

Program B.S. in Earth and Environmental Science
Assessment Coordinator for the program Dave Kreamer
Department(s) or Interdisciplinary Council Responsible for the Program Geoscience
Five-Year Implementation Dates (2012-2017) _____

1. Student Learning Outcomes for the program. List the Student Learning Outcomes for the program.

1. Demonstrate the ability to recognize, formulate, employ, and interpret the scientific methodology through the completion of a research project requiring the submission of a research paper and/or a presentation of one's findings.
2. Demonstrate the knowledge of major rock types, geologic time, evolution, and earth history events through a combination of identification techniques, inclusion of such topics within the evaluation of broad-based essay questions, and/or their application as part of a student research project.
3. Demonstrate the knowledge in various specializations within the field of earth science to solve appropriate research or applied problems through the successful completion of a broad range of geoscience courses.
4. Demonstrate the ability to function independently, collaboratively, and ethically with others in the profession as colleagues and supervisors through project-based course work, participation in wider department functions, and/or through volunteering of one's time to support the activities of the department.
5. Demonstrate the written and verbal communications skills required to convey contemporary theories in earth science and in how the Earth operates as a system through a range of written products and presentation opportunities included within course work and as other presentation opportunities arise (courses, volunteer school presentations and conferences).
6. Demonstrate sufficient quantitative skills, and proficiencies in computers and multi-media systems for application in the analysis and presentation of earth science concepts.
7. Demonstrate the ability to integrate accumulated skills and knowledge with a capstone experience for this degree comprising the successful completion of a research project as part of a regularly scheduled course or as an independent research experience, resulting in its presentation as part of the department's regularly scheduled Geosymposium research conference.

2. Curriculum Alignment of Student Learning Outcomes. Where is the information introduced, enriched, and/or reinforced in the courses required in the program?

Student Learning Outcomes	Required Courses Introduced	Enriched	Reinforced
1	One of: GEOL100, 101, 105, 110, 126, 130, 135, 140, 141, GEOG101, 140; GEOL102; CHEM 121,121L; PHYS 151, 151L, 152, 152L; Other possible such as AST 103, 104, 105, 190	GEOL220, GEOL220L, OTHERS	GEOL335, Capstone Experience, OTHERS
2	One of: GEOL100, 101, 105, 110, 126, 130, 135, 140, 141, GEOG101, 140; GEOL102; CHEM 121,121L; PHYS 151, 151L, 152, 152L; OTHERS	GEOL220, GEOL 220L, OTHERS	GEOL335, Capstone experience, Exit Interview, OTHERS
3	One of: GEOL100, 101, 105, 110, 126, 130, 135, 140, 141, GEOG101, 140; GEOL102, Others possible such as: AST 103	GEOL220, GEOL220L, OTHERS	GEOL335, Capstone Experience, Possible Geosymposium participation; Exit Interview, Others possible including GEOL 301, 302, 303, 333, 333L, 334, 348,27,430, 434, 437, 440, 462, 474, 478, 485
4	GEOL102; CHEM 121,121L; PHYS 151, 151L, 152, 152L;	Advising, Possible (not required) GEOL 302	Capstone Experience, Possible Geosymposium participation; possible GEOL 348, Exit interview
5		GEOL220, 220L, OTHERS	GEOL335, Capstone Experience, Possible Geosymposium participation; Exit Interview, Others possible including GEOL 301, 302, 303, 333, 333L, 334, 348,27,430, 434, 437, 440, 462, 474, 478, 485
6	Math 126, 127 or 181; PHYS 151, 151L, 152, 152L	GEOL220, 220L, OTHERS	Possible GEOL 430, 445, 445L, 446,488 and others; Capstone Experience, Possible Geosymposium participation
7.	One of GEOL 100, 101, 110, 141	Possibly (not required) GEOL 348, 352, 429	Capstone Experience, Possible Geosymposium participation