University of Toronto-Scarborough
Department of Physical and Environmental Sciences
EESB19H3 Mineralogy - Winter 2019-2020

Instructor:	David Summer, ES 4095, email: david.summer@mail.utoronto.ca
	Office hours: Monday, 12 pm ς 1pm, and by appointment
Teaching Assistant:	Adriano Roberto, email: adriano.roberto@mail.utoronto.ca
Lectures:	Monday, 1 pm ς 3 pm (virtual; if in person, room IC 120)
Labs:	Monday: 3 pm ς 5 pm (virtual; if in person, room EV224, EV222)

Overview:

In this course you will learn about minerals, the smallest and most basic building blocks of our planet. These minerals, which can vary in specimen size from microscopic to a macroscopic scale of meters, form aggregates (rocks), fill cavities and caves, form natural resources (e.g. gold, iron-minerals, rock salt), and are often used in our daily life, for example in form of specifically developed concrete mixtures, without being recognized as such. This course will help you to better understand mineral growth, their distinct structure and chemical composition, how they associate with one another, how minerals aggregate to form rocks and what applications minerals are used for.

We will start with an introduction to the study of crystallography, as it is an important tool of Earth and material sciences. This will include the delineation of specific crystal symmetries and morphologies, as well as basic classification of minerals by crystal classes. Furthermore, we will study the mineralogy, including physical and chemical properties, of the most important mineral groups, in which mineral assemblages they occur in form of rocks, and how these are used in our daily life.

Furthermore, we will practice 3D visualization and spatial skills needed in all geology-related disciplines in form of in-class exercises and laboratory exercises.

Communication:

Please use your UofT e-mail address for all communications.

Lecture & lab material will be posted on Quercus. Quizzes and all lab and exam submissions will be through Quercus. Course announcements will also be posted on Quercus. Please check daily for updates.

Online lectures and labs will be held on the Zoom platform. Please use the UofT Zoom portal to join all online lectures and lab sessions. The details to join Zoom sessions will be provided on the course Quercus page. Should lectures and labs return to in-person sessions, the details of the transition will be announced as soon as possible.

Should in-person activities resume, please refer to the Covid-19 Information for UofT Students webpage for the most up-to-date information and resources regarding Covid-19 mitigation policies.

A Discord Server is set up for this course. Please post any questions relat

Readings:

Earth Materials ς Introduction to Mineralogy and Petrology, C. Klein & A. Philpotts, 2013, Cambridge Univ. Press (course reserve)
The Manual of Mineral Science, 23rd Edition, John Wiley & Sons Inc.

cumulative but will be heavily weighted towards material covered following the previous Term Test. Figures, movies, and animations are examinable, as are in-class participation/lab type exercises. The exam will be available on Quercus for a 72 hour period. Multiple choice and true-or-false questions will be through Quercus and will have time limitations. Note: Written answers for exams must be limited to the space provided. Written answers extending beyond the space provided will not be graded. Short and long answer portions of the exam must be submitted in a DOC or PDF format. Exams will be filtered through a plagiarism detection program, Ouriginal. Hand-written answers will not be accepted and will receive a grade of zero. Late Submissions will not be accepted.

Additional information about the exam will be provided ahead of time (including exact deadline, what resources may be used, how these resources must be cited, and what kind of consultation/collaboration with other students is permitted). Note that although this exam is open-book (i.e., you will have access to

accepted. If you know that you will miss an assignment deadline then please let me know in advance, as we might be able to work something out. Should you miss a deadline for any term work, other than the midterm and final exams, you will be automatically penalized 5% *per day* (including weekends).

Missed labs or other deadlines will only be excused for cases in which the absence was entirely beyond the student's control (e.g., medical reasons, personal affliction). To request an exemption for a missed lab or deadline, you must register your petition *by clicking on this link.* We reserve the right to request supporting documentation such as a doctor's note. All requests for consideration must be received no later than 5 business days after the exam/assignment (the University is open during Reading Week). If your petition is accepted you will be pro-rated on the missed assignment/test (i.e., you will be given a mark

Library Service:

Research Help: University of Toronto Scarborough Library
Staff at the UTSC Library will be happy to help you find the resources you need for your assignments, and learn the research skills you will need for success at university.
Research help is available by phone, e-mail, chat, or in-person in the Library.
For more information, please see the Library's Help Guide for UTSC Students: http://guides.library.utoronto.ca/utsc_help
Need in-depth or department specific assistance? Contact Sarah Forbes, Liaison Librarian for Physical and Environmental Sciences: http://uoft.me/smforbes

Accessibility Needs:

The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible: UTSC campus AccessAbility http://www.utsc.utoronto.ca/~ability/ or St. George Campus Dis disability.services@utoronto.ca or http://studentlife.utoronto.ca/accessibility. The University reserves the right to change any aspect of this course outline.