

PLOs ของมหาวิทยาลัยคู่เทียบที่มีหลักสูตรวิศวกรรมธรณี/เหมืองแร่

| Student Outcomes (SOs) | University of Arizona (Department of Mining and Geological Engineering) | University of Minnesota (Department of Civil, Environmental, and Geo-Engineering) | Colorado School of Mines (Department of Mining and Geological Engineering) | South Dakota School of Mines and Technology (Geological Engineering) |
|---|--|--|---|---|
| (1) An ability to apply knowledge of mathematics, science, and engineering | ✓ | ✓ | ✓ | ✓ |
| (2) An ability to design and conduct experiments, as well as to analyze and interpret data | ✓ | ✓ | ✓ | ✓ |
| (3) An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability | ✓ | ✓ | ✓ | ✓ |
| (4) An ability to function on multidisciplinary teams | ✓ | ✓ | ✓ | ✓ |
| (5) An ability to identify, formulate, and solve engineering problems | ✓ | ✓ | ✓ | ✓ |
| (6) An understanding of professional and ethical responsibility | ✓ | ✓ | ✓ | ✓ |
| (7) An ability to communicate effectively | ✓ | ✓ | ✓ | ✓ |
| (8) The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context | ✓ | ✓ | ✓ | ✓ |
| (9) A recognition of the need for, and an ability to engage in life-long learning | ✓ | ✓ | ✓ | ✓ |
| (10) A knowledge of contemporary issues | ✓ | ✓ | ✓ | ✓ |
| (11) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice | ✓ | ✓ | ✓ | ✓ |

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|--|--|--|---|---|
| (12) Field competence, including critical thinking skills. | | | | ✓ |
| (13) Proficiency in geological science topics that emphasize geologic processes and the identification of minerals and rocks | | | ✓ | |
| (14) The ability to visualize and solve geological problems in three and four dimensions | | | ✓ | |
| (15) Proficiency in the engineering sciences including statics, properties/strength of materials, and geomechanics | | | ✓ | |