Bachelor of Science in Mining Engineering

Department of Mining and Geological Engineering

Program Objectives

Vision: *To be a world class center for mineral resource engineering through our core functions of technologically advanced education that emphasizes creative problem solving, leadership, and communication; innovative research that emphasizes leading technology to solve tomorrow's problems; and service to the profession to ensure mineral resources engineering remains a discipline valued by society*

Mission: *Provide lifelong learning, service, leadership, and new knowledge of engineering and scientific principles applied to earth systems for the purpose of discovery and sustainable development of non-renewable resources, conversion of mineral resources into usable materials, safe construction of structures on and in the earth, and in situ characterization of volumes of earth materials with invasive and non-invasive techniques. (2007 Strategic Plan, www.mge.arizona.edu)*

B. Program Educational Objectives

A practicing mining engineer:

1. Can tie the first principles of engineering with computer-based solutions to validate computer output, understand the difference between theoretical and practical solutions.
2. Can conduct economic and risk analyses; understand a business plan and responsibilities to customers, stockholders, and stakeholders.
3. Can stay current with technology and industry practices.
4. Can effectively communicate with peers, front-line workforce, and management; possess the skills to be a team player.
5. Takes safety and environmental concerns into consideration in designs.
6. Can understand the human and social elements of a mining operation and its importance, dynamics, and sensitivity to internal stimuli as it drives the safety, costs, and productivity of the operation.
7. Possess the ability to organize, plan, and schedule projects to effectively manage resources and reach deadlines.