

EASC 302 - 3 Sedimentary Petrology

Section: D100 - 2012 Spring

Instructor: Kevin Gillen

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Description Topic:

General:

EASC 302 is a course that concentrates on the composition, texture, diagenesis and depositional origin (petrology) of sedimentary rocks. It has as prerequisites: Sedimentation and Stratigraphy (EASC 201), Introduction to Petrology (EASC 205) and Statistics (STAT 101). The course outlines the various classification schemes for siliciclastic and carbonate rocks, microscopic/optical techniques for their study, and develops theories of sedimentary rock formation and diagenetic modification.

Course Topics:

Quick, general review of the depositional environments of siliciclastic, chemical and organic rocks.

The study of siliciclastic rocks, including compositional and textural classification systems, diagenesis, optical analysis of common clastic rock suites in thin section, and field identification.

The study of chemically precipitated (limestone, dolostone and evaporite) rocks, including compositional and textural classification systems, diagenesis, optical analysis of carbonate rock suites in thin section, and field identification.

The study of organic rocks (coal) (time permitting).

Course Organization:

Two 1-hour lecture classes and One 3-hour laboratory class per week.

Grading:

Written Laboratory Assignments: 15%

Mid-Term Theory Exam: 15%

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Final Laboratory Exam: 15%

Final Theory Exam: 40%

Required Text:

Tucker, M.E., 2001. Sedimentary Petrology (Third Edition). Blackwell Science Ltd., UK. ISBN 978-0-632-05735-1

Recommended Text:

None.

Material List:

None.

Prerequisite/Corequisite:

STAT 101 or STAT 201, EASC 201 and 205.

Notes: