SYLLABUS: SOLID EARTH PROCESSES
GEOL 725, Spring 2014
Lecture: Tue-Th: 10:05-11:20 in EWS 604
Recitation Section: To Be Arranged

Instructors
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Course Description:
Solid Earth Processes is a four-credit course that focuses on the structure and dynamics of the earth’s interior and the lithospheric cycle. It is primarily intended for graduate students in the earth, ocean and environmental sciences. The course prerequisite is graduate standing.

Learning Outcomes:
The overall goal of this course is to provide the students with an understanding of the processes occurring within the Earth and the observable effects of these processes, and the skills necessary to evaluate the complex feedbacks that control these processes. The measureable learning outcomes will be:
- Students will analyze seismic wave records and gravity data to model the physical structure of the Earth’s interior
- Students will learn to interpret geochemical data in the context of igneous processes
- Students will be able to calculate elastic flexure of lithosphere
- Students will be able to explain the current models formation of continental crust

Grading:
Students will be evaluated on recitation exercises and two take-home examinations. The examinations and exercises will be scored using a scoring key as percentage of possible points earned. Grades will be assigned using the following weights:
Each Exam 30% (for a total of 60%)
Exercises 40%

Required Reading:
No required textbook. Required reading material will consist of a mixture of scientific reports, published journal articles, and monograph excerpts, and will be distributed in class or via Blackboard. Students are encouraged to consider the purchase of optional textbooks relevant to the topics of this class, including Fowler (The Solid Earth, Cambridge University Press) and Philpotts & Ague (Principles of Igneous and Metamorphic Petrology, Cambridge University Press, 2nd Edition).

Course Policies:
One week is allowed to complete assignments unless otherwise specified. A penalty of 5% per day for late assignments will be applied. Attendance is required, and students with unexcused absences for more than 10% of course meetings may face a 5% grade reduction penalty. Any student with a documented disability should arrange for appropriate accommodations with the USC Office of Student Disability Services.