MINERALS INDUSTRY CAREERS. RICH IN DISCOVERY.

Mining Engineering

WHAT DOES A MINING ENGINEER DO?

Mining engineers plan and direct the various engineering aspects of extracting minerals from the earth. They prepare initial plans for the type, size, location and construction of open pit or underground mines.

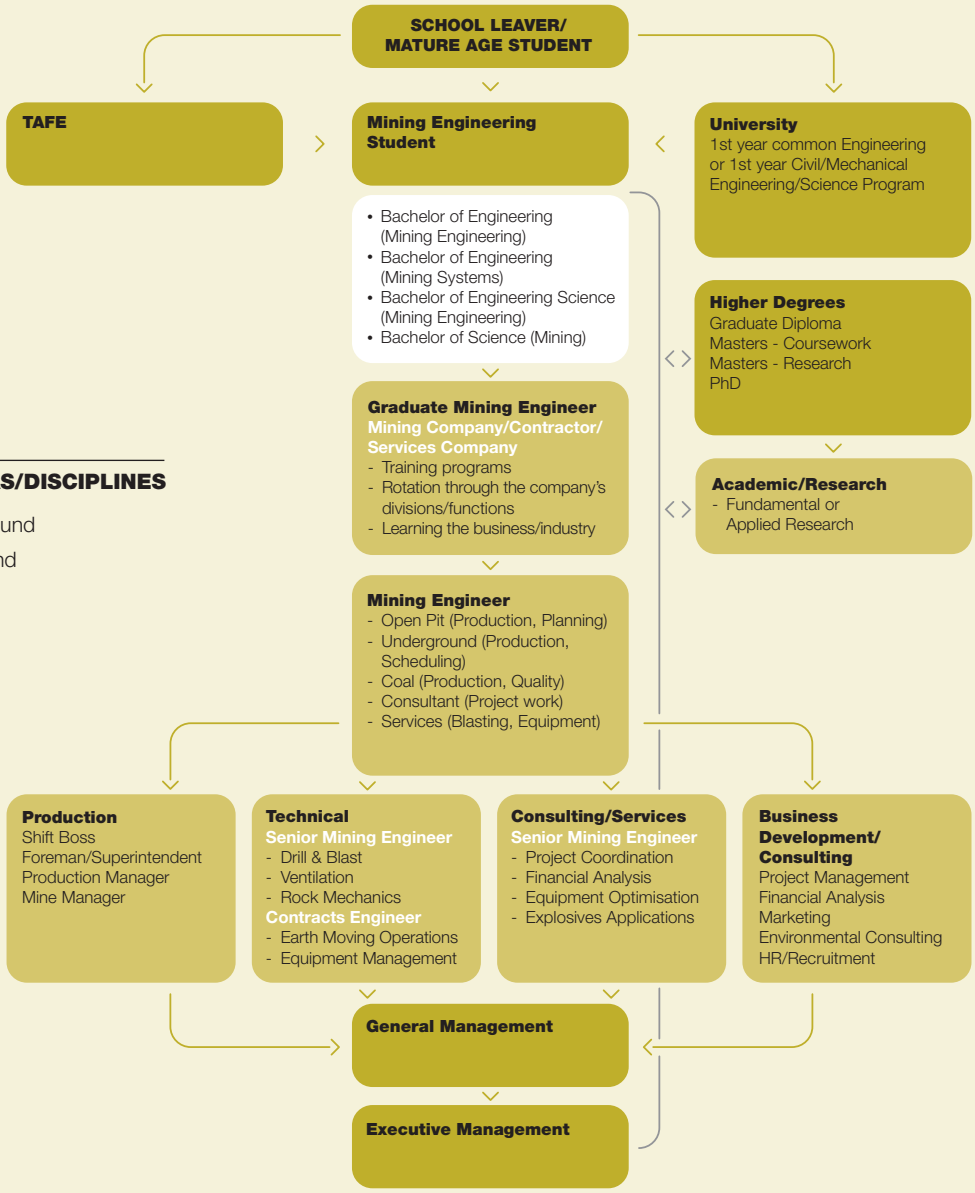
The sorts of things that a mining engineer oversees at a mine includes:

- conduct investigations of mineral deposits and undertake evaluations in collaboration with geologists, other earth scientists and economists to determine whether the mineral deposits can be mined profitably
- prepare plans for mines, including tunnels and shafts for underground operations, and pits and haulage roads for open-cut operations, using computer-aided design packages
- prepare the layout of the mine development and the way the minerals are to be mined
- plan and coordinate the employment of mining staff and equipment with regard to efficiency, safety and environmental conditions
- consult with geologists and other engineers about the design, selection and provision of machines, facilities and systems for mining, as well as infrastructure such as access roads, water and power supplies
- operate computers to assist with calculations, prepare estimates on the cost of the operation and control expenditure when mines come into production
- oversee the construction of the mine and the installation of plant and equipment
- make sure that mining regulations are observed, including the proper use and care of explosives, and the correct ventilation to allow the removal of dust and gases
- conduct research aimed at improving efficiency and safety in mines
- establish first aid and emergency services facilities at the mines.

WHAT ARE THE CAREER OPPORTUNITIES?

Mining engineers have a wide variety of career options including becoming mine planners and designers, consultants for tunneling operations (for road, rail, hydro-electric, water supply or sewerage works), operations managers, technical specialists (eg. rock mechanics, drilling and blasting, mine machinery or ventilation), investment →

AusIMM
THE MINERALS INSTITUTE



MINING ENGINEERING AREAS/DISCIPLINES

- Metals - Open Pit and Underground
- Coal - Open Pit and Underground
- Consulting
- Academic/Research
- Mining Services

→ analysts and advisers, researchers, or general managers and mine managers.

To prepare for such a career, students studying mining engineering cover a broad range of subjects such as mining technology, rock mechanics, ventilation, geology, metallurgy, surveying, economics and finance, management, health and safety, environmental principles and computer applications.

Mining Engineers have interesting and diversified careers. A typical career might span several countries, multiple commodities and a range of dynamic jobs - always with excellent financial rewards!

Mining Engineers can go on to specialise as Geotechnical Engineers by completing post graduate study.

PROFILE

RICHARD PRICE
B Eng (Mining, Hons) B Com (Marketing & Management) MAusIMM
Business Improvement Coach, BHP Billiton

Why did you choose your particular career?
I wanted to spend a few years doing something fun before going into a commercially focused role, and being a mining engineer is great fun. My current role is wonderful mix of analysis, people skills and team work.

What have you done?
Upon leaving high school I went to Kalgoorlie to study mining engineering. I worked during the holiday break in July of my first year – and every holiday break after that. I spent one year of my mining degree overseas in the USA on a study exchange program. Whilst in the USA I participated in the International Mining Competition and then started the first MiningTeam at WASM.

Also during my time at University I ran my own company in the IT industry, and served in leadership positions for the student chapter of the AusIMM as well as University related committees. I was awarded the Atlas Copco traveling scholarship for my efforts, and spent several weeks in Europe as a guest of Atlas Copco touring their facilities and mining operations.

Upon graduation I worked in some mines, then worked for a mining equipment company, then in marketing for a IT consulting business and now in Business Improvement for the world's largest mining company.

What have you enjoyed most about your profession?
I have really enjoyed playing with big trucks and blowing stuff up - all with a safety focus of course! You get paid heaps of money, and in my current role in business improvement I do less technical work and more people work, which I am happy with at this stage of my career.

AusIMM
THE MINERALS INSTITUTE

FOR MORE INFORMATION ON A CAREER IN MINING ENGINEERING GO TO AUSIMM.COM/CAREERS