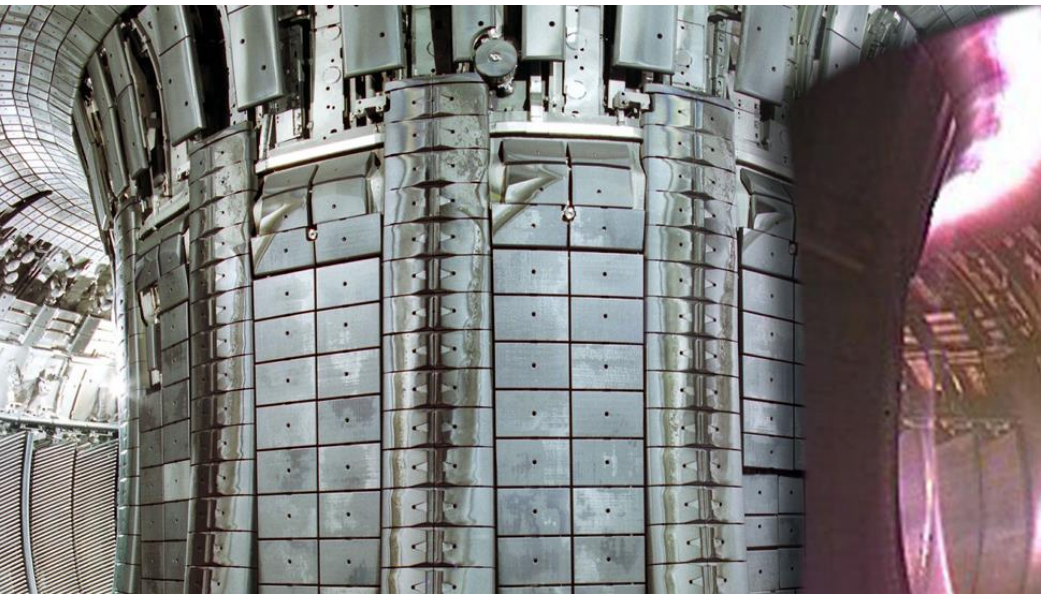




University of Bahrain MICRO-CREDENTIAL



Exploring Material Science:
Foundations and Applications in Industry

GENERAL INFORMATION

Duration: 10 weeks

Total Hours: 80 hours

Venue: To be announced

Fees: 500 BHD

Credits: 2 credits

Level: Graduate

Language: English

Pre-requisite: None

INSTRUCTORS BIOGRAPHY

Dr. Niaz Bahadur Khan

Assistant Professor, Mechanical Engineering, University of Bahrain.

PhD in Mechanical Engineering, has 5 years of industry experience, 6 years teaching, and 65 publications.

Dr. Nahed Shuwaiter

Assistant Professor, Mechanical Engineering, University of Bahrain.



Micro-credential is a short, focused course designed to equip learners with specific skills and knowledge within a specialized area. It serves as a pathway to earning an equivalent certification for a core course, offering a flexible and targeted learning experience.

COURSE OVERVIEW

This workshop covers material science principles, properties, and industrial applications, including material classification, atomic structure, defects, and mechanical properties. It explores phase diagrams, transformations, alloys, and material selection tools like Ashby charts and ANSYS Granta, ending with a case study and Q/A session for interactive learning.

DELIVERY MODE

80 hours over the course span blends in :

- In-person Delivery (28 hours)
- Practical Work (8 hours)
- Guided Project Work (40 hours)
- Project Presentation and evaluations (4 hours)

ASSESSMENTS

- Assignment (15%)
- Lab work (15%)
- Guided Project (70%)

TARGET AUDIENCE

- Introduction to Material Science
- Atomic structure and Interatomic Bonding
- Imperfections in solids
- Mechanical Properties of Metal and ASTM Standards for Testing
- Mechanical Testing Lab
- Phase Diagrams
- Phase Transformations: Development of Microstructure and Alteration of Mechanical Properties
- Applications and Processing of Metal Alloys
- Material Selection
- Microstructure Evaluation Lab

KEY TOPICS COVERED

- Current students
- Alumni
- Business/Industry partners
- Faculty/staff
- Professionals



Scan the code
for Registration

For further Information, please contact:

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