



## **Petrochemicals: An In-Depth Introduction**

**Time zone: 2PM London / 10AM New York**

**2-5 November 2021**

***Times shown is in London***

### **MODULE 1**

*Understanding petrochemicals: Feedstock dynamics and industry fundamentals*

**2:00 – 3:00**

#### **Understanding petrochemicals: industry development, basic production processes and building blocks**

- How the industry has developed over the years
- Overview of the petrochemicals value chain: terminology explained
- Paraffins (alkanes), olefins (alkenes) and aromatics introduced
- Steam cracking to make the building blocks
- The impact of coronavirus: How it could reshape the industry
- Recycling: Introducing basic concepts and terminology

**3:00 – 4:15**

#### **Examining oil and its relationship with petrochemicals**

- Overview of the oil refining industry
- Crude oil quality measurements
- Crude distillation, FCC and catalytic reforming processes
- Where petrochemicals are produced in refineries
- Crude oil pricing, and its influence on petrochemicals
- Coronavirus: Short -and long-term scenarios for oil markets

**4:15 – 4:30**

#### **Break**

**4:30 – 5:20**

#### **An introduction to natural gas, methanol and ammonia**

- Types of natural gas: NGLs, LPGs and condensates
- Natural gas distribution and LNG
- Growth of shale gas and the fracking process
- Ethane cost advantage
- The impact of shale gas on US competitiveness
- Emerging trade in ethane
- Production, consumption and reserves
- Methanol and ammonia from natural gas
- Olefins and growing fuel uses from methanol

**5:20 – 5:30**

#### **Summary and conclusion**

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### **MODULE 2**

*Petrochemical building blocks and their major applications*

**2:00 – 3:00**

#### **Olefins: Ethylene, propylene and butadiene**

- Ethylene and derivatives: major sources, value chains and end-uses
- The three polyethylenes, ethylene oxide/glycol and the vinyls chain
- Propylene – the versatile polypropylene and other derivatives
- Sources of propylene and on-purpose processes
- Butadiene: synthetic rubbers and other C4 derivatives
- Market dynamics: Demand and supply in the Coronavirus New Normal

**3:00 – 3:20**

#### **Value chain exercise: Olefins**

**3.20 – 3.30**

#### **Break**

**3.30 – 4.30**

#### **Aromatics: Benzene, toluene and xylenes**

- Primary and secondary sources of aromatics
- Benzene and derivatives: value chains and end-uses
- Polymers made from styrene
- Tensions in the phenol-acetone chains
- Paraxylene to polyester
- Phthalates from orthoxylene
- Market dynamics: Demand and supply in the Coronavirus New Normal

**4.30 – 4.50**

#### **Value chain exercise: Aromatics**

**4.50 – 5.00**

#### **Summary and conclusion**



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### **MODULE 3**

*Petrochemical market trends and understanding cost drivers*

**2.00 – 3.20**

#### **Petrochemicals – a changed world**

- Petrochemicals are a global business: who are the leaders; what are their roles?
- Key business drivers: Coronavirus, feedstock, markets, logistics and more
- Global and regional chemicals output; domination of China
- The key industries for petrochemicals
- Strategic moves and creating winning partnerships
- Trade flows and shifting regional influences
- Industry challenges and opportunities: social pressure and tightening controls, key trends and growth prospects

**3.20 – 4.00**

#### **Break**

**4.00 – 4.30**

#### **Understanding petrochemicals pricing and cost drivers**

- How markets function and prices are set
- Types of prices: Spot and contract pricing
- Pricing jargon clarified
- Main price drivers – cost, supply, demand and sentiment
- ICIS price assessment explained
- Price reporting challenges; manipulation and illiquid markets

**4.30 – 5.00**

#### **Application: Knowledge survey & interactive discussion**

**5.00 – 5.15**

#### **Summary and conclusion**



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### **MODULE 4**

*Future trends: Looking into factors that are shaping the future of the petrochemicals industry*

**2.00 – 3.15**

#### **COVID-19 in focus: Implications on petrochemical markets**

- The global market condition: Where it stands today
- A bipolar world: How the US and China split could be accelerated post-virus, leading to two economic and geopolitical trading zones and it would mean for petrochemicals trade flows and investments

**3.15 – 3.30**

**Break**

**3.30 – 4.15**

**The rise of sustainability commitments and how it could change the future direction of petrochemicals**

**4.15 – 4.30**

**Summary and conclusion**