UNIVERSITI SAINS MALAYSIA

PUSAT PENGAJIAN KEJURUTERAAN BAHAN DAN SUMBER MINERAL
SCHOOL OF MATERIALS AND MINERAL RESOURCES ENGINEERING

Training Course Offers

by School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia

Target Participants:

- Engineering Project Managers and team members wishing to improve their engineering project management knowledge and techniques related to materials, polymer or minerals.
- Supervisors, Team Leaders, R&D Engineers and Engineering Department Managers
- Technical personnel across industries looking to advance their careers by increasing their engineering skills.
- Newcomers to a project role needing a foundation in materials, polymer and minerals processing
- Professionals entering a new field to gain sought-after skills and knowledge.

Suitable for the following industries:

- Steel making
- Silicon wafer
- Semiconductors
- SMT Technologies
- Plastic and Rubber
- Rare Earth Element (REE)
- Mineral Processing
- Oil and Gas
- Biomedical
- Polymer composite
- Advanced ceramics
- High precision machinery inspections
- Chip-on-Board (COB)

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School Of Materials And Mineral Resources Engineering, USM

https://material.eng.usm.my

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MATERIALS ENGINEERING TRAINING COURSES

1. Applied statistics for engineers
2. Basic and Advanced Metallurgy.
3. Biomaterials testing
4. Basic Steel Metallurgy : Microstructure, Process & Properties
5. Basic Aluminium Metallurgy : Processing & Properties
6. Characterization of Engineering Materials – Essential Knowledge to Solve Engineering Issues.
7. Corrosion measurement: Theory and hands-on
8. Design and Selection of Engineering Materials.
9. Die Attachment. Technology
10. Electrochemical Methods in Corrosion Testing.
11. Electro and Electrochemical Migration: Factors, Effects, & Solutions.
12. Failure Analysis of Materials.
13. Failure Mechanisms of Semiconductor.
14. Heat Treatment for metals.
15. IC Packaging Failure Mechanisms.
16. Introduction to Electromigration.
17. Introduction to Steelmaking.
18. Metallurgy (Fundamentals and Basic Concepts).
19. Metal Plating for Corrosion & Wear
20. Metal Deformation & Sheet Metal Working
21. Materials for Electronic Packaging
22. Nanomaterials and Nanotechnology.
23. Nanomaterials: Syntheses and Characterization.
24. Semiconductor Fabrication Technology.
25. Silicon Material and Processing.
26. Stress Related Failures in Thin Film.
27. Surface Analysis Techniques.
28. Surface of Engineering Materials: Application, Issue, and Solution
29. Steel : Basic Metallurgy & Heat Treatment
30. Understanding Materials Properties: Theory, Principle and Application.
31. Wide Bandgap Semiconductors.
32. XRD characterization: Theory and hands-on

POLYMER ENGINEERING TRAINING COURSES

1. Fundamental of Rubber Processing.
2. Flow and Failure in Polymers: Are They Connected?
3. HDPE & LDPE Plastic Materials, Properties & Their Blow Moulding Characteristics
4. Introduction of Emulsion Polymerization for coatings and NBR industries
5. Overview on Polymers Materials, Characterizations and Processing Techniques.
6. Polymers for Advanced Applications..
7. Polymer processing and characterization
8. Polymeric Materials Characterizations for Electronic Packaging
9. Polymer and Characterization Composites
10. Thermal Analysis Techniques.

MINERAL RESOURCES ENGINEERING TRAINING COURSES

1. Size Reduction and Sizing in Mineral Processing
2. Metallurgical Accounting
3. Fundamental in Physical Mineral Processing
4. Blasting Technology
5. Optimization in mineral processing circuits
6. Mineral deposits classification
7. Covered and polished section preparation
8. Petrography analysis
9. Wet Chemical analysis for mining and mineral industry
10. An introduction to resources estimation and geostatistics for mining application