

# EOS 201: SEDIMENTARY GEOLOGY

Spring 2017

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<b>Instructor:</b>	Ben Johnson	<b>Time:</b>	M Th 1130–1250
<b>Email:</b>	<a href="mailto:bwjohnso@uvic.ca">bwjohnso@uvic.ca</a>	<b>Place:</b>	MAC D110
<b>Lab:</b>	TWTh 1430-1720	<b>Lab place:</b>	BWC B119

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**Office Hours:** Tuesday 1345–1445 and Thursday 2–3, with other times available by appointment (make in person in class) in Bob Wright A321.

**Prerequisites:** EOS 120 and EOS 205 If you do not have these, come and see me right away!

**Lab attendance:** The lab portion of this course is very important! Attendance is mandatory, and this is where you actually learn what a rock looks and feels like. Make sure you buy the lab manual from the bookstore.

**Reading:** Please read the material before coming to class. Believe me, this book is your friend! Also, feel free to seek out additional resources (books, journal articles, asking each other questions, lab instructors, the lab manual is great) to supplement the reading and my lecture material.

- Sedimentary Geology: An Introduction to Sedimentary Rocks and Stratigraphy, 3rd edition by Donald Prothero, Fred Schwab
- BONUS READING: The Biosphere, Vladimir Verdansky. Book by a mad Ukrainian geologist about how the crust and life link together
- Theory of the Earth: James Hutton. The book that started it all. Wonder who began to figure out that the Earth was really old? And that you can use sedimentary processes to figure out what was happening back then? There is a free Kindle version available.

**Objectives:** The objectives of this course are to introduce you to the field of sedimentary geology and how we can use sedimentary rocks as a record of Earth system processes, both those that occur inorganically and those which are mediated by life. At the end of this class and lab, you will be able to identify the major types of sedimentary rocks, a variety of sedimentary structures, and interpret changes in environments through time and space.

**Course Outline and Schedule:**

<b>Date</b>	<b>Lecture topics</b>	<b>Reading</b>
Jan. 5	Introduction and rock touching	
Jan. 9–12	Sedimentary approaches, weathering, paleosols, processes I	Chap 1-2
Jan 16–19	Sedimentary processes II	Chap 3-4
<b>Jan 23-26 Roundup</b>	No class Mon.	Chap 5-6
Jan. 30–Feb 2	Depositional Environments I	Chap 7
Feb. 6–9	Depositional Environments II	Chap 8-10
<b>Feb 13-17 Reading Week</b>		
Feb. 20–23	Sequence stratigraphy	Library assignment
Feb. 27–March 2	Tidal straits and Review	
March 6–9	<b>Midterm</b> and Vancouver Island History	Field trip guide
March 13–16	Carbonates and Stratigraphy	Chaps. 12, 15
March 20–23	Geochronology	Chap 16-17
March 27–30	Tectonics	Chap 18-19
<b>Apr 3 Last day of Classes</b>	Review	

**Mark breakdown:** The lecture is worth 60% of your overall mark, while the lab is worth 40%. Your lecture component mark breaks down as such: weekly reading quizzes (10%), Weekly “surveys” (10%), Monthly writing (30%), Midterm (20%), Final (30%).

And following UVic’s standard mark scheme, overall marks are:

A+	> 90%	A	85 – 89%	A-	80 – 84%
B+	77 – 79%	B	73 – 76%	B-	70 – 72%
C+	65 – 69%	C	60 – 64%	D	50 – 59%
F	< 50%				

**Important Dates:**

Writing #1 due .....	Jan 30, 2017
Writing #2 due .....	March 2, 2017
Midterm .....	March 6, 2017
Field Trip .....	March 11, 2017
Writing #3 due .....	April 3, 2017
Final .....	<b>April 10, 14:00, CLE A127</b>

**Assignment description:**

There will be three types of assessments in this course in addition to the midterm and final exams.

1. Weekly reading quizzes: each Thursday, there will be a short ( $5 \pm 3$  questions) quiz on the reading at the beginning of class. These will cover the main points of the reading and either be multiple choice or one-ish word answer
2. Weekly “surveys”: each week I will ask you to write a one sentence answer to the following questions:
  - (a) What was your favourite sedimentary item this week?
  - (b) What was the thing you had the hardest time with this week?

Surveys will be completed on CourseSpaces, due by 11PM every Sunday (i.e., so Ben can look at them Monday morning before class). You’ll get credit for completing these honestly!

3. Monthly writing: these three assignments will be  $\sim 1 - 2$  page writing assignments on an aspect of sedimentary geology. The goal is to get some practice writing science in manageable doses. They will be due on the last Monday of each month (Jan. 30, Feb. 27, March 27). I will post the topic at least 2 weeks before the due date. Each writing assignment **MUST** include **one figure AND at least one peer-reviewed citation**. Ask me if you need help with this.

**Honesty Policy:** You are encouraged to work with each other, but any and all assignments, written assessments, exam answers must be your own. Do not plagiarize from the literature or from each other. Please see me if you’d like clarification on how to properly cite other’s work. Refer to the UVic calendar for a more detailed description of plagiarism policy.