

<b>Course ID:</b>	<b>Course Title:</b>	<b>Spring 2021</b>
SC 250	Science and Society	<b>Prerequisite: None</b>
		<b>Credits: 3</b>

Class Information		Instructor Information		Important Dates	
<b>Days:</b>	M-F	<b>Instructor:</b>	Liza Abraham PhD	<b>First day of classes:</b>	May 17
<b>Time:</b>	May 17-21 May 25-29 9:00-12:30	<b>Email:</b>	<a href="mailto:labraham@ambrose.edu">labraham@ambrose.edu</a>	<b>Last day to add/drop, or change to audit:</b>	
<b>Room:</b>	On-line	<b>Phone:</b>	403-410-2000 ext.6921	<b>Last day to request revised exam:</b>	
<b>Office:</b>	A2160	<b>Last day to withdraw from course:</b>			
<b>Office Hours:</b>	Open Door Policy	<b>Last day to apply for coursework extension:</b>			
<b>Final Exam:</b>				<b>Last day of classes:</b>	May 29

### Course Description

An interactive science course for non-science majors, where students are introduced to topics from a range of disciplines. Within each discipline, real-world examples are used to highlight the application of science in daily life. Instruction will consist of lecture, in-class group work, and hands-on experimental activities.

### Expected Learning Outcomes

Learning Outcomes:

By the end of this course, students will be able to:

- Describe the science behind natural disasters
- Describe the importance of renewable and non-renewable energy
- Recognize emerging infectious diseases
- Understands the nature of radiations
- Understand controversies in science

### Textbooks

There will not be any prescribed textbook for this course. The assigned reading and watching videos will be made available on Moodle.

Course Schedule: (**Tentative** Lecture Schedule)

Date	Lecture	These due dates are tentative
May 17-19	<p><b>Natural Disasters</b></p> <p>Layers of Earth</p> <p>Seismic Waves and Structure of the Earth Theory of Plate tectonics</p> <p>Pate boundaries</p> <p>Seismogram</p> <p>Epicenter</p> <p>Richter scale</p> <p>Impacts of Earth Quakes</p> <p>Volcanism on subduction zones</p> <p>Hot spot volcanism</p> <p>Volcanic hazards</p>	<p>Watch the following videos outside of the classroom</p> <p>How the Earth Was Made: Ring of Fire?</p> <p>How the Earth was Made: Iceland?</p> <p>How the Earth was Made: Hawaii?</p> <p><b>Assignment 1: An in-depth study of one of the major earthquakes.</b></p> <p><i>Due June 4</i></p> <p>Quiz 1 (during class time)</p>
May 20-21	<p>Emerging Infectious Diseases</p> <p>Zoonosis</p> <p>Epidemic &amp; Pandemic</p> <p>Examples-Chikungunya, Zika, Ebola, MERS, Influenza, Shift and Drift, Swine flu, HIV/AIDS, COVID-19, Variants</p> <p>Vaccines and Vaccination</p> <p>Herd Immunity</p> <p>Misconceptions on vaccination, Eradication-Smallpox &amp; Polio</p> <p>Antibiotic Resistance-a global concern</p> <p>Alternatives to Antibiotics and growth promoters</p> <p>Beneficial Bacteria- Probiotics &amp; Fermented Foods.</p>	<p>Watch the following videos outside of the classroom</p> <p>Smallpox eradication: TED talk video</p> <p><a href="http://www.ted.com/talks/larry_brilliant_wants_to_stop_pandemics?language=en">http://www.ted.com/talks/larry_brilliant_wants_to_stop_pandemics?language=en</a></p> <p>Superbugs in the Supermarket: CBC News (<a href="https://www.youtube.com/watch?v=otEA1Ph1UCA">https://www.youtube.com/watch?v=otEA1Ph1UCA</a>)</p> <p><b>In-Class Activities</b></p> <p><i>Science behind Probiotics, Probiotics, Kombucha, Kimchi, &amp; Kefir</i></p> <p><i>Antibiotic Resistance: Based on your research, write an evidence-based paragraph to the chicken farmers of Alberta about how they can use other alternatives to fight infections and promote growth. If possible, provide a recipe.</i></p> <p>Quiz 2 (during class time)</p>
May 24-25	<p>Renewable and Non-Renewable energies</p> <p>Nuclear Power</p> <p>Coal</p> <p>Solar</p>	<p><b>Assignment 2: An in-depth study of one of the renewable energies.</b></p> <p>Due: June 10</p> <p>Quiz 3 (during class time)</p>

	Geothermal Wind Biomass Hydro	
May 26-28	Controversies in Science Genetically Modified Organism Bible and Science	Assignment3: Essay on GMO Due: June 15 Assignment 4: Essay on the Bible and Science Due: June 20
May 29	Radiations Ionizing Radiations Cosmic radiation Radon Gas, Nuclear Disasters Alpha, beta and gamma radiations C-14 dating, UV radiation Sunscreen	Quiz 4 (during class time)

### 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:

Assignment 1	15%
Assignment 2	15%
Assignment 3	15%
Assignment 4	15%
Quiz Radiations	10%
Quiz Natural Disasters	10%
Quiz Infectious Diseases	10%
Quiz Renewable Energy	10%

**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](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)

## 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 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. 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.