

## 2022 DOWNSTREAM TRAINING PROGRAMS

### Including:

- ✓ Pressure Vessel and Piping
- ✓ Process Machinery, Operation and Maintenance
- ✓ Process Engineering
- ✓ Pipeline
- ✓ Instrumentation and Control
- ✓ Management and Petroleum Business
- ✓ Hydropower



# Message from the CEO



Nowadays behind any development, there is a competent workforce. We will not thrive, unless by concentration and implementing workforce holistic planning. MAT Group brings together industry-driven and industry required programs that deliver by using international experts who have extensive experience in the oil, gas, and petrochemical Industry.

We are always trying to respect diversity, have pay attention to all details, and continuous monitoring of programs.

MAT Group Ltd. has been providing exceptional training programs for over a decade to assist and enhance technical know-how and expertise in the oil and gas industry. We are ready to help with the new challenges of our business and focus on the training needs with comprehensive developed programs specifically for the oil and gas industry.

From the early pandemic, distance learning and online training have played a major role to address infrastructure and technical problems. We at MAT Group are able to design and develop attractive online and virtual training programs in conjunction with your organization's needs.

I invite you to take advantage of our 2022 Downstream training calendar to improve and continue to build your company's value and expertise. MAT Group looks forward to assist with challenges in the industry as a leader of "Workforce Development" solutions. Our consulting team can help you build and implement effective projects, while our specialized training programs improve your team's knowledge to better gain your goals. Please visit our website [www.matgroup.org](http://www.matgroup.org) and contact us at [training@matgroup.org](mailto:training@matgroup.org) for additional information.

Sincerely Yours,

*Ali Amidi*

CEO at MAT Group Ltd.

## WHY MAT GROUP

MAT Group values its business relationships and constantly strives to improve specialized innovative and essential training and consultations to assist oil and gas experts in these challenging economic times.

Our goal is to constantly offer the highest professional and educational standard of world-class training. MAT Group employees and agents pay attention to every small detail so that our clients training expectations and needs are continually surpassed.

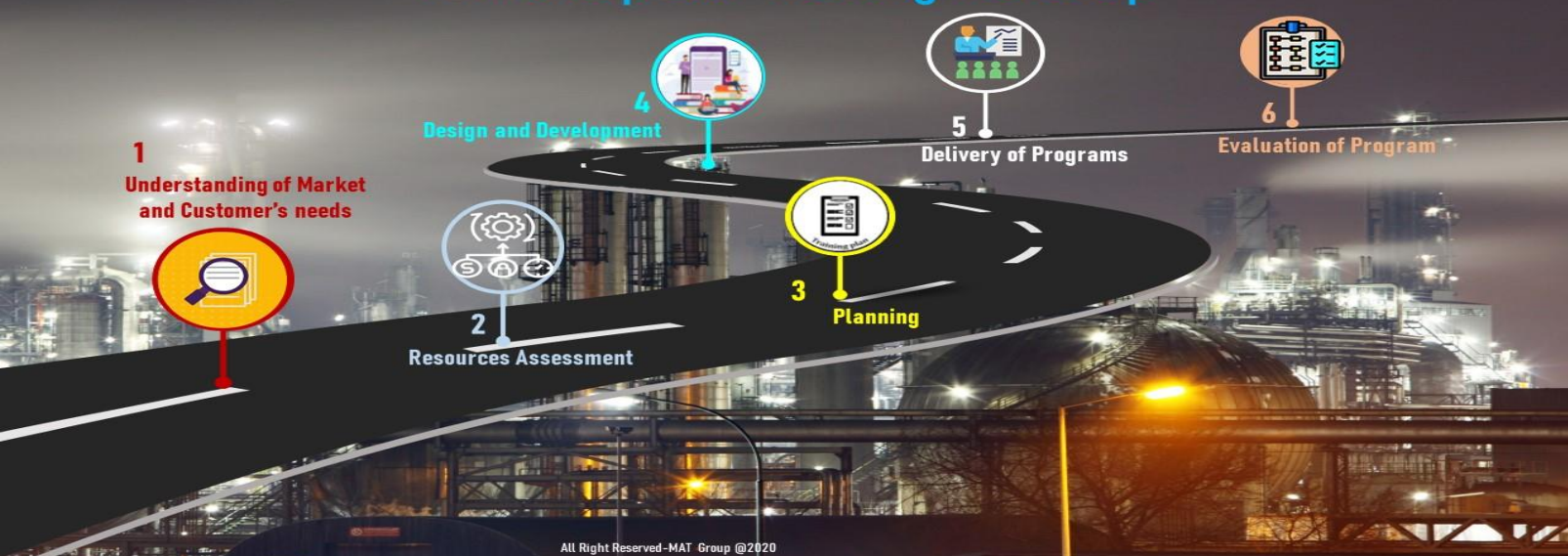
We are able to help companies develop their workforce for future business challenges achieve business goals, enhance effectiveness, achieve compliance, mitigate risk, and improve operations. Since 2007 MAT Group has been focused on consistent, high quality learning and development for the oil and gas industry.

We have grown from a hand full of instructors and workbook developers, to a global company with comprehensive learning solutions and workforce development expertise, able to address all segments of the industry-from exploration and production, to processing, pipelines, refining, petrochemicals, water and power industries HSE and shipping and marine Industries.

## Consulting Solutions:

- ✓ Active Industry Partner
- ✓ Design Technical Courses Based on Customer's Needs
- ✓ Senior Level Management Training Programs
- ✓ Competence Training Programs
- ✓ Water Transmission Pipeline Systems
- ✓ Due Diligence and Feasibility Studies
- ✓ Physical Asset Integrity

## MAT Group Ltd.-Training Roadmap



# Table of Content

## Pressure Vessel and Piping

- 1) ASME Code, Section VIII, Division 1, Design and Fabrication of PV
- 2) ASME Code, Section VIII, Division 2, Design and Fabrication of PV
- 3) ASME Code, B31.3 Process Piping Design
- 4) Detail Engineering and Piping Layout
- 5) Fitness for Services and Flaw Evaluation of Pressure Equipment, API 579
- 6) Inspection, Repair & Alteration of Pressure Equipment
- 7) Material Selection & Corrosion Control in Refinery Industries
- 8) Damage Mechanisms Based on API RP 571
- 9) Industrial Valves: Design, Sizing, Inspection and Maintenance
- 10) Non-Destructive Examination - Applying ASME Code Requirement
- 11) Risk Based Inspection, API 580/581
- 12) Storage Tank Design, Construction & Maintenance
- 13) Design of Heat Exchangers
- 14) Power Boilers: Design, Construction, Operation, Inspection and Maintenance
- 15) Pressure Relieving Systems Based on API 520/521
- 16) ASME Section IX, Welding Brazing and Qualifications

## Process Machinery, Operation & Maintenance

- 17) Process Machinery, Pre- Commissioning, Commissioning and Start UP
- 18) Equipment Failure Analysis and Prevention
- 19) Turbomachinery Monitoring and Problem Analysis
- 20) Condition Monitoring and Vibration Analysis
- 21) Compressors: Operation and Maintenance
- 22) Pumps: Operation and Maintenance
- 23) Gas Turbine: Operation and Maintenance
- 24) Managing Efficient Shutdown and Turnaround
- 25) Lubrication of Hydro Mechanical Equipment
- 26) Compressors: Design and Selection
- 27) Pumps: Design and Selection
- 28) Effective Operations Leadership
- 29) Commissioning of Petrochemical Plants
- 30) Predictive Maintenance
- 31) Process Plant Reliability and Maintenance Strategies

## Process Engineering

- 32) Gas Conditioning and Processing
- 33) Oil Production and Processing Facilities
- 34) Oil Surface: Design and Operation
- 35) Gas Treating and Sulfur Recovery
- 36) Process Design for Process Plant Equipment
- 37) Separation Equipment: Selection & Sizing
- 38) Introducing of Process Engineering
- 39) Process Plant Troubleshooting
- 40) Hydro-treating & Hydrocracking Process Technology
- 41) Amine Gas Sweetening & Sulphur Recovery
- 42) Relief and Flare Systems
- 43) Process Utility System
- 44) Process Safety Engineering
- 45) Onshore Gas Gathering Systems: Design and Operations
- 46) Applied Process Control
- 47) Gas Flow Measurement

## Pipeline

- 48) Liquid Pipeline Pumping System
- 49) Pipeline Design and Construction
- 50) Pipeline Defect Assessment
- 51) Pipeline Integrity Management Systems
- 52) Subsea Pipeline Engineering Master Class
- 53) Pipeline Project Management
- 54) Pipeline Corrosion and Material Selection
- 55) ASME B31.4 Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids
- 56) B31.8 Gas Transmission & Distribution Piping Systems
- 57) Pipeline System Optimization

## Instrumentation and Control

- 58) Distributed Control Systems Technology
- 59) Advanced Process Control Technology
- 60) Process Control: LOOP TUNING and ANALYSIS
- 61) Instrumentation and Controls Fundamentals for Facilities Engineers
- 62) PLC and SCADA Technologies
- 63) Electrical Faults: Causes, Analysis, Detection & Remedies
- 64) Valve and Actuator Technology
- 65) Commissioning of Electrical Equipment
- 66) Data Communication and Fieldbus Systems

## Management and Petroleum Business

- 78) Strategic Management in Petrochemicals
- 79) Leadership and Interpersonal Skills for Managers
- 80) Asset Integrity Management
- 81) Essential Management Skills
- 82) Senior Management Skills
- 83) Refinery Economics
- 84) Oil and Gas Contract: Negotiations Skills
- 85) "Joint Ventures Between" Local" and "Foreign" Partners-An International Perspective"
- 86) Petroleum Finance and Accounting
- 87) International Petroleum Contracts: The legal and Contractual Regime
- 88) Construction Management
- 89) Oil and Gas Sector: Business Environment and Finance
- 90) Project Management in the Upstream oil and gas Industry
- 91) Power Plants Economics
- 92) Technical Writing and Communication



# MAT Group Online Training Programs



## Benefits:

- ✓ To allow participants to receive comprehensive training and individualized attention from top international instructors.
- ✓ Excellent solution to training needs with limited budgets.
- ✓ Using our resources, we can develop customized training programs in accordance with your needs while incorporating your company's data into the curriculum.
- ✓ These courses are catered to your internal employees and held anywhere you need training.
- ✓ Omitted travel time

**Book your training programs through:** [www.matgroup.org](http://www.matgroup.org) or [training@matgroup.org](mailto:training@matgroup.org)

# 2022 DOWNSTREAM TRAINING PROGRAMS

## PRESSURE VESSEL & PIPING

CODE	COURSE TOPIC	DURATION	VENUE	DATE
S001	ASME Code, Section VIII, Division 1, Design and Fabrication of Pressure Vessels	3 Days	Dubai	T.B.A
S002	ASME Code, Section VIII, Division 2, Design and Fabrication of Pressure Vessels	3 Days	Dubai	T.B.A
S003	ASME Code,B31.3 Process Piping Design	4 Days	Dubai	T.B.A
S004	Detail Engineering and Piping Layout	4 Days	Dubai	T.B.A
S005	Fitness for Services and Flaw Evaluation of Pressure Equipment, API579	3 Days	Dubai	T.B.A
S006	Inspection, Repair &Alteration of Pressure Equipment	3 Days	Dubai	T.B.A
S007	Material Selection and Corrosion Control in Refining Industries	4 Days	Tehran	T.B.A
S008	Damage Mechanisms Based on API RP 571	4 Days	Tehran	T.B.A
S009	Industrial Valves: Design, Sizing, Inspection and Maintenance	4 Days	Dubai	T.B.A
S010	Non-Destruction Examination-Applying ASME Code Requirements	3 Days	Dubai	T.B.A
S011	Risk Based Inspection, API 580/581	4 Days	Dubai	T.B.A
S012	Storage Tank Design, Construction & Maintenance	4 Days	Dubai	T.B.A
S013	Design of Heat Exchangers	4 Days	Dubai	T.B.A
S014	Power Boilers: Design, Construction, Operation, Inspection and Maintenance	5 Days	Dubai	T.B.A
S015	Pressure Relieving Systems Based on API 520/521	3 Days	Dubai	T.B.A
S016	ASME Section IX, Welding Brazing and Qualifications	4 Days	Dubai	T.B.A

# 2022 DOWNSTREAM TRAINING PROGRAMS

## PROCESS MACHINERY, OPERATION & MAINTENANCE

CODE	COURSE TOPICS	DURATION	VENUE	DATE
M016	Process Machinery, Pre -Commissioning, Commissioning and Start UP	3 Days	Dubai	T.B.A
M017	Equipment Failure Analysis and Prevention	4 Days	Dubai	T.B.A
M018	Condition Monitory and Vibration Analysis	3 Days	Kish Island	T.B.A
M019	Turbomachinery Monitoring and Problem Analysis	3 Days	Dubai	T.B.A
M020	Compressors: Operation and Maintenance	4 Days	Dubai	T.B.A
M021	Pumps: Operation and Maintenance	4 Days	Dubai	T.B.A
M022	Gas Turbine: Operation and Maintenance	3 Days	Dubai	T.B.A
M023	Managing Efficient Shutdown and Turnaround	5 Days	Dubai	T.B.A
M024	Lubrication of Hydro Mechanical Equipment	3 Days	Kish Island	T.B.A
M025	Compressors: Design and Selection	3 Days	Kish Island	T.B.A
M026	Pumps: Operation and Maintenance	3 Days	Kish Island	T.B.A
M027	Effective Operation Leadership	3 Days	Kish Island	T.B.A
M028	Commissioning of Petrochemical Plants	5 Days	Kish Island	T.B.A
M029	Predictive Maintenance	3 Days	Kish Island	T.B.A
M030	Risk Based Maintenance	3 Days	Kish Island	T.B.A
M031	Process Plant Maintenance Strategies	3 Days	Kish Island	T.B.A

# 2022 DOWNSTREAM TRAINING PROGRAMS

## PROCESS ENGINEERING

CODE	COURSE TOPICS	DURATION	VENUE	DATE
P032	Gas Conditioning and Processing	5 Days	Dubai	T.B.A
P033	Oil Production and Processing Facilities	5 Days	Tehran	T.B.A
P034	Oil Surface: Design and Operation	5 Days	Kish Island	T.B.A
P035	Gas Treating and Sulfur Recovery	5 Days	Dubai	T.B.A
P036	Process Design for Process Plant Equipment	5 Days	Kish Island	T.B.A
P037	Separation Equipment: Selecting & Sizing	5 Days	Tehran	T.B.A
P038	Introducing of Process Engineering	3 Days	Kish Island	T.B.A
P039	Process Plant Troubleshooting	4 Days	Dubai	T.B.A
P040	Hydro-treating & Hydrocracking Process Technology	5 Days	Kish Island	T.B.A
P041	Amine Gas Sweetening & Sulphur Recovery	5 Days	Tehran	T.B.A
P042	Relief and Flare Systems	5 Days	Kish Island	T.B.A
P043	Process Utility System	5 Days	Dubai	T.B.A
P044	Process Safety Engineering	5 Days	Kish Island	T.B.A
P045	Onshore Gas Gathering Systems: Design and Operations	5 Days	Tehran	T.B.A
P046	Applied Process Control	5 Days	Kish Island	T.B.A
P047	Gas Flow Measurement	5 Days	Dubai	T.B.A



# 2022 DOWNSTREAM TRAINING PROGRAMS



## PIPELINE

CODE	COURSE TOPICS	DURATION	VENUE	DATE
PI048	Liquid Pipeline Pumping System	3 Days	Virtual	T.B.A
PI049	Pipeline Design and Construction	3 Days	Dubai	T.B.A
PI050	Pipeline Defect Assessment	3 Days	Dubai	T.B.A
PI051	Pipeline Integrity Management Systems	3 Days	Muscat	T.B.A
PI052	Subsea Pipeline Engineering Master Class	5 Days	Dubai	T.B.A
PI053	Modern Pipeline Leakage Detection	2Days	Virtual	T.B.A
PI054	Pipeline Corrosion Integrity Management Systems	3 Days	Dubai	T.B.A
PI055	ASME B31.4 Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids	5 Days	Dubai	T.B.A
PI056	B31.8 Gas Transmission & Distribution Piping Systems	4 Days	Dubai	T.B.A
PI057	Pipeline System Optimization	3 Days	Dubai	T.B.A



# 2022 DOWNSTREAM TRAINING PROGRAMS



## INSTRUMENTATION & CONTROL

CODE	COURSE TOPICS	DURATION	VENUE	DATE
IC058	Distributed Control Systems Technology	5 Days	Tehran	T.B.A
IC059	Advanced Process Control Technology	5 Days	Tehran	T.B.A
IC060	Process Control: LOOP TUNING and ANALYSIS	3 Days	Tehran	T.B.A
IC061	Instrumentation and Controls Fundamentals for Facilities Engineers	5 Days	Tehran	T.B.A
IC062	PLC and SCADA Technologies	5 Days	Tehran	T.B.A
IC063	Electrical Faults: Causes, Analysis, Detection & Remedies	5 Days	Tehran	T.B.A
IC064	Valve and Actuator Technology	5 Days	Tehran	T.B.A
IC065	Commissioning of Electrical Equipment	5 Days	Tehran	T.B.A
IC066	Data Communication and Fieldbus Systems	5 Days	Tehran	T.B.A

# 2022 DOWNSTREAM TRAINING PROGRAMS

## MANAGEMENT AND PETROLEUM BUSINESS

CODE	COURSE TOPICS	DURATION	VENUE	DATE
MB067	Strategic Management in Petrochemicals	3 Days	Tehran	T.B.A
MB068	Leadership and Interpersonal Skills for Managers	5 Days	Tehran	T.B.A
MB069	Asset Integrity Management	5 Days	Tehran	T.B.A
MB070	Essential Management Skills	5 Days	Tehran	T.B.A
MB071	Senior Management Skills	3 Days	Tehran	T.B.A
MB072	Refinery Economics	5 Days	Tehran	T.B.A
MB073	Oil and Gas Contract: Negotiations Skills	5 Days	Tehran	T.B.A
MB074	"Joint Ventures Between" Local" and "Foreign" Partners-An International Perspective"	2 Days	Tehran	T.B.A
MB075	Petroleum Finance and Accounting	5 Days	Tehran	T.B.A
Mb076	International Petroleum Contracts: The legal and Contractual Regime	5 Days	Tehran	T.B.A
MB077	Construction Management	5 Days	Tehran	T.B.A
MB078	Oil and Gas Sector: Business Environment and Finance	5 Days	Tehran	T.B.A
MB079	Front line Leadership In Oil, Gas and Petrochemicals	5 Days	Tehran	T.B.A
MB080	Project Management in the Upstream oil and gas Industry	5 Days	Tehran	T.B.A
MB081	Power Plants Economics	5 Days	Tehran	T.B.A
MB082	Technical Writing and Communication	3 Days	Tehran	T.B.A

# 2022 ONLINE DOWNSTREAM TRAINING PROGRAMS

## Oil Refinery Revamping

**Duration:** 60 Hours

This course provides an overview of Revamping of oil refineries . The focus is on all aspects of process engineering ,instrumentation and control, material selection and corrosion control, mechanical, electrical and HSE.

### Designed For:

This course is designed for all who deal with economic of power plants including but not limited to : owners, governmental bodies, project managers, finance managers, and operation managers.

**Tuition US\$1200**



## Power Plant Economics

**Duration:** 8 Hours

This course provide necessary knowledge and skills for audience which enable them to evaluate the economic of new plans and operational units. Also at the end of this course, the audience is expected to acquire essential knowledge and skills for economic analysis of the power industry in order to prepare relevant reports and required analysis.

### Designed For:

This course is designed for all who deal with economic of power plants including but not limited to : owners, governmental bodies, project managers, finance managers, and operation managers.

**Tuition US\$300**

## Financing Techniques of Power Plant Projects

**Duration:**8 Hours

This course provides an overview on the basics, knowledge and skills, methods and tools of financing in the power industry. In addition, participants will be benefited from the best global experiences and well-known companies. Also, you will learn what is the position of financing from the perspective of current and future theorists along with the future of the world of financing.

### Designed For:

This course is designed for all who deal with economic of power plants including but not limited to : owners, governmental bodies, project managers, finance managers, and operation managers.

**Tuition US\$300**



## The Art of Presentation

**Duration:** 8 Hours

This Presentation Skills training course is designed to give you confidence when delivering presentations. During this course delegates will learn how to overcome, and use problems to their advantage in order to give maximum impact with presentations. As a result of this training course, candidates will learn a series of techniques through practical activities to develop presenting skills and enhance confidence to expand the potential of the individual. Candidates will also learn how to adopt a presenting style that suits them as well as covering more general components such as how to engage with the audience.

### Designed For:

The Art of Presentations is a workshop geared to professionals in both public and private sectors across all industries.

**Tuition US\$200**



# ***OUR INTERNATIONAL TRAINING NETWORK***



***MAT Group Strives for Perfection Through  
Quality, Commitment , Local & International  
Opportunities***