What are Mining and Minerals Engineering?

All of the materials we use around us originate from the ground. Mining and Minerals Engineers must develop economically and environmentally responsible ways of extracting these valuable resources.

Mining engineers work with metal ores, diamonds, oil, coal, clays, limestone and granites to name but a few. Their primary responsibility is to safely extract these valuable minerals from the ground. This can involve working on the surface in strip mines, open pits or quarries, or deep underground where the temperature is high and there are large stresses on the rocks. Mining engineers require knowledge of engineering, rock mechanics, geology, economics, surveying and management.

Once the mining engineers have safely extracted the minerals from the ground it is over to the Minerals Engineers, who are responsible for winning the valuable resources from their primary ores. A combination of physical, chemical and biological processes can be employed to do this, such as heating, dissolution, reduction, or electrolysis. The minerals engineer must understand which method or combination of techniques will be most effective at producing the maximum yield.

As our demand for minerals increases and our sources of primary ores are depleted, recycling and reclamation are becoming increasingly important. New developments allow resources to be extracted from contaminated land, domestic waste and the waste from previously mined deposits. It is also vital that former quarry and mine sites are restored to their original state.

If you would like to know more about a career in the mining and minerals industries look at the web-site below. Find out where you can study minerals and mining engineering and play a role in shaping the future…

The Institute of Materials, Minerals and Mining

schools affiliate scheme

The following Universities run accredited mining and minerals related degree programmes. This means that you can go on to become a Chartered Engineer. Other universities run courses on which you will learn about minerals and mining. Why not get in touch with your nearest department and go and see minerals and mining in action.

University / College	Telephone	E-mail address
University of Exeter (Camborne School of Mines)	01326 371801	cornwall@exeter.ac.uk

Geology and Earth Science related courses (such as Geophysics and Geochemistry) are available at a large number of universities across the UK.

For more information about Minerals and Mining please contact:

Dr Diane Aston, Education Co-ordinator (Minerals and Mining), The Institute of Materials, Minerals and Mining, Grantham Centre, The Boilerhouse, Springfield Business Park, Caunt Road, Grantham, Lincolnshire, NG31 7FZ or e-mail diane.aston@iom3.org

You can find out more about university courses at www.ucas.co.uk