

Establish the mine ventilation model and conduct network analyses



<i>Competency Unit</i>	AMV103	Establish the mine ventilation model and conduct network analyses
<i>Description of Unit</i>	<p><u>Day 1:</u> provides hands-on experience with the opportunity to use all of the key features of the latest version of Ventsim. The workshop assumes no prior knowledge of Ventsim, and leads the student through the process of setting up a simple mine network, fan input and selection and conducting simple mine ventilation analyses. All of the Ventsim graphical tools, displays and menu items are examined over the course of the day.</p> <p><u>Day 2:</u> gives the student hands-on experience developing, modifying, validating (against underground measurements) and auditing a Ventsim network including all of Ventsim's advanced modelling tools and techniques. Shortcuts, useful tips and good practice methods are explained. The student will be able to interrogate the model, identify fan and ventilation control requirements and evaluate various mine design options with a view to optimising the design.</p>	
<i>Applicable to</i>	Ventilation officers or engineers, mine planning or operations engineers, statutory regulators or any person who may need to design, modify, operate, risk-assess or audit ventilation systems including airflows, differential pressures, fans and ventilation controls in mines or sub-surface excavations.	
<i>Co-requisites</i>	MNCU1106 or MNCU1109 or MNMMSM631A, <i>Establish the ventilation management plan/system</i>	
<i>Method of delivery</i>	2-day workshop with subsequent assignment(s).	
<i>Assessments</i>	Single mine ventilation modelling exercise including preparation of Ventsim models for scenario analyses, fan selections and written report.	
<i>Locations</i>	Brisbane or Mackay. Also available at other locations at additional cost (<i>see below</i>).	
<i>Course presenters</i>	<p>Dr Rick Brake and/or Tony Nixon</p> <p>Dr Rick Brake is a Chartered Practicing Mining Engineer with 25 years experience in underground and open cut mines in senior planning and operating roles in Australia and North America. He graduated with First Class Honours in Mining Engineering from the University of Queensland in 1979, completed a Master of Business Administration from Deakin University in 1991 and completed a PhD in physiology from the School of Public Health at Curtin University in the area of human heat stress in 2002. He has a First Class Mine Manager's Certificate of Competency (Qld) and is a Fellow of the AusIMM, a member of MICA and the MVSSA, an RPE(Qld) and has consulted widely and published extensively in the areas of mine ventilation, cooling and refrigeration, heat stress and egress and entrapment.</p> <p>Tony Nixon has an Advanced (Mine Ventilation II) Ventilation Officer's Certificate from the Mine Ventilation Society of South Africa. He has 40 years continuous experience in underground mine ventilation, including virtually all underground hardrock mining methods currently in Australia, including various forms of cut and fill, sub level caving, VCR, SURF (stopping under rock fill), panel and open stoping. He was Ventilation Superintendent for the four Mount Isa mines from 1987 to 1999, when he joined MVA. He also has significant experience using Ventsim network modelling software.</p>	
<i>Hardware/software requirements</i>	Laptop with Windows™ and Microsoft Excel™ Special 90-day fully-functional and latest version of Ventsim provided in tuition fees.	
<i>Required text books and facilities</i>	Access to a working mine for measurements and audits.	
<i>Fees (\$AUD)</i> <small>[subject to change without notice]</small>	\$1,500 (no GST payable)	
<i>Conditions</i>	Fees apply for Brisbane and Mackay. Courses can be run at other locations. Additional fees may apply. All courses are subject to maximum and minimum registrations.	
<i>Further Information</i>	TAFE Queensland Mining Services Phone: 1300 653 050 or +61 7 4920 2654 Email: TQMining@det.qld.gov.au	Mine Ventilation Australia Phone: +61 7 3269 3733 Email: mvamail@mvaust.com.au