

ERTH 5202A  
Volcanology And Igneous Petrology  
Winter 2019

Instructor: Brian Cousens

This graduate level, seminar-style course will emphasize the processes by which igneous rocks form. We will discuss how the mode of emplacement and the chemistry of igneous rocks depends on the composition of the source material that is melting, and how this primary melt composition can change as a result of the many processes that occur after this melt separates from its source and ascends through the Earth's mantle and/or crust. We will also further investigate the links between igneous rocks and tectonic setting. The seminar style allows the students to determine much of the course content depending on interest. An emphasis is placed on oral and written communication in igneous petrology, and students will have several opportunities to design teaching material to be used in the course. Weekly assignments will include critical reading of research journal articles and handling of geochemical data.

Questions that igneous rocks can answer:

1. Was a silicate melt involved?
2. What was the composition (or compositions) of the melt?
3. Where and by what process(es) did the melt originate?
4. How did the magma(s) reach their present site?
5. What chemical fractionation processes occurred?
6. What were the thermal histories for steps #3, #4 and #5?

Seminars: Tuesday 11:35AM-2:25PM, HP 3120

<u>Grading Scheme</u> :	Seminar presentations (2)	35%
	Weekly Assignments	15%
	Term Project	30%
	Term Paper	20%

Textbook: None assigned, but chapters from three books will be recommended for particular subjects. These books will be available for **short-term** borrowing in HP 2259.  
Assigned readings will be linked on cuLearn.

Office Hours: Whenever my office door is open or by appointment.

How to get in touch: Office: HP 2259  
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e-mail: [brian.cousens@carleton.ca](mailto:brian.cousens@carleton.ca)

## STUDENT ACCOMMODATIONS

### **Examinations and Assignments**

In the case of a less serious illness (cold, flu), I require a medical note within one week after the exam date in order for the due date for any assignment to be modified. In the case of a serious illness, see <http://carleton.ca/registrar/special-requests/deferral/> for the rules concerning deferral of an assignment, and contact me as soon as possible.

### **Requests for Academic Accommodation**

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

#### **Pregnancy obligation**

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: [carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf](http://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf)

#### **Religious obligation**

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: [carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf](http://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf)

#### **Academic Accommodations for Students with Disabilities**

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or [pmc@carleton.ca](mailto:pmc@carleton.ca) for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. [carleton.ca/pmc](http://carleton.ca/pmc)

#### **Survivors of Sexual Violence**

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and is survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: [carleton.ca/sexual-violence-support](http://carleton.ca/sexual-violence-support)

#### **Accommodation for Student Activities**

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

For more information on academic accommodation, please contact the departmental administrator or visit: [students.carleton.ca/course-outline](http://students.carleton.ca/course-outline)

## Medical Certificates

Please note, that in this course, on all occasions that call for a medical certificate you must use (or furnish the information demanded in): [http://carleton.ca/registrar/wp-content/uploads/med\\_cert.pdf](http://carleton.ca/registrar/wp-content/uploads/med_cert.pdf)

## PLAGIARISM

The University's Senate defines plagiarism in the regulations on instructional offences as: "to use and pass off as one's own idea or product work of another without expressly giving credit to another". ***This includes copying of material from websites or other publications that is incorporated into assignments, reports, or other submissions for grading.*** Borrowing someone else's answers, unauthorized possession of tests or answers to tests, or possession of material designed in answering exam questions, are all subject to university policy regarding instructional offences.

For this course (and all other courses at Carleton), it is extremely important to understand that you cannot copy and paste material from websites or publications into assignments. This is plagiarism, and it is easy to spot during grading. When formulating an answer to an assignment question, be sure to reword the material from websites or publications into your own words, then type that into your assignment. Identification of copied material in an assignment answer will result in an automatic zero points for that section of an assignment.

I encourage students to work together on assignments. HOWEVER, each student must submit answers to questions in *their own words*, not the words used by another student that you are working with. *Be sure that you and your co-worker word your submitted answers differently.* If the answers submitted by one student for an assignment are identical to those submitted by another student, both students will be assigned a grade of zero for the question.

Details regarding the Carleton University Academic Integrity policy can be found at: <http://carleton.ca/senate/wp-content/uploads/Academic-Integrity-Policy1.pdf>