

**Environmental Chemistry and Sustainability Studies**
**3 credits**
**Prerequisite: CHE 101 and CHE 103**

Class Information		Instructor Information		First day of classes:	Wed., Sept. 6
Days	F 2:30-5:30	Lecture Instructor	Dr. Liza Abraham	Last day to add/drop, or change to audit:	Sun, Sept. 17
Time:		Email	<a href="mailto:lbraham@ambrose.edu">lbraham@ambrose.edu</a>	Last day to request revised exam:	Mon., Oct. 23
Room:	A2212	Phone:	403-410-2000 ext.6921	Last day to withdraw from course:	Mon. Nov.13
		Office:	A2160	Last day to apply for time extension for coursework:	Mon.,Nov.20
<b>FINAL EXAM:</b> W December 13 (1:00-4:00) Airhart		Office Hrs.:	W/F: 9:00-10:00; 1:00-2:00 M: 9:00-2:00 T/R:9:00-11:00	Last day of classes:	Mon. Dec 11,
<b>Textbook: No prescribed textbook. Relevant materials will be posted on Moodle.</b>					

## Assessments

**In-Class Activities/Class Participation: 20%**
**I @ Home Project: 30%**
**TERM TEST : 20%**
**FINAL EXAM:30%**
**Final Exam will be cumulative.**

**Literature Review and Discussion:** There will be a substantial amount of literature reading throughout the course. Your research findings will be presented to the whole class for further discussion. There will be case studies on major environmental issues and further discussions in class.

**In-Class Activities** are a major component of this course. It is designed to help you learn, understand and practice the material. Every in-class activity will be followed by a questionnaire for you to hand-in for grading. Many of the concepts that you are learning will be tested by in-class activities, followed by group discussions, which will account for 20% of the course mark. Examples of in-class activities are:

- Harmful Algal Blooms
- Bioremediation
- Fluoride Controversy
- Mercury Toxicity in Daily Life
- Glyphosate (Roundup)
- River Ganges pollution
- Sunscreen controversies
- Tobacco Carcinogenesis
- Oil Sands of Alberta

### **I @ Home Project with India:**

There will be an International component to this course.

Participating in the I@ home project will increase your

- knowledge of global issues related to environmental chemistry
- awareness of current research and trends in the subject area
- understanding of how the academic field is viewed and practiced in different cultural contexts
- understanding of other cultures/languages/ beliefs, values, perspectives, and practices
- skills in working with people from other cultures, acceptance of cultural differences, willingness to learn from people of other cultures

#### (a) Live classrooms lectures

Water Pollution in Kerala  
Water Treatment Methods and Technologies  
Current Research in Water Treatment

#### (b) Assignments

Water Quality in Kerala  
Arsenic Toxicology  
Endosulfan in Kerala  
Plastic Waste Management in India  
Solar Power in India

#### (c) Class Projects

Water Purification Kit  
Development of a Biodegradable Plastic

**Attendance:**

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.

**Grade Summary:**

The available letters for course grades are as follows:

<u>Letter Grade</u>	<u>Description</u>
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:

**Grading Scale:**

<b>A+</b>	<b>A</b>	<b>A-</b>	<b>B+</b>	<b>B</b>	<b>B-</b>
<b>95% - 100%</b>	<b>87% - 94.99%</b>	<b>82% - 86.99%</b>	<b>77% - 81.99%</b>	<b>72% -76.99%</b>	<b>66% - 71.99%</b>
<b>C+</b>	<b>C</b>	<b>C-</b>	<b>D+</b>	<b>D</b>	<b>F</b>
<b>62% - 65.99%</b>	<b>58% - 61.99%</b>	<b>54% - 57.99%</b>	<b>50% - 53.99%</b>	<b>45% - 49.99%</b>	<b>&lt; 44.99%</b>

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](mailto: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](https://ambrose.edu/student_life/accessibility-and-support-services)

## **Topics to be covered**

### **Environmental Aquatic Chemistry**

- Chemistry of Water Pollution
- Chemistry of Water Treatment and Technologies
- Current Research in Water purification

### **Environmental Microbial Chemistry**

- Aquatic microbial Chemistry
- Bioremediation

### **Environmental Health and Toxicology**

- Radiation and Chemicals as Mutagens
- Persistent Organic Pollutants
- Endocrine Disruptors

### **Pollution and Waste Management**

- Plastics
- Ozone Pollution

### **Energy**

- Renewable and Non-Renewable
- Current Research in Solar Power and Biofuels

### **Sustainability**

- Principles of Green Chemistry
- Student Projects

### 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.

### Exam Scheduling

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.

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 devices 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](mailto: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 college. 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.



