MC-MINENG Master of Mining Engineering

Year and Campus:	2011 - Parkville
CRICOS Code:	064505A
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Level:	Graduate/Postgraduate
Duration & Credit Points:	100 credit points taken over 12 months full time. This course is available as full or part time.
Coordinator:	Professor Ian Johnston
Contact:	Melbourne School of Engineering **eng-info@unimelb.edu.au (mailto:eng-info@unimelb.edu.au)** **http://www.eng.unimelb.edu.au (http://www.eng.unimelb.edu.au)**
Course Overview:	This course aims to meet the educational needs of students interested in obtaining knowledge of the mining industry, and gaining qualifications acceptable for employment as mining engineers in the mining industry, which has a great unfulfilled demand for more professional engineers. These subjects are planned with sufficient background material so that a graduate with a good quality 4-year degree in geology, or civil, mechanical or mining engineering, or equivalent, will be able to learn successfully. There will be only one intake per year and this will be in the first semester. The Graduate Certificate in Mining may be offered to students who enter the Master of Mining Engineering who successfully complete 4 subjects and wish to exit with a Graduate Certificate
Objectives:	On completion of this course, students should have developed the skills and knowledge to understand how mineral deposits are formed, found, evaluated, extracted, and processed. Students should also be able to design mining excavations and sequences, for both surface and underground mining operations and understand how to dewater and ventilate mines, and preserve the health of workers against the hazards caused by dust, smoke, and radiation. Students should also understand the principles of risk management and hazard reduction, and the framework of state mining legislation.
Course Structure & Available Subjects:	The Master of Mining Engineering is a one-year full-time Master of Engineering by coursework. Students will take four subjects in the first semester and four in the second semester.

Subject Options:

Subject	Study Period Commencement:	Credit Points:
ENGR90010 Mineral Economics	Semester 1	12.50
ENGR90011 Mineral Processing and Waste Management	Semester 1	12.50
ENGR90012 Soil Rock and Tailings Mechanics	Semester 1	12.50
ENGR90013 Surface Mine Planning and Mining Methods	Semester 1	12.50
ENGR90014 Underground Mining and Planning Methods	Semester 2	12.50
ENGR90015 Mining Geotechnics and Mine Design	Semester 2	12.50
ENGR90016 Mine Dewatering, Ventilation and Power	Semester 2	12.50
ENGR90017 Risk and Safety Management	Semester 2	12.50

Entry Requirements:

The Selection Committee will evaluate the applicant's ability to pursue successfully the course using the following criteria:

A 4-year degree in earth science (Hons.) with a major in geology and substantial mathematics and physics knowledge; or
A 4-year degree in civil, mechanical or mining engineering, with at least H2B (70%) average, or equivalent; or

	# A relevant postgraduate diploma with at least H2B (70%) average. The Selection Committee may conduct interviews and tests, and may call for referee reports or employer references to elucidate any of the matters referred to above. Please download an application form at the Melbourne School of Engineering website: **http://www.eng.unimelb.edu.au/admissions (http://www.eng.unimelb.edu.au/admissions)** . Students whose prior studies were in a language other than English must also meet the University of Melbourne's English Language requirements for entry. **http://www.futurestudents.unimelb.edu.au/int/grad/english-req (http://www.futurestudents.unimelb.edu.au/int/grad/english-req)**
Core Participation Requirements:	For The purposeof considering request for easonable Adjustments under the Disability for Education(Cwth2005),and students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/
Graduate Attributes:	Academically excellent: Have a strong sense of intellectual integrity and the ethics of scholarship Have in-depth knowledge of their specialist discipline(s) Reach a high level of achievement in writing, generic research activities, problem-solving and communication Be critical and creative thinkers, with an aptitude for continued self-directed learning Be adept at learning in a range of ways, including through information and communication technologies Knowledgeable across disciplines: Examine critically, synthesise and evaluate knowledge across a broad range of disciplines Expand their analytical and cognitive skills through learning experiences in diverse subjects Have the capacity to participate fully in collaborative learning and to confront unfamiliar problems Have a set of flexible and transferable skills for different types of employment Leaders in communities: Initiate and implement constructive change in their communities, including professions and workplaces Have excellent interpersonal and decision-making skills, including an awareness of personal strengths and limitations Mentor future generations of learners Engage in meaningful public discourse, with a profound awareness of community needs Attuned to cultural diversity: Value different cultures Be well-informed citizens able to contribute to their communities wherever they choose to live and work Have an understanding of the social and cultural diversity in our community Respect indigenous knowledge, cultures and values Active global citizens: Accept social and civic responsibilities Be advocates for improving the sustainability of the environment Have a broad global understanding, with a high regard for human rights, equity and ethics
Professional Accreditation:	Students entering the course will already possess qualifications entitling them to the status of graduate membership of Engineers Australia or the AusIMM, i.e. to become registered Professional Engineers or registered Mining Professionals
Generic Skills:	# Problem solving and analytical skills; # Critical and creative thinking, with aptitude for continued self-directed learning; # Sense of intellectual curiosity; # Ability to interpret data and research results; # Capacity to confront unfamiliar problems; # Ability to evaluate and synthesise the research and professional literature.
Links to further information:	http://www.eng.unimelb.edu.au/Postgrad/postProf/grad_mme.html
Notes:	Further accreditation of the Master of Mining Engineering course, when established, will be sought from the AusIMM, so that it will qualify graduates for the status of Chartered Mining Professional.