This course will study the history of geologic inquiry into the process of mountain-building, with special attention to the American West, from nineteenth-century debates to the emergence of plate tectonic theory in the late 1960s. At the same time, we will situate geologists’ efforts to understand this process within a set of larger questions regarding, on one hand, the history, philosophy, and the practices of science, and, on the other, the literary and rhetorical means through which scientific knowledge is presented, both to specialist and to public audiences.

Topics to be examined will include how theories are shaped, tested, and debated; how national, social, and personal factors (including gender) can affect the acceptance and rejection of theories; and how rhetorical and literary devices shape scientific discourse, both in professional scientific writing and in environmental nonfiction written for a general audience.

**Required Texts**


_____, *Basin and Range* (Farrar Strauss, & Giroux, 1982).


(All texts are available at the UO Bookstore)

**Written and Oral Graded Work**

Graded work for the course includes the following: two 4-5 page papers (on *Walden* and a final reflective essay) [25 and 30%]; two lab exercises [10%]; one-time class discussion leadership of an assigned reading [15%] plus discussion responses [10%]; and general class participation [10%]. Detailed descriptions of the papers will be distributed in class. Students are expected to
complete all reading assignments listed below before the class meeting for which they are assigned.

**Calendar of Activities and Readings**

**Week 1** (1/9)  Introduction to the course, to geology, and literary nonfiction

**Week 2** (1/16)  Selections from Charles Lyell, *Principles of Geology* (1830-33). In Penguin edition, read the first two sections of James A. Secord’s Introduction, pp. ix-xxiii; and, in *Principles*, pp. 5-42, 84-179 (Vol 1, chaps 1-5 and 9-26).

**Week 3** (1/23)  *Principles*, pp. 278-86 (from Vol 2., chap 10); and pp. 351-56, 436-38 (Vol. 3, chaps 1, 6-26 and “Concluding Remarks”); selections from Charles Darwin’s *Journal of Researches aboard H.M.S. Beagle* (1839, 1845); and J.D. Burchfield, “The Age of the Earth and the Invention of Geological Time” (1998) [both available on Blackboard]

**Week 4** (1/30)  Henry Thoreau, *Walden* (1854); selections tba

  Paper 1 (abstract in class; final version due by Friday noon in 363 PLC)


  Lab Exercise in Class


**Week 8** (2/27)  Harry H. Hess, “History of Ocean Basins” (1962); Frederick J. Vine and
J. Tuzo Wilson, “Magnetic Anomalies Over a Young Ocean Ridge off Vancouver Island;” (1965); and J. Tuzo Wilson, “A New Class of Faults and Their Bearing on Continental Drift” (1965) [all readings on Blackboard]

Lab Exercise Due


Finals Week:  Reflective Essay Due in 363 PLC Tuesday, March 20, by 5pm.