

Fundamentals of Mechanical Technology: Principles & Practice

Oil & Gas Engineering
Berlin (Germany)
11 - 15 Aug 2025

UK Training

PARTNER

A photograph of chess pieces on a checkered board. In the foreground, a large gold king piece stands prominently. To its left, a silver pawn is visible. Further back, another silver pawn is positioned. The background features a series of concentric, light gray circles that create a sense of depth and focus on the pieces.

Fundamentals of Mechanical Technology: Principles & Practice

Ref: 3270_133214 **Date:** 11 - 15 Aug 2025 **Location:** Berlin (Germany) **Fees:** 4200 **Euro**

Course Description

This comprehensive 5-day course provides a solid foundation in mechanical technology fundamentals. Participants will explore core principles of mechanics, materials science, design processes, and manufacturing techniques. Through a combination of theoretical knowledge and hands-on exercises, attendees will gain practical skills applicable to various engineering fields.

Learning Objectives

- Understand fundamental principles of mechanics and their applications
- Analyze material properties and selection criteria for engineering applications
- Apply basic design principles using CAD software
- Comprehend manufacturing processes and their implications on product design
- Develop problem-solving skills for mechanical engineering challenges

Course Modules

Day 1: Introduction to Mechanical Principles

- Basic concepts of statics and dynamics
- Force systems and equilibrium
- Kinematics and kinetics
- Energy and momentum principles

Day 2: Materials Science and Properties

- Material classification and structure
- Mechanical properties of materials
- Material selection criteria
- Testing and characterization methods

Day 3: Design Fundamentals and CAD

- Engineering drawing standards
- Introduction to CAD software
- 2D and 3D modeling techniques
- Design for manufacturability

Day 4: Manufacturing Processes

A graphic of a chessboard with several chess pieces (king, queen, rook, knight, and pawns) in gold and silver. The text 'UK Training PARTNER' is overlaid on the board.

UK Training
PARTNER

- Overview of manufacturing methods
- Machining processes and tools
- Forming and shaping techniques
- Additive manufacturing and 3D printing

Day 5: Applied Mechanical Systems

- Mechanical power transmission
- Fluid power systems
- Thermal systems and heat transfer
- Mechatronics basics

Practical Wins for Participants

- Ability to analyze and solve basic mechanical engineering problems
- Proficiency in using CAD software for design tasks
- Understanding of material selection for specific applications
- Knowledge of manufacturing processes to optimize product design

Blackbird training cities



Amman (Jordan)



Amsterdam (Netherlands)

Accra (Ghana)

Annecy (France)

Baku (Azerbaijan)

Bali (Indonesia)

Bangkok (Thailand)

Bangkok (Thailand)

Barcelona (Spain)

Batumi (Georgia)

Beijing (China)

Beirut (Lebanon)

Berlin (Germany)

Birmingham (UK)

Bordeaux (France)

Boston, Massachusetts (USA)

Brussels (Belgium)

Cairo (Egypt)

Cape Town (South Africa)

Casablanca (Morocco)

Cascais (Portugal)

Copenhagen (Denmark)

Doha (Qatar)

Dubai (UAE)

Düsseldorf (Germany)

UK Training
PARTNER



Blackbird Training Category



Human Resource



Audit & Quality Assurance



Finance, Accounting, Budgeting



Marketing, Sales, Customer Service



Secretary & Admin



Law and Contract Management



Project Management



IT & IT Engineering



Supply Chain & Logistics



Management & Leadership



Professional Skills



Oil & Gas Engineering



Health & Safety



Telecom Engineering



Hospital Management



Customs & Safety



Aviation



C-Suite Training



Agile and Refinement



Blackbird training Clients



MANNAI Trading
Company WLL,
Qatar



Alumina Corporation
Guinea



Booking.com
Netherlands



Oxfam GB International
Organization,
Yemen



Capital Markets
Authority,
Kuwait



Waltersmith Petroman Oil Limited
Nigeria



Qatar National Bank
(QNB),
Qatar



Qatar Foundation,
Qatar



AFRICAN UNION ADVISORY
BOARD ON CORRUPTION,
Tanzania



KFAS
Kuwait



Reserve Bank of
Malawi,
Malawi



Central Bank of Nigeria
Nigeria



Ministry of Interior
Kingdom of Saudi Arabia
KSA



Mabruk Oil Company
Libya



Saudi Electricity
Company,
KSA



BADAN PENGELOLA
KEUANGAN Haji,
Indonesia



NATO
Italy



ENI CORPORATE
UNIVERSITY,
Italy



Gulf Bank
Kuwait



General Organization for
Social Insurance
KSA



Defence Space Administration
Nigeria



National Industries
Group (Holding),
Kuwait



Hamad Medical
Corporation,
Qatar



USAID
Pakistan



STC Solutions,
KSA



North Oil company,



EKO Electricity



Oman Broadband



UNITED NATIONS
UN.



Authority for

UK Training
PARTNER



LONDON TRAINING PROVIDER



www.blackbird-training.com



training@blackbird-training.com



+44 7480 775526 / +44 7401 177335