

PETROLEUM INDUSTRY

“Higher National Diploma (HND) in Processing Engineering”

MAIN TOPIC	SUBJECTS	CREDIT HOURS
Petroleum Engineering Fundamentals	Introduction to petroleum industry and processes.	3
	Petroleum geology and exploration techniques.	
	Reservoir engineering and fluid properties.	
	Well drilling and completion.	
Petroleum Refining and Processing	Refinery operations and unit processes.	3
	Crude oil distillation and fractionation.	
	Catalytic cracking and hydro-processing.	
	Refinery product blending and specifications.	
Petrochemicals and Chemical Processing	Introduction to petrochemical industry.	3
	Introduction to petrochemical industry.	
	Petrochemical feedstock and production processes.	
	Polymer production and processing.	
	Specialty chemical production and applications.	
Process Control and Instrumentation	Principles of process control systems.	3
	Instrumentation and measurement techniques.	
	Distributed control systems (DCS).	
	Safety instrumented systems (SIS).	
Process Safety and Risk Assessment	Hazard identification and risk assessment methods.	3
	Safety in petroleum refining and petrochemical plants.	
	Process Safety management systems.	
	Emergency response planning and incident investigation.	



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Environmental Protection and Sustainability	Environmental impact assessment in the petroleum industry.	3
	Pollution prevention and control measures.	
	Energy efficiency and conservation.	
	Sustainable practices in refining and petrochemical processes.	
Industrial Training and Project:	Practical training in a petroleum processing facility.	18
	Industrial project to apply knowledge and skills acquired throughout the program.	