A CHOSEN CAREER IN MINING ENGINEERING

INTRODUCTION

The Curtin Careers Centre, working closely with employers and the university community, sources, develops and delivers career development programs and resources. The purpose of these professional and personal development learning opportunities is to facilitate successful career transitions; especially study to employment and further study and to enhance students’ ability to develop lifelong skills in managing their careers. The Careers Centre also provides accurate, current authoritative labour market and graduate recruitment information focusing on society’s needs and aspirations.

The Careers Centre team has written a series of occupation career booklets to enable tertiary students to consider their chosen field in more depth including information on the current labour market, associated professional associations, pertinent job seeking avenues and samples of relevant and related positions.

Whilst students are actively seeking information about a particular field they need also be aware of recruitment and selection methods and the need to develop strategies to be competitive in their field at graduate entry level.

Self-assessment is an essential component of job seeking i.e. a student needs to be fully aware of their interests, skills, attributes and capabilities to be able to convey this on paper (job application documents) and in person (networking/interviewing/promotion).

The purpose of this occupational booklet is twofold. It will assist students to develop knowledge of trends in employment and current opportunities and to identify existing skills and attributes required to successfully pursue a career in this field.

A student may not be aware that whilst using this resource that they are involved in Career Development Learning (CDL). CDL assists students to develop Self Awareness, to Identify Opportunities, to learn how to Make Decisions, to Manage Transition from university and incorporate Lifelong Learning.

This involves Curtin students working with the Curtin Careers Centre towards the attainment of required skills and knowledge at a tertiary level to successfully manage the changing contexts of life; incorporating:

- Personal Management
- Learning and Work Exploration
- Career Building

Contacting the Careers Centre...

Feel free to visit us at Building 303
Email us at careers@curtin.edu.au
Give us a call on (08) 9266 7802
Or check out our website at www.careers.curtin.edu.au

Stay connected to the Careers Centre with Jobs and Events Connect. Access new jobs posted daily, workshop information, special events and employer presentations.
A CHOSEN CAREER IN MINING ENGINEERING

Mining Engineers have a variety of career opportunities which include planning, designing, consulting and operations, just to name a few. Your new career in mining has the flexibility to move between a diverse range of environments in state, national and international stages. Most graduates work on mine sites, however, there are also opportunities for students to find employment in the business sector of the mining and resources industry.

WHAT AM I QUALIFIED FOR?

As a Curtin University of Technology student you will have developed a number of employability skills and attributes that maybe you have not thought of or recognised in your self. In fact, all Curtin University courses are designed to ensure you are given ample opportunity to develop Curtin Graduate Attributes. These attributes are defined as qualities, skills and understandings that Curtin students develop during their time at the university. They are designed to go beyond the disciplinary specific expertise or technical knowledge you gain at university. According to the Graduate Attributes, Curtin graduates show evidence that they can:

- Utilise lifelong learning skills
- Recognise and apply international perspectives
- Demonstrate inter cultural awareness and understanding
- Apply professional skills

Combine these attributes with existing skills gained from life and work experiences and you will start to form a solid picture of what you are capable of. If you are having difficulty with outlining your skills or recording your achievements logon to Resume Express from Jobs and Events Connect – Job Applications – Resumes - Module

Analyse Your Skills, attend a workshop at the Careers Centre or contact careers@curtin.edu.au to make an appointment to see a Careers Consultant.
Information gathered from Get Access (2010), suggests that Mining engineers work in offices, laboratories and on site. Opportunities to travel are great, as there are mining operations situated around the world.

Mining engineers find employment in a range of organisations including large mining companies, state or federal government departments, heavy equipment suppliers and manufacturers, civil engineering firms, and stock broking firms, where they may work as technical advisers to brokers.

According to Mining Careers.com.au, graduates who pursue a career in mining engineering can expect to earn between $55,000 — $95,000 in their first 2 – 3 years and up to $110,000 — $145,000 as a Senior Mining Engineer.

There are many career opportunities available to Mining Engineers. Due to the diverse settings and roles a graduate can do, its up to you to decide where you would like your degree to take you. To get an idea of the full extent of the career prospects, you may need to do further research. Contact professional associations, companies you would like to work for and your faculty for more ideas. Below are just some of the roles you can do, outlined by AusIMM (2010):

OPEN PIT MINING

Mining Engineers working in open pits are involved with both long and short term open pit mine planning, mine design, budgeting, supervision of staff and mine management. They are also involved with feasibility studies, drilling and blasting supervision, evaluation of mining equipment, mining contract development.

UNDERGROUND MINING

Underground Mining Engineers are involved with coordinating mining activities, maintenance scheduling for all equipment, short/long term mine planning, scheduling and design.

CONSULTING

Mining Engineers who work as consultants are often involved in a wide variety of projects, mining methods and different technical areas. They use computer programs to model the mining process and design and can work on both open pit and underground developments.

ACADEMIC/RESEARCH

Academic and Research mining engineers often work in universities or Cooperative Research Centres and investigate why and how things behave the way they do or are the way they are. They experiment with different mining methods, designs and equipment.

OTHER PATHWAYS MINING ENGINEERS TAKE ARE:

TECHNICAL ENGINEERS

Technical roles include the design, planning and use of drilling machines and equipment, blasting processes, tunneling techniques and mine ventilation.

MINERALS AND METALLURGY

Mining Engineers in this field assist in determining grades and quality of mineral deposits and works with geologists and chemical engineers to determine what can be economically mined.

GOVERNMENT

Mining Engineers work for government in policy planning and administration organizations determine if mining activities can go ahead. Mining Engineers ensure that companies, who are mining, follow legislation and regulations, work on environmental impact and occupational health and safety policies.

Others include, computer software development and information management systems, merchant banking, stockbrokerage, financial planning and research and development.
Further to those listed above, Mining Engineer Jobs.com (2010) have highlighted further areas you could consider:

BUSINESS

graduates in mining engineering can also work on the business side of mining. Some roles that you could consider are:

• Drill and Blast design
• Scheduling
• Projects
• Budgeting
• Contractor management
• Continuous improvement
• Asset replacement
• Compliance

CITY BASED POSITIONS

• Optimization
• Feasibility Studies
• Equipment selection
• Risk Assessment
• International projects
• Capital investment

MANAGEMENT ROLES

• Project Manager
• Superintendent
• Underground Manager
• Quarry Manager
• Technical Services Manager
• Mine Manager
• General Manager
GRADUATE AND VACATION PROGRAMS

GRADUATE AND VACATION WORK

Graduate programs are available to final year students and recent graduates. Applications can open as early as February/March of each year. Programs can be from one year to three years in duration, depending on the discipline. Graduate Programs generally offer training and development, job rotation through various departments of the organisation, challenging roles, mentoring, and social and networking opportunities.

Vacation programs are available to penultimate and final year students and can be offered in either Winter or Summer. Winter programs will be approximately four weeks in duration and summer programs can be up to twelve weeks. Vacation programs offer paid positions and training pertinent to your discipline, the application of theory to the workplace and may also lead to selection for a Graduate Program.

Applications are generally open in Semester I for Winter Vacation Programs and this can tie in with the advertising of the Graduate Programs. Summer programs are often advertised mid-year, June to August.

Both public and private sector employers target final year students from all disciplines. Have a look at what they have to offer.

Some companies that have Graduate Programs are:

GRD Minproc

Newcrest Mining

Goldfields

Newmont Asia Pacific
http://www.newmont.com


Note: You may not wish to apply for a Graduate Program but the position descriptions will give a good indicator of what type of graduate and graduate skills/attributes employers are seeking from prospective candidates. If you believe that you meet this type of criteria, it is likely that you are already in the professional employability stakes. If not, then you know what you have to do leading up to your graduation - increase your employability stakes.

PROFESSIONAL DEVELOPMENT AND ASSOCIATIONS

It is very important that students know their professional associations and affiliations. There are often student membership options which provided you with valuable industry specific information and professional development opportunities and open you up to a vast network of professionals in your chosen area of expertise.

Australian Institute of Mining and Engineering (AUSIMM)
http://www.ausimm.com.au

Engineers Australia
http://www.engineersaustralia.com.au

Association of Professional Engineers, Scientists, Managers Australia (APESMA)
www.apesma.asn.au
Set up a Desktop folder and add a Favorite Internet Explorer folder.

Download jobs of interest for future reference. This allows you to keep a track of who is hiring in your field and the types of positions available.

NOTE: Don’t just save the link as the details will disappear once the position has been filled. Copy the advertisement or any additional files onto Word and keep in your desktop folder. *This is also a useful tip for when you begin working in your field, keep an eye on pertinent positions at all times.

Look at positions available around the country and not just in Perth. This will give an idea of who is recruiting and where and differing salary scales.

Register with websites for specific job alerts

Consider search terms e.g. mining, planning, underground etc. This will ensure that email alerts of appropriate jobs are sent directly to you. If positions on the job search websites give the name of the recruiting company – go directly to their website and check for other employment opportunities. Apply directly from the company website if possible.

GENERAL JOB SEARCH ENGINES
(all provide hits on the above search terms)

http://www.seek.com.au
http://www.careerone.com.au

Review job advertisements and job requirements – pay attention to the job description form (JDF) or job requirements and to the selection criteria.

NOTE: Selection criteria may be included in a JDF as for government jobs or may be ‘hidden’ in the advertisement. If no set selection criteria are asked to be addressed – target your letter to the position. Don’t just limit yourself to reviewing entry level or graduate positions, look at the variety of positions in your field at various levels and view the requirements. This will let you discover what will be expected of you at higher levels and the type of experience that you will hope to gain at earlier stages in your career. Consider lifelong learning and developing your career.

SPECIFIC JOB SEARCH ENGINES

Check out appropriate organizations/companies in your field and look for Career or Employment pages. See the Careers Resource Officer for assistance if required

Attend the Curtin Careers Festival (held semester one each year) and other career related events throughout the year to gain more information on the employers hiring graduates in your field. This information is also available online at www.careers.curtin.edu.au. You should be investigating individual employers throughout your studies to be able to identify those which you may wish to work for when you graduate.

Engineering Jobs Australia
http://www.engineeringjobs.net.au/

Mining Employment Services
http://www.miningemployment.com.au

People for the Future
http://www.peopleforthefuture.com.au

Mining Engineering Jobs
http://www.miningengineerjobs.com.au
FURTHER YOUR CAREER WITH POSTGRADUATE STUDY

Postgraduate study can enhance your career opportunities by allowing you to develop more specialised expertise in a particular area. If you are considering careers in academia, or industry-based research and development, you will almost certainly need to complete honours and undertake a postgraduate research degree (Masters or PhD).

Some management roles also require postgraduate coursework or research experience. It is also possible to complete shorter coursework degrees (graduate certificates and graduate diplomas) in a wide range of areas. These allow you to expand your career options by gaining knowledge of areas that may be specialized or unrelated to your undergraduate degree.

Competition for graduate employment is intensifying so postgraduate qualifications are increasingly important to prospective employers in some industries. In many cases, salary is also indicative of your level of study. Postgraduate study may be greatly enhanced by the knowledge you gain from being in the work force before, or during your study.

Many postgraduate courses are offered in a range of delivery modes to accommodate the needs of students who are working and studying at the same time. Look for courses that allow you to enrol part-time and/or as an external student.

Some postgraduate courses you could study at Curtin are:

- Graduate Diploma in Mineral Exploration
- Graduate Diploma in Applied Geology
- Master of Science (Geology)

RESEARCH AT CURTIN

Higher degree by research differs from other postgraduate degrees in that the main part of your work will be in the form of a thesis written under the guidance of a supervisor and associate supervisor(s).

WASM is widely recognised for practical and applied mining research that’s firmly focused on solving real-world problems. Underpinning our research endeavours are strong partnerships with industry, business and government, which result in outcomes that greatly benefit the broader community locally, nationally and globally.

WASM Mining Engineering Department has a long history of recognition as the leader in applied mining research. The department has worldwide recognised research teams and facilities within the area of Rock Mechanics, Mine Road Design and Management, Mine Planning and Design, Remote Inspection and Surveying at the Kalgoorlie Campus.

Some focus areas of research are:

- Surface and Underground Mine Planning and Optimization
- Mine Waste Dump Scheduling
- Long and Short Term Mine Scheduling for Surface and Underground mines
- Application of the Real Options in Engineering Design and Decision Making
- Mine equipment Scheduling Based on Maintenance Cost
- Risk evaluation in Strategic Planning for Open Cut Mines

For more information please visit:
Research at Curtin:
http://wasm.curtin.edu.au/research
WORK EXPERIENCE

Gaining work experience is essential to your career development. Here are some of the benefits:

- Insight on the working environment and relevant industries
- Development and acquisition of new skills
- Creates career networks and integration into the labour market
- An opportunity to demonstrate discipline knowledge, skills and abilities
- Highlights and informs career choices
- Professional grooming and development

By viewing position descriptions you will get a clear idea of what will be required in a specific role for a specific industry or field and you can start to address any skill shortages prior to completion of your studies.

Employers look for students who are ‘all-rounders’. These are students who, whilst still performing well academically, can also demonstrate an interest in their chosen field beyond the textbooks. The Curtin Careers Centre has many services to assist you in finding a work placement. These are:

- You can email us at careers@curtin.edu.au or phone (08) 9266 7802 to make an appointment.

No matter what type of work placement you are on accident insurance is essential. Accident insurance covers you if you hurt yourself on a work site. If a work experience opportunity is not paid the employer’s Personal Accident Insurance does not cover you. The Curtin Careers Centre provides students free appropriate accident cover.

ADDITIONAL RESOURCES

Big Plans

Minerals Council of Australia

Skills One

The Chamber of Minerals and Energy
[http://www.cmewa.com](http://www.cmewa.com)

STILL CONFUSED?

If you are a current or recent Curtin graduate and you are still unclear about your career directions and the opportunities available for you please contact the Curtin Careers Centre for an individual career counselling session with a professional career development consultant. Just call reception on +61 8 9266 7802 to make an appointment.

If you are not a Curtin University Student or Alumni but would be interested in learning more about the courses at Curtin University please contact Future Students +61 8 9266 1000 (domestic students) or +61 8 9266 7331 (international students) or check out their website at [http://www.futurestudents.curtin.edu.au](http://www.futurestudents.curtin.edu.au)
MINING ENGINEERS (UNDERGROUND AND OPEN PIT) - WA

* FIFO or residential

* Multiple roles, mulitple opportunities

* Looking to move on - Apply now!

At the moment there are number of opportunities at a number of different levels for Mining Engineers with the right experience in Western Australia.

We currently have vacancies for Mining Engineers ranging from one year of experience to Engineering Managers and Engineering Superintendents with a number of our client companies.

These vacancies include roles for both underground and open pit operations as well as ranging from more junior positions to senior and management roles.

If you are ready for a change and are looking for a better role, better money and better career opportunities then apply now!

Salaries will be commensurate with experience and will be in the range of $95k - $150k + benefits. Salaries outside this range will be considered for people with exceptional skills.
CURTIN CAREERS CENTRE

EXAMPLE POSITIONS

GRADUATE EMPLOYEES

With 28 years experience in civil and mining construction projects, Brierty Limited offers extensive experience with proven work practices and certified systems for the management of safety, quality and environmental impacts, ensuring compliance, efficiency and productivity on all projects.

Our Company will engage graduates across our business units to build on and contribute to our solid foundation.

Current Vacancies include:

- Graduate Mechanical Engineer (Focus on Plant and Asset Management)
- Graduate Surveyor (1-2 years experience preferred)

To be considered for the roles, candidates must be:

- Able to demonstrate a willingness to acquire new skills
- Able to demonstrate history of achievement
- Flexible in the performance of their role
- Discipline in meeting deadlines
- Proficient in Microsoft office suite
- Willing to travel and accommodate onsite

Successful candidates will have access to:

- A tailored program in conjunction with Engineers Australia
- A competitive remuneration packages
- Support from a dedicated management team and the CEO

If you think you have what it takes to join Brierty Limited, please submit a detailed resume, complete with a cover letter describing why you are the most suitable applicants.
REFERENCES

AusIMM. 2010. Mining Engineer. 


Contacting the Careers Centre...

Feel free to visit us at Building 303
Email us at careers@curtin.edu.au
Give us a call on (08) 9266 7802
Or check out our website at www.careers.curtin.edu.au

Stay connected to the Careers Centre with Jobs and Events Connect. Access new jobs posted daily, workshop information, special events and employer presentations.