclear Magnetic Resonance Spectroscopy Number of Signals Position of Signals, The Chemical Shift of Protons Intensity of Signals, Spin–Spin Splitting and Using ^{1}H NMR to Identify an Unknown ^{13}C NMR Spectroscopy

- Nucleophilic Substitution — General Features, Leaving Group, Nucleophile, The SN2 Mechanism, The SN1 Mechanism, Carbocation Stability, When Is the Mechanism SN1 or SN2? And Organic Synthesis
- Elimination Reactions- General Features of Elimination, The E2 Mechanism, The Zaitsev Rule , The E1 Mechanism, SN1 and E1 Reactions, Stereochemistry of the E2 Reaction , When Is the Mechanism E1 or E2?, E2 Reactions and Alkyne Synthesis and When Is the Reaction SN1, SN2, E1, or E2? 31

Textbooks

Link to an online textbook will be provided

Course Schedule: (Tentative Lecture / Tutorial / Laboratory Schedule)

Week of	Lecture	Tutorial	Lab
Sep3	Introduction to the course Fundamentals of Organic Chemistry		
Sep 10	Fundamentals of Organic Chemistry	**Tutorial 1/Quiz 1**	
Sep 17	Stereochemistry	**No Tutorial**	**Lab 1:Separatin of Organic Compounds by Solvent Extraction**
Sep 24	Oct.2-3 Spiritual Emphasis days (no classes)	No Tutorial	No Lab
Oct 1	Spectroscopy	**Tutorial 2/Quiz 2**	No Lab
Oct 8	**Oct 8 Mon Thanksgiving: No class** .	**Term Test 1/ Oct.10**	**Lab 2:** Isolation of Caffeine from tea
Oct 15	Spectroscopy	**Tutorial 3/ Quiz 3**	**No Lab**
Oct 22	Spectroscopy	**No Tutorial**	**Lab 3: Thin Layer Chromatography**
Oct 29	Spectroscopy	**Tutorial 4/Quiz 4**	**No Lab**
Nov5	Nov.5-10, M-F (mid-semester break; no classes)		
Nov 12	Nucleophilic Substitution reactions	No Tutorial	**Lab 4: Column chromatography**
Nov 19	Nucleophilic Substitution reactions	Tutorial 5/Quiz 5	

Nov 26	Elimination Reactions	**Term Test 2 Nov.28**	**Lab 5: Spectroscopy Dry Lab**
Dec 3	Elimination Reactions	Tutorial 6/Quiz 6	
Dec.10	Last Day of Class Final Exam	Dec.11 W December 12 1:00-4:00 Airhart	

Requirements:

- All students registered in CHE 251 are expected to take the *WHMIS 2015* quiz and pass with a percentage of at least 80 before engaging in lab activities. You are permitted to re-take the quiz this as many times as necessary. Students have not passed a version of this quiz by the time of their first lab will not be allowed to partake in the lab activity and will take a zero for anything from that lab that is marked. Students need to complete the quiz by Friday, September 7. Here is the link to the Moodle site; https://moodle.ambrose.edu/course/view.php?id=2576

- Labs and tutorials are mandatory. You must provide a doctor's note, if you need to miss one for health reasons.

- Complete the Pre-lab quizzes and hand it in to the Lab Instructor before start of each lab.

- Students must wear appropriate laboratory attire to perform experiments in the lab reasons.

- Maintain a lab notebook and record everything in your notebook. Attach the pages to worksheets and reports for grading.

- Among the five labs, three will be worksheets and two will be formal lab reports. Worksheets are due at the end of the lab. Formal lab reports are due next week at the beginning of the tutorial. You must include an experimental section when writing the formal lab report.

- The grade for each experiment will be based on your pre-laboratory assignment, maintaining a lab notebook, your performance in the laboratory, and the required experimental report.

- Students work in groups for the tutorial and at the end of every tutorial there will be an individual quiz. Questions for the quiz can be similar to the tutorial or from the lecture notes.

- There are five assignments in this course. Assignments will be posted when new topic starts. Students are expected work on it as you the chapter progresses. You will lose 10% day for late submission; no submission after 5 days including weekends.

- Final exam is cumulative. During exams and course work students are allowed to use only non-programmable calculators. You are not allowed to use phone as your calculator.
- Class participation is extremely important to your learning in this course. If you miss any class please make sure to complete the notes from your peers.

- A mark of less than 50% in the laboratory component and submission of fewer than three laboratory experiments will result in a final grade of no greater than D. A grade of D does not satisfy the pre-requisite requirements for further chemistry courses or admission to programs in Biology.

- Arrive to lecture, lab and tutorial on time; you will not be permitted in the lab if you miss the pre-lab talk

In respect to the professor and to your fellow students, we ask that you:

a) Turn your phone off during class and that you don't use it for texting during lecture or lab;

b) Not have conversations with the people beside you during lecture – it is very distracting to the people around you;

c) Use your laptops for lecture material and assignments only – that you are not using the internet or Facebook during class time;

e) Don't listen to music in class or lab. These will help to maximize the learning experience for you and your fellow students (and will keep your professor in a good mood).

Grade Summary:

The available letters for course grades are as follows:

Letter Grade	Description
A+	
A	Excellent
A-	
B+	
B	Good
B-	
C+	
C	Satisfactory
C-	
D+	
D	Minimal Pass
F	Failure

In determining the overall grade in the course the following weights will be used:

Laboratory Experiments	25%
Tutorial Quizzes	10%

Term Test I	15%
Term Test II	15%
Assignments	5%
Final Examination	30%

Grading Scale:

A+	A	A-	B+	B	B-
95% - 100%	**87% - 94.99%**	**82% - 86.99%**	**77% - 81.99%**	**72% -76.99%**	**66% - 71.99%**

C+	C	C-	D+	D	F
62% - 65.99%	**58% - 61.99%**	**54% - 57.99%**	**50% - 53.99%**	**45% - 49.99%**	**< 44.99%**

Ambrose Tutoring Services

To help you succeed in this course, Ambrose offers **FREE** tutoring! You can meet with an experienced peer tutor—someone who has already taken and excelled in this course—for help with understanding and applying concepts. To book an appointment, visit https://ambrose.edu/tutoring, and click on the appropriate discipline. Scroll down to find tutors that are eligible to tutor for this course, and then click on "Book Now." Please book at least 24 hours in advance.

For science courses, Ambrose Tutoring Services also offers drop-in study sessions, where students can come by, individually or in groups, to ask questions or work with a tutor. Check out the schedule at https://ambrose.edu/tutoring, under the "Science" tab.

Ambrose Writing Centre

To demonstrate your knowledge of our course content, you will need to communicate clearly and persuasively. For help with doing research, understanding your textbooks, or writing papers and presentations, I would encourage you to visit the Ambrose Writing Centre (https://ambrose.edu/writingcentre). Writing Centre tutors can help at any stage of an assignment, whether you're brainstorming ideas or polishing your grammar. To be sure you'll get a spot, you can book an appointment online at least 24 hours in advance. If you do not have an appointment, don't worry: you can also drop by during regular writing centre hours.

Also, watch for workshops on research and communication throughout the year. All writing centre services are **FREE** to Ambrose students, so please take advantage of them!

Because of the nature of the Alpha 4.00 system, there can be no uniform College-wide conversion scale. The relationship between raw scores (e.g. percentages) and the resultant letter grade will depend on the nature of the course and the instructor's assessment of the level of each class, compared to similar classes taught previously. Please note that final grades will be available on student registration system. Printed grade sheets are not mailed out.

Academic Accommodation:

Ambrose University is committed to ensuring that each student is afforded an academic environment that has been developed on the principles of equal and equitable access, respect for individual differences, and academic integrity. Accessibility and Support Services offers services to students with documented disabilities including learning disabilities, chronic health issues, hearing and visual impairment, disabilities and temporary impairment due to accident, illness or injury. It is the student's responsibility to contact the Accessibility and Support Services office to request academic accommodation. The nature and type of academic accommodations vary from student to student and are dependent upon the student's disability and the academic requirements.

If you are a student with a documented disability who may require academic accommodation and have not registered with Student Accessibility and Support Services, please contact their office at accessibility@ambrose.edu or (403) 410-2000 ext. 2956. Students who have not registered with Student Accessibility Services are not eligible for formal academic accommodation. For additional information on support services and accommodations for students with disabilities, visit: https://ambrose.edu/student_life/accessibility-and-support-services

Ambrose University Academic Policies:

Communication
All students have received an Ambrose e-mail account upon registration. It is the student's responsibility to check this account regularly as the Ambrose email system will be the professor's instrument for notifying students of important matters (cancelled class sessions, extensions, requested appointments, etc.) between class sessions. If students do not wish to use their Ambrose accounts, they will need to forward all messages from the Ambrose account to another personal account.

Registration
During the **Registration Revision Period** students may enter a course without permission, change the designation of any class from credit to audit and /or voluntary withdraw from a course without financial or academic penalty or record. Courses should be added or dropped on the student portal by the deadline date; please consult the List of Important Dates. After that date, the original status remains and the student is responsible for related fees.
Students intending to withdraw from a course after the Registration Revision Period must apply to the Office of the Registrar by submitting a "Request to Withdraw from a Course" form or by sending an email to the Registrar's Office by the **Withdrawal Deadline;** please consult the List of Important Dates on the my.ambrose.edu website. Students will not receive a tuition refund for courses from which they withdraw after the Registration Revision period. A grade of "W" will appear on their transcript.

Students wishing to withdraw from a course, but who fail to do so by the applicable date, will receive the grade earned in accordance with the course syllabus. A student obliged to withdraw from a course after the Withdrawal Deadline because of health or other reasons may apply to the Registrar for special consideration.

Exam Scheduling
Students, who find a conflict in their exam schedule must submit a Revised Examination Request form to the Registrar's Office by the deadline date; please consult the List of Important Dates. Requests will be considered for the following reasons only: 1) the scheduled final examination slot conflicts with another exam; 2) the student has three final exams within three consecutive exam time blocks; 3) the scheduled final exam slot conflicts with an exam at another institution; 4) extenuating circumstances. Travel is not considered a valid excuse for re-scheduling or missing a final exam.

Electronic Etiquette
Students are expected to treat their instructor, guest speakers, and fellow students with respect. It is disruptive to the learning goals of a course or seminar and disrespectful to fellow students and the instructor to use electronics for purposes unrelated to the course

during a class session. Turn off all cell phones and other electronic devices during class. Laptops should be used for class-related purposes only. Do not use iPods, MP3 players, or headphones. Do not text, read, or send personal emails, go on Facebook or other social networks, search the internet, or play computer games during class. Some professors will not allow the use of any electronic devises in class. The professor has the right to disallow the student to use a laptop in future lectures and/or to ask a student to withdraw from the session if s/he does not comply with this policy. Repeat offenders will be directed to the Dean. If you are expecting communication due to an emergency, please speak with the professor before the class begins.

Academic Policies

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Academic Calendar. Personal information (information about an individual that may be used to identify that individual) may be required as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at privacy@ambrose.edu.

Extensions

Although extensions to coursework in the semester are at the discretion of the instructor, students may not turn in coursework for evaluation after the last day of the scheduled final examination period unless they have received permission for a course Extension from the Registrar's Office. Requests for course extensions or alternative examination time must be submitted to the Registrar's Office by the deadline date; please consult the List of Important Dates. Course extensions are only granted for serious issues that arise "due to circumstances beyond the student's control."

Appeal of Grade

An appeal for change of grade on any course work must be made to the course instructor within one week of receiving notification of the grade. An appeal for change of final grade must be submitted to the Registrar's Office in writing and providing the basis for appeal within 30 days of receiving notification of the final grade, providing the basis for appeal. A review fee of $50.00 must accompany the appeal. If the appeal is sustained, the fee will be refunded.

Academic Integrity

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. Plagiarism involves presenting someone else's ideas, words, or work as one's own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to acknowledge to another person's ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from the university. Students are expected to be familiar with the policies in the current Academic Calendar that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are reported to the Academic Dean and become part of the student's permanent record.

Note: Students are strongly advised to retain this syllabus for their records.