

Textbook Alternatives Project (TAP)

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GEOL 112: Hazards, Risks of Earthquakes and Volcanoes

How, where and why earthquakes and volcanic eruptions occur. Analysis of hazards posed by earthquakes and volcanoes. Risks incurred by humankind due to these hazards. Minimizing risk; economic, social and political problems associated with earthquakes.

Brief description of the course and its place in the curriculum

Geology 112 is a General Education course in the area of Earth & Environment. Four sections of the course are offered each semester with an average total annual enrollment of 250-280 students. It is taught both online and in the classroom. Currently, students use a traditional textbook costing \$158 new or \$66 for a customized paperback version.

Summary of course re-design activities

Prof. Reed has compiled hands-on learning activity worksheets, peer-reviewed instructional materials, and articles into an online course textbook that will be offered to students as a free downloadable PDF. Sources for this information include federally funded organizations such as Incorporated Research Institutions in Seismology, Southern California Earthquake Center, and the U.S. Geological Survey.

Bi-weekly online quizzes will be used to assess knowledge gained from the use of these materials and surveys will be given to students to assess the usability of the online resources.

Collective savings for students from this textbook alternative are estimated to be around \$27,000.

