

MINING ENGINEERING, MINOR

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

Program Description

The minor in Mining Engineering offers a specialized program for students in many other broad-based, technical majors, such as those in engineering or science. The demand for professionals with the training and skills for a career in the minerals- and energy-recovery profession far exceeds the supply. Mineral exploration and evaluation, mine development, marketing, health and safety, environmental protection, and mine management are all areas of industry employment. It is recommended that students wishing to pursue this minor come from an engineering or science major. As a result, the selection of this minor can provide additional career options for students in a wide range of offerings at Penn State.

What is Mining Engineering?

Mining engineers extract materials required for the survival of society while being stewards of the environment. They solve unique engineering challenges. Their workplace can often be in an out-of-the-office setting such as a surface or underground mine—or an office setting using cutting-edge technology and software simulations to plan solutions to problems. Worldwide, mining companies extract more than 100 different commodities that are used in nearly every industrial sector. There's a saying: if it can't be grown, it has to be mined! The United Nations has recognized 17 goals as a part of their "2030 Agenda for Sustainable Development." Minerals, including 50 identified as 'critical' by the US government, will be instrumental in achieving several of these goals. These minerals are required for several applications, including clean energy transition, aerospace, defense, etc. A mining engineer thus stays at the forefront of the economy, environment, and society.

You Might Like This Program If...

- You want to work in an out-of-the-office setting.
- You are a "hands-on" problem solver and like to get your hands dirty, both literally and figuratively.
- You want to apply different engineering disciplines to your problem solving, and prefer to not be focused on just one.
- You want to join a high-tech industry that provides the basic building blocks, minerals and other materials, used in nearly every industry today.