

COURSE OUTLINE

PROGRAMME TITLE	Managing Rising Fuel Cost, Fuel Quality and ESG Compliance in Modern Operations
OVERVIEW (Brief introduction Of the topic)	Fuel cost is one of the largest operating expenses for many industries, including transportation, plantation, construction, power generation, manufacturing, and hospitality sectors. As fuel prices continue to fluctuate and biodiesel blending requirements increase, organizations face growing challenges in maintaining operational efficiency while controlling costs. Beyond rising fuel prices, fuel quality has become an increasing concern. Biodiesel blends such as B15 can contribute to fuel degradation, water contamination, microbial growth, sludge formation, and accelerated fuel system maintenance requirements if not properly managed. These issues can lead to increased downtime, higher maintenance costs, reduced equipment reliability, and shorter component lifespan. At the same time, organizations are facing increasing expectations to improve environmental performance, reduce carbon emissions, and strengthen ESG reporting practices. Effective fuel management not only reduces operating costs but also contributes to sustainability objectives while improving transparency and reducing losses associated with fuel wastage and theft. This programme provides participants with a practical management-level understanding of fuel cost drivers, fuel quality challenges, fuel loss prevention strategies, and ESG implications. Participants will gain insights into available fuel optimization approaches, monitoring systems, and implementation frameworks that can help organizations improve operational efficiency while preparing for future sustainability requirements. The programme is educational in nature and focuses on operational improvement, risk management, and decision-making frameworks without promoting any specific product or service.
LEARNING OUTCOME	Upon completion of this course, participants will be able to: 1. Explain the operating principles of diesel fuel systems and combustion processes.

	2. Identify common fuel quality problems affecting diesel-powered equipment. 3. Understand the impact of biodiesel blends on fuel storage and fuel system performance. 4. Diagnose common causes of fuel contamination, sludge formation, and fuel system deterioration. 5. Conduct basic fuel system inspections and contamination assessments. 6. Perform basic fuel system cleansing and fuel system protection procedures. 7. Apply preventive maintenance practices to improve fuel system reliability. 8. Compare various fuel optimization technologies and operational approaches. 9. Establish fuel monitoring and performance verification systems. 10. Evaluate fuel-saving initiatives using structured data collection and analysis methods. 11. Develop a fuel management improvement plan applicable to their own workplace.
DURATION (days)	0.5 day (4 hours)
TARGET PARTICIPANTS (position/level)	• General Managers • Operations Managers • Estate Managers • Mill Managers • Fleet Managers • Engineering Managers • Sustainability and ESG Officers • Procurement Managers • Business Owners and Decision Makers
COURSE CONTENT (with submodules)	MODULE 1: The Rising Cost of Fuel Operations Sub-Module 1.1 – Fuel Cost Trends and Business Impact Sub-Module 1.2 – Understanding Fuel as a Strategic Operating Cost Sub-Module 1.3 – Hidden Costs of Fuel Inefficiency and Downtime

	MODULE 2: Fuel Quality Challenges in Modern Operations Sub-Module 2.1 – Biodiesel Adoption and Fuel System Implications Sub-Module 2.2 – Water Contamination, Sludge Formation and Microbial Growth Sub-Module 2.3 – Impact on Equipment Reliability and Maintenance Cost MODULE 3: Fuel Cost Control and Loss Prevention Sub-Module 3.1 – Common Sources of Fuel Wastage and Losses Sub-Module 3.2 – Fuel Monitoring, Measurement and Theft Prevention Sub-Module 3.3 – Overview of Fuel Optimization Technologies and Operational Strategies MODULE 4: ESG Compliance and Future Readiness Sub-Module 4.1 – Understanding Fuel Consumption and Scope 1 Emissions Sub-Module 4.2 – Fuel Management as Part of ESG Strategy Sub-Module 4.3 – Implementation Roadmap: Baseline, Monitoring, Improvement and Reporting
LEARNING METHODOLOGIES	Learning Methodologies 1. Interactive Icebreaker and Experience Sharing 2. Instructor-Led Presentations 3. Case Studies and Industry Examples 4. Guided Group Discussions 5. Visual Diagrams and Workflow Explanations 6. Scenario-Based Learning 7. Knowledge Checks and Reflection Activities 8. Open Q&A Session