

Department of Earth and Environmental Sciences, CSCI



ASSESSMENT PLAN: B.S., B.A. in Geology

Updated: Winter 2015, by Mitchell Craig and Luther Strayer

PROGRAM MISSION

[CSUEB Missions, Commitments, and ILOs, 2012](#)

CSUEB Geology BS and BA Program Description

The undergraduate degree programs consist of required courses plus electives designed to meet the needs of students with objectives ranging from employment at the Bachelor's degree level, through preparation for a secondary school teaching credential, to graduate study in Geology. A B.S. major in Geology is the primary, professional program in Geology, and serves as preparation for employment in the field, usually on a technical level; those wishing to do independent geological work should plan on graduate study. The B.A. degree major is designed for persons who do not necessarily plan to become professional geologists or to go on to graduate work.

PROGRAM STUDENT LEARNING OUTCOMES (PLOs)

Students graduating with a B.S. or B.A. in Geology from Cal State East Bay will be able to:

<i>PLO 1</i> <i>ILO 1,6</i>	Identify and classify geologic materials, including minerals, rocks, and fossils, and know their material and/or biological properties or characteristics. <i>(Geologic Materials)</i>
<i>PLO 2</i> <i>ILO 1,4,6</i>	Collect, organize, and analyze qualitative and quantitative data from both field and laboratory investigations such as lithostratigraphic and biostratigraphic correlations, geologic maps, geophysical surveys, cross-sections, soil tests, and geochemical and groundwater quality analyses. <i>(Data Collection and Analysis)</i>
<i>PLO 3</i> <i>ILO 1,2,6</i>	Synthesize, interpret and critically analyze geologic datasets (2D and 3D) and reports using discipline-specific methods, techniques, and equipment. <i>(Interpretation)</i>
<i>PLO 4</i> <i>ILO 1,2,3,4,5,6</i>	Critically analyze geological and environmental issues through the evaluation of scientific literature, and present their positions clearly and persuasively in written and oral form. <i>(Communication)</i>
<i>PLO 5</i> <i>ILO 1,3,5,6</i>	Understand geologic time, evolution, Earth's place in the Universe, and global-scale processes such as plate tectonics, earth systems interactions, and climate change. <i>(Geologic Time)</i>

Year 1: 2013-2014

1. Which PLO(s) to assess	PLO2 (<i>Data Collection and Analysis</i>), PLO4 (<i>Communication</i>)
2. Assessment indicators	Course assignments and projects, precis & oral presentations of topical journal articles in the field. Department rubrics will be used.
3. Sample (courses/# of students)	GEOL 3701, GEOL 3801, GEOL 3810, GEOL 3910.
4. Time (which quarter(s))	Winter 2014, Spring 2014
5. Responsible person(s)	Luther Strayer, affiliated faculty.
6. Ways of reporting (how, to who)	Indicators from individual courses are submitted by faculty to the Chair. The results are compiled and analyzed. A summary report is distributed to the faculty and included within the department's annual program report.
7. Ways of closing the loop	Areas of improvement are discussed at faculty meetings and used to make improvements and revisions to courses.

Year 2: 2014-2015

1. Which PLO(s) to assess	PLO1 (<i>Geologic Materials</i>), PLO 4 (<i>Communication</i>)
2. Assessment indicators	Course assignments and projects, precis & oral presentations of topical journal articles in the field. Department rubrics will be used.
3. Sample (courses/# of students)	GEOL 2101, GEOL 3601, GEOL 3701, GEOL 4800.
4. Time (which quarter(s))	Fall 2014, Winter 2015, Spring 2015
5. Responsible person(s)	Luther Strayer, affiliated faculty.
6. Ways of reporting (how, to who)	Reports are submitted first to the Chair and then to the entire faculty for comment & discussion. An end-of-year meeting will be devoted to evaluating assessment results and "closing the loop."
7. Ways of closing the loop	Areas of improvement are discussed at faculty meetings and used to make improvements and revisions to courses.

Year 3: 2015-2016

1. Which PLO(s) to assess	PLO 3 (<i>Interpretation</i>), PLO 5 (<i>Geologic Time</i>)
2. Assessment indicators	Course assignments and projects, precis & oral presentations of topical journal articles in the field. Department rubrics will be used.
3. Sample (courses/# of students)	GEOL 3801, GEOL 3910, GEOL 2102, GEOL 3810
4. Time (which quarter(s))	Winter 2016, Spring 2016
5. Responsible person(s)	Luther Strayer, affiliated faculty.
6. Ways of reporting (how, to who)	Reports first to the Chair and then to the entire faculty for comment & discussion. An end-of-year meeting will be devoted to evaluating assessment results and "closing the loop."
7. Ways of closing the loop	Disciplinary knowledge assessment will aid with program revision concurrent with quarter-to-semester conversion.

Year 4: 2016-2017

1. Which PLO(s) to assess	PLO 1 (<i>Geologic Materials</i>), PLO 5 (<i>Geologic Time</i>)
2. Assessment indicators	Course assignments and projects, precis & oral presentations of topical journal articles in the field. Department rubrics will be used.
3. Sample (courses/# of students)	GEOL 2101, GEOL 2102, GEOL 3701, GEOL 3801, GEOL 3810, GEOL 4800.
4. Time (which quarter(s))	Winter 2017, Spring 2017
5. Responsible person(s)	Luther Strayer, Mitchell Craig, affiliated faculty.
6. Ways of reporting (how, to who)	Reports first to the Chair and then to the entire faculty for comment & discussion. An end-of-year meeting will be devoted to evaluating assessment results and “closing the loop.”
7. Ways of closing the loop	Assess progress made since 2014-2015, adjust strategies. Revise program requirements concurrently with quarter-to-semester conversion.

Year 5: 2017-2018

1. Which PLO(s) to assess	PLO 3 (<i>Interpretation</i>), PLO 2 (<i>Data & Analysis</i>)
2. Assessment indicators	Course assignments and projects, with department rubrics.
3. Sample (courses/# of students)	GEOL 3801, GEOL 3810, GEOL 3910, GEOL 4010.
4. Time (which quarter(s))	Fall 2017, Winter 2018, Spring 2018.
5. Responsible person(s)	Luther Strayer, Mitchell Craig, affiliated faculty.
6. Ways of reporting (how, to who)	Reports first to the Chair and then to the entire faculty for comment & discussion. An end-of-year meeting will be devoted to evaluating assessment results and “closing the loop.”
7. Ways of closing the loop	Assess progress made since 2016-17, adjust strategies.