



Engineering English Rationale

UnitName
Module 1: Engineering Services
About Us
Civil Engineering Services
Water Systems Services
Project Management
Manufacturing Engineering
Applying for a Job in Electrical Engineering
Applying for a Job in Mechanical Engineering
Module 2: Design Stage - Designing Projects
Defining Objectives
Feasibility Studies
CAD (Computer-aided Design)
Drafting
Comparing Engineering Systems
A Presentation to a Client
Module 3: Design Stage - Materials and their Properties
Ferrous Metals
Non-ferrous Metals
Synthetic Polymers
Concrete
Module 4: Design Stage - Forces
Lift, Drag, and Torque
Compression, Tension, Load, and Shear
Thrust and Measuring Methods
Turbulence
Module 5: Design Stage - Systems and Mechanisms
Hydraulic Systems
Pneumatic Systems
Mechanical Systems
Robotic Systems
Electrical Systems
Mechanisms: Gears
Mechanisms: Engines



Mechanisms: Cams and Camshafts

Module 6: Implementation Stage - Giving Instructions

Assembly Instructions

Disassembly Instructions

Maintenance Instructions

Troubleshooting

Module 7: Implementation Stage - Measurements

Taking Measurements (length, width, height, weight, measurement units)

Calibrating the Equipment

Clean Room Sensors

Industrial Sensors

Module 8: Implementation Stage - Safety

Discussing Safety Procedures

Hazard Analysis and Management

Tool Usage

Reporting Safety Incidents

First-aid Instructions

Module 9: Implementation Stage - Quality Management

Performance Specifications

Testing

Quality Analysis

Documentation

Quality Audits and Certifications

System Support

Engineering Ethics

Module 10: Green Engineering

Alternative Fuels in Industry

Energy Efficiency in Production

Industrial Recycling

Waste Management

Winning an Award in Green Engineering