

## 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

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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

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