



Training Course	Process Plant Startup and Commissioning
Course Duration	Total Number of hours 40 Dates February 17 – February 20 2019 (session 1) October 6 – October 9 2019 (session 2) Time 8:00 AM – 2:00 PM Venue : Hotel in West bay
Course Objectives	<p>Overview and Purpose Process Plants play a fundamental role in every oil and gas production facility in the world. Learning to effectively start up and commission a plant can substantially lower the cost of production and minimize operational interruptions to ensure a successful operation.</p> <p>This Process Plant Start Up and Commissioning course will focus on the six Key Stages of the Commissioning and Start Up process.</p> <p>Preparation & Planning Mechanical Completion & Integrity Checking Pre-commissioning & Operational Testing Start Up & Initial Operations Performance & Acceptance testing Post Commissioning</p> <p>With emphasis on real world examples of how to get complete these Stages Safely and Effectively. Participants will gain a more specific understanding of how the entire process works with pointers on how to structure the Commissioning Teams, task that will need to be completed pitfalls to avoid. Participants will understand what steps are required to ensure that their commissioning projects are on schedule and that all the minor details required to release facilities and processes are to be completed according to schedule.</p> <p>The course material that will be delivered is a balance between shared experiences, and hands on interactions with participants</p>



Course Key Topic Area Includes:

Day 1	0800-0830	Introduction /Overview
	0830-0930	Introduction to Probability and Reliability Engineering - Mean Time to Failure, Mean Time to Repair, Failure Distributions
	0930-0945	Break
	0945-1030	Reliability Block Diagrams
	1030-1130	Practical Exercises - Reliability Block Diagrams
	1130-1145	Break
	1145-1230	Failure Modes and Effects Analysis - Organization, Boundaries, Functions
	1230-1300	Practical Exercises - Functions
	1300-1400	Lunch
Day 2	0730-0800	Review Previous Day / Preparation
	0800-0900	Failure Modes
	0900-0930	Practical Exercises - Failure Modes and Mechanisms
	0930-0945	Break
	0945-1030	Failure Effects and Criticality
	1030-1130	Failure Effects - Failure Modes and Effects Analysis (Part 2)
	1130-1145	Break
	1145-1230	Asset Wellness Indices
	1230-1300	Weibull Analysis
	1300-1400	Lunch
Day 3	0730-0800	Review Previous Day / Preparation
	0800-0930	Fault Tree Analysis, Event Tree Analysis, Markov Analysis, Monte Carlo Analysis
	0930-0945	Break
	0945-1030	Introduction to Risk Concepts
	1030-1130	Risk Matrices
	1130-1145	Break
	1145-1230	Life Cycle Costing
	1230-1300	Practical Exercises - Life Cycle Costing
	1300-1400	Lunch
Day 4	0730-0800	Review Previous Day / Preparation
	0800-0930	Uses of Reliability Engineer - RCM Overview
	0930-0945	Break
	0945-1030	Total Productive Maintenance, Root Cause Analysis / FRACAS
	1030-1130	Risk-Based Inspection, Safety Instrumented Systems
	1130-1145	Break
	1145-1230	Design, Operations, Maintenance Enhancement
	1230-1300	Living Program
	1300-1400	Lunch
Day 5	0730-0800	Review Previous Day / Preparation
	0800-0930	Practical Examples - Case Studies
	0930-0945	Break
	0945-1030	Additional Case Studies
	1030-1130	Course Review and Feedback
	1130-1230	Break and Lunch

Course Content



At the end of the program the trainees will be able to:

Objectives:

At the end of this course participants should be able to:

Understand the importance of an effective Commissioning Organization right down to the sub area team structure.

Understand the importance of proper preparation and documentation to facilitate the commissioning process.

Understand and define the Commissioning Process Stages from Preparation and Planning to Post Commissioning and the important content of each.

Understand the need for attention to detail to promote the safe start-up of the plant and to maintain its performance.

Understand how the various systems and subsystems of a new plant overlap and how this can impact the planning process.

Understand the importance of the acceptance and performance test and how to execute successfully.

Begin to define how to perform plant optimization efforts.

Learning Outcomes

Target Audience

Who should attend?

Project Managers, Plant Managers, Process Engineers, Plant Supervisors, and key Technical Staff involved in project execution and plant start-up

Course Material /Exams / Technology used/ Details Relevant to the course.

Course Material: PPT Slides / Course book / Pre Test / Post test



Instructor Details & Brief Instructor Bio

First Instructor: Eng. Ian Macdonald has a wealth of more than 35 years of professional expert experience in the Oil and Gas and Petrochemicals industries. He has worked the majority of his career as a Plant Manager at NOVA Corporation a refining plant and leading producer of plastics and chemicals based in the heart of Canada's Oil and Gas industry. Eng Ian has been recognized as Nova Chemical's leading expert for LDPE process and facilities and holds a degree in Mechanical Engineering. As a facilitator for this Process Plant Start Up and Commissioning course, Eng. Ian hosts the perfect balance of practical experience leading Nova Chemical's Interpersonal Skills Development program during his career as while leading plants across Canada and in the US ranging from 490 Million LBS/Year - 950 million LBS/year.

Second Instructor: Eng. Tom's vast knowledge of Electrical, Instrumentation, Maintenance, Planning, Scheduling, Start-Up and Commissioning (CSU), Root Cause Analysis (RCA), Reliability Centered Maintenance (RCM) experience came from over 55 years of practical knowledge in various sectors including Oil/Gas, Petrochemical, Electrical Utilities, Mining Military, Pulp/Paper, Marine Electronics, Agriculture and Maintenance Reliability. This experience allows Tom to provide extensive formal presentation and training seminars covering all of the above in both classroom and field environments.

Asset Management and Reliability are technical, tactical and strategic exercises that consider human and organizational requirements in order to ensure sustainability. As a Senior Technical Advisor Tom champions efforts in this field to ensure that the approaches are total, sustainable and practical.



Course Fees	<p>QAR 16,000 per participant</p> <p>10 % corporate discount for 4 or more participants.</p> <p>Minimum number of participants to deliver the course : 6</p>
Contact Person	<p>Ms. Lijy Jose Senior Training Specialist Community Service and Continuing Education Center Qatar University Email : lijy@qu.edu.qa Phone : 44034025</p>