

## EARTH SCIENCES 3314B SEDIMENTARY PETROLOGY

**1) Description:** Identification and description of various types of siliciclastic and carbonate rocks; sedimentary textures and geochemical composition; sedimentary structures and depositional environments; diagenetic and weathering processes that alter original properties of primary sediments.

**Prerequisites:** Earth Sciences 2200a/b, Earth Sciences 2206a/b

**Statement on Requisites:** Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

**2) Instructor:** Dr. P.L. Corcoran; BGS 0164; Email: [pcorcor@uwo.ca](mailto:pcorcor@uwo.ca)

**Lecture Schedule:** 11:30-12:30 Monday and Wednesday B&GS 0165; laboratory Monday 6:00-9:00 BGS 1065; Wednesday 2:30-5:30 BGS 1065

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### 3) COURSE SYLLABUS

#### LECTURES

##### Topics

Introduction to sedimentary rocks

Siliciclastic rocks: textures, fluid flow, sedimentary structures

Siliciclastic rocks: classification, provenance, tectonic setting, depositional environments, chemical weathering, diagenesis

Carbonate rocks: composition and classification, depositional environments, diagenesis

Evaporites, sulphates, BIF, chert, Earth's atmosphere and sedimentary deposits, mineral deposits and sedimentary rocks

#### LABORATORY (One session = 3 hours)

##### Sessions

4

Composition and classification of siliciclastic rocks

4

Composition and classification of carbonate rocks

2

Composition and classification of other sedimentary rocks

2

Oral presentations

#### 4) COURSE MATERIALS

Any sedimentology textbook can be used as a resource, but none are required.

#### 5) METHODS OF EVALUATION

Mid-term exam 1 hour (February 26th): 15%

Final exam 2 hours (date TBA): 35%

Quizzes: 10%

Oral presentation (March 24<sup>th</sup>, March 26<sup>th</sup>): 15%

Lab assignments: 25%

**6) ATTENTION:** All lab assignments must be completed during each laboratory session.

One lab assignment may be missed during the term, or the student may opt to remove their lowest lab assignment score from the total at the end of term. One quiz may be missed during the term, or the student may opt to remove their lowest quiz score from the total at the end of term.

**7) Scholastic offences** are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: <http://www.uwo.ca/univsec/handbook/appeals/scholoff.pdf>.

**8) Plagiarism** is a serious academic offence. The UWO Senate Academic Handbook defines plagiarism as "The act of appropriating the literary composition of another, or parts or passages of his writings, or the ideas or language of the same, and passing them off as the product of one's own mind." Students must write their assignments in their own words. Whenever students take an idea, or a passage from another author, they must acknowledge their debt both by using proper referencing such as citations. For more information see Scholastic Offence Policy in the Western Academic Calendar.

**9)** If you are unable to meet a course requirement due to **illness** or other serious circumstances, you must provide valid medical or other supporting documentation to the Dean's office as soon as possible and contact your instructor immediately. It is the student's responsibility to make alternative arrangements with their instructor once the accommodation has been approved and the instructor has been informed. In the event of a missed final exam, a "Recommendation of Special Examination" form must be obtained from the Dean's Office immediately. For further information please see: <http://www.uwo.ca/univsec/handbook/appeals/medical.pdf>

A student requiring academic accommodation due to illness, should use the Student Medical Certificate when visiting an off-campus medical facility or request a Records Release Form (located in the Dean's Office) for visits to Student Health Services. The form can be found here: [https://studentservices.uwo.ca/secure/medical\\_document.pdf](https://studentservices.uwo.ca/secure/medical_document.pdf)

#### **10) Accessibility Statement**

Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 x.82147 for any specific question regarding an accommodation.