



The Materials Australia NSW Branch Presents:

Metallurgy for Non-Metallurgists

Training Workshop – UNSW Sydney

29 - 30 August 2017

School of Materials Science & Engineering (Building E10)

Level 2, Room 252

10am - 6pm

Metals and alloys are used in the greatest variety of applications of all engineering materials. As such it is essential for those involved in manufacturing, engineering and construction to have an understanding of what metals (ferrous and non-ferrous) are, how they behave, and why they behave differently than ceramics, glass, and plastics. It is also important to understand how they can be made stronger, how they can be shaped by casting, forging, forming, and how these processes along with heat treatment can alter properties. This course provides important basic knowledge to those who are not metallurgists.

All attendees will receive printed lessons developed by ASM.

WHO SHOULD ATTEND?

- Metal Processing Personnel
- Engineers who need to gain a better understanding of metals and alloys.
- QA Managers
- Heat Treating Operators & Managers
- Component Designers
- Technicians
- Marketing, Technical Writers, Purchasers and individuals without a materials background who wish to better understand the role of materials science

LEARNING OBJECTIVES

Upon completion of this course, you should be able to:

- Describe how metals and alloys are formed and why
- Recognise how metals can be strengthened by alloying, cold-working, and heat treatment
- Determine why metals and alloys are not behaving as expected and can be made to behave as needed
- Choose what metal or alloy to use for its specific combinations of properties

TOPICS

Topics may include:

- Introduction to Metals and Alloys
- Solidification of Metals
- Metal Forming
- Mechanical Properties
- Failure Analysis
- Strengthening Mechanisms
- Heat Treatment
- Strengthening Steels & Cast Iron
- Materials Characterization and Selection

Contact Materials Australia [E imea@materialsaustralia.com.au](mailto:imea@materialsaustralia.com.au) [T +61 3 9326 7266](tel:+61393267266)



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PRESENTERS

Prof. Madeleine du Toit, CMatP

Professor – Welding Engineering Research Group
Discipline Advisor – Materials Engineering
University of Wollongong

Prof. Huijun Li

School of Mechanical, Materials & Mechatronics Engineering
University of Wollongong

Dr. Sophie Primig, CMatP

Lecturer of Physical Metallurgy
School of Materials Science & Engineering
UNSW Sydney

HOW DO I REGISTER

To register complete and email the registration form on the following page to imea@materialsaustralia.com.au

OR

Register online at www.materialsaustralia.com.au/training/training-courses



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REGISTRATION (Inc of GST)

Name:

Organisation:

Address:

..... State:.....Postcode:.....

Phone: Email.....

Member Registration \$990

*Non Member Registration \$1,210

Registration includes morning tea, lunch and afternoon tea plus comprehensive printed notes.

*Join as a member for \$230 and pay the member price.

Individual Membership \$230

(Membership will be valid to 31st December 2018)

PAYMENT DETAILS

Visa MasterCard

Card Number:...../...../...../.....ExpiryDate:...../.....CVV

Card Holder Name:.....Signature

EFT (please use Last Name or Company Name as your reference)

Account Name: Institute of Materials Engineering Australasia Ltd

BSB: 063-000

Account: 0080 0220

Please return completed registration form to: Materials Australia, PO Box 19, Parkville, Vic 3052 or

Email: imea@materialsaustralia.com.au

*The minimum number of persons enrolled in order to run the course is 10. Registrations must be in two (2) weeks prior to seminar date and must be accompanied by payment in full. Our cancellation policy is as follows: If you cancel earlier than two (2) weeks, your fees are refunded, less a \$50.00 administration levy. After two (2) weeks prior to the seminar, there is no refund. If we should cancel the course then your fees are fully refunded. An alternative person may register if the original cannot attend.

The Institute of Materials Engineering Australasia Ltd ABN 40 004 249 183

Contact Materials Australia E imea@materialsaustralia.com.au T +61 3 9326 7266