

EIT Onshore and Offshore Pipeline Systems Course mapping to APGA Pipeline Engineer Competency Standards

Module	Competencies contributed to	
	Onshore	Offshore
1: Introduction and Overview	GE002 Pipeline Engineering fundamentals CA001 Commercial aspects Fundamentals	OGE002 Offshore pipeline engineering fundamentals
2: Pipeline Design, Operation and Maintenance Standards	IB001 Industry participants and structure	OGE004, Industry background and knowledge
3: Pipeline Routing	RE001 Route engineering fundamentals RE008 Route selection	ODP005 Route selection and alignment sheet engineering
4: Liquid and gas flow	GE007 Fluid mechanics (hydraulics) - bridging DP003 Pipeline hydraulics modelling – steady state DP004 Pipeline hydraulics modelling - transient	OFA001 Flow assurance fundamentals
5: General Pipeline Design Considerations	DP002 Onshore pipeline design fundamentals DP006 Wall thickness and design pressure DP013 Stress analysis	ODP006 Mechanical design of rigid offshore pipeline systems ODR001 Design of risers fundamentals ODR002 Riser system design
6: Pipeline Materials	GE008 Materials - bridging DP008 Linepipe specification CP001 Composite pipe fundamentals	OCC001 Corrosion control and materials engineering fundamentals OCC004 Materials selection and engineering
7: Onshore Pipeline Construction	CE001 Construction engineering and management	

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	Onshore	Offshore
	CE002 Construction equipment CE006 Pipeline crossing construction CE020 Managing a pipeline spread HC001 Hydrotesting, commissioning and preparation for operations HC003 Pipeline commissioning	
8: Offshore Pipeline Construction		OCE001 Pipeline construction fundamentals OCE002 Pipeline installation engineering and analysis OCE003 Construction vessels and equipment
9: Pipeline Installation		OCE001 Pipeline construction fundamentals OCE002 Pipeline installation engineering and analysis
10: Pipeline Commissioning, Operations, Maintenance and Failures	HC001 Hydrotesting, commissioning and preparation for operations HC002 Hydrotest design and planning HC005 Hydrotest execution HC006 Preparation for operations AM002 Asset management – technical fundamentals AM033 Linepipe anomaly investigation and inspection	OHC001 Offshore pipeline pre-commissioning OHC002 Offshore pipeline commissioning OAM001 Pipeline asset management fundamentals OAM002 Risk based integrity management process OAM003 Inspection and monitoring systems OAM005, Pipeline repair and recommissioning OAM007 operational and intelligent pigging

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	OP001 Pipeline operation fundamentals OP007 Planning in-service repairs OP008 Linepipe repair systems OP014 In-line inspection OP026 Operational and maintenance pigging RA001 Risk assessment fundamentals EH001 Environment and heritage fundamentals	OFA001 Flow assurance fundamentals OEH001 Environment and heritage identification and assessment issues
11: Pipeline Protection	CC001 Corrosion control fundamentals CC002 Cathodic protection systems CC003 Pipe coatings CC007 Pipeline coating inspection and assessment CC008 Internal corrosion failure mechanisms IC008 Leak detection systems AM033 Linepipe anomaly investigation and inspection AM034 Stress corrosion cracking	OCC001 Corrosion control and materials fundamentals OCC002 Internal corrosion and control OCC003 External corrosion and control OCC006 Erosion mechanisms and control OAM001 Pipeline asset management fundamentals OAM002 Risk based integrity management process
12: Pipeline Economics and Asset Management	CA001 Commercial aspects fundamentals CA002 Pipeline capital cost estimation CA003 Operations and maintenance cost estimation	