



Petroleum and Petrochemical Engineering

What is the meaning of upstream and downstream?

The oil and gas sector is divided into two main components

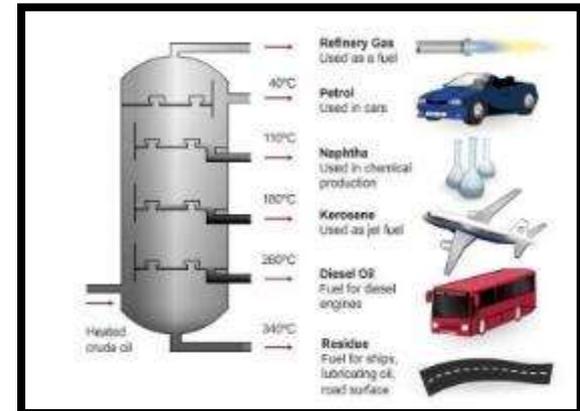
Upstream Sector

The upstream is usually known as the exploration and production (E&P) sector. It includes the searching for potential underground or underwater oil and gas fields, drilling of exploratory wells, and subsequently drilling and operating the wells that recover and bring the crude oil and/or raw natural gas to the surface

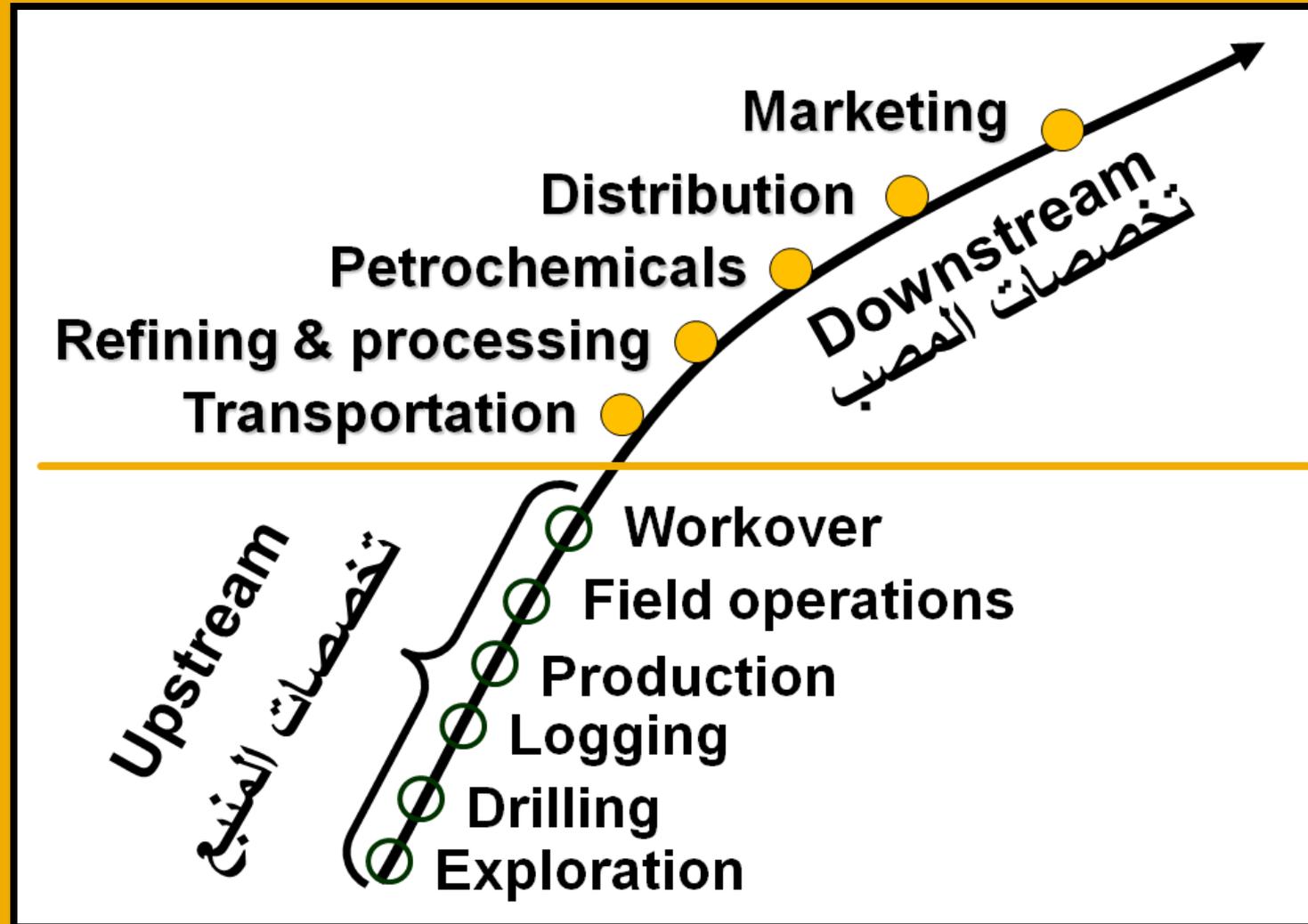


Downstream Sector

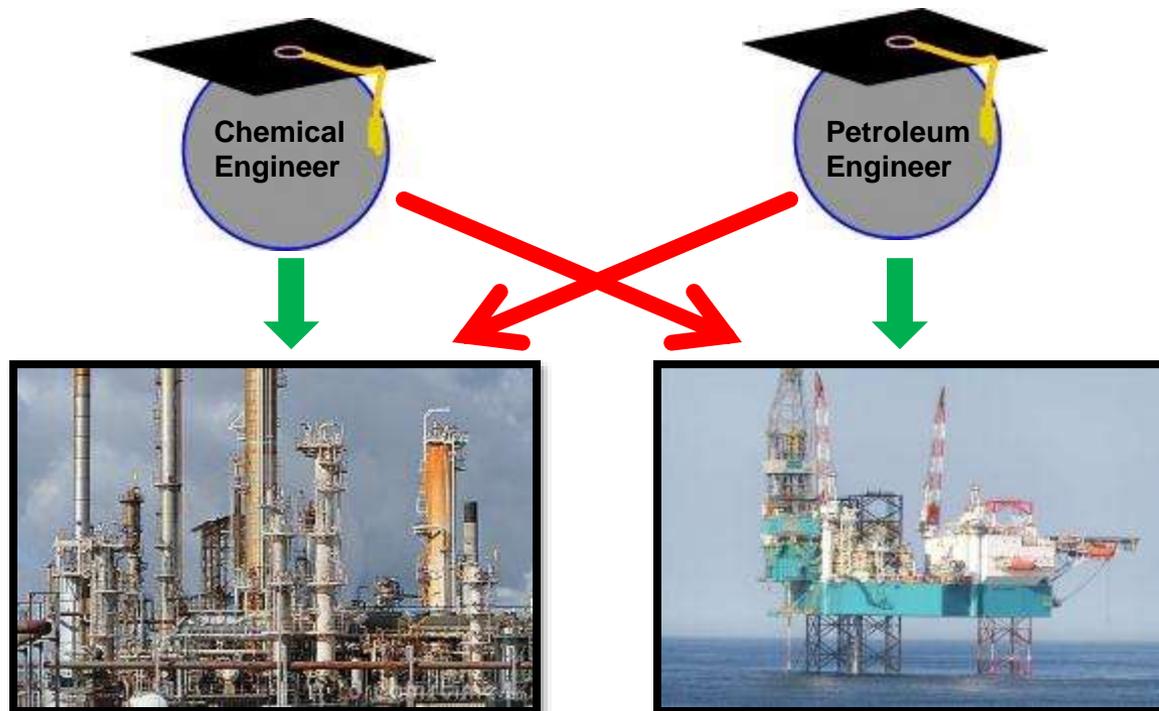
The downstream sector includes oil refineries, petrochemical plants, and touches every province and territory-wherever consumers are located-and provides thousands of products such as gasoline, diesel, jet fuel, heating oil, asphalt, lubricants, synthetic rubber, plastics, fertilizers, antifreeze, pesticides, pharmaceuticals, natural gas and propane.



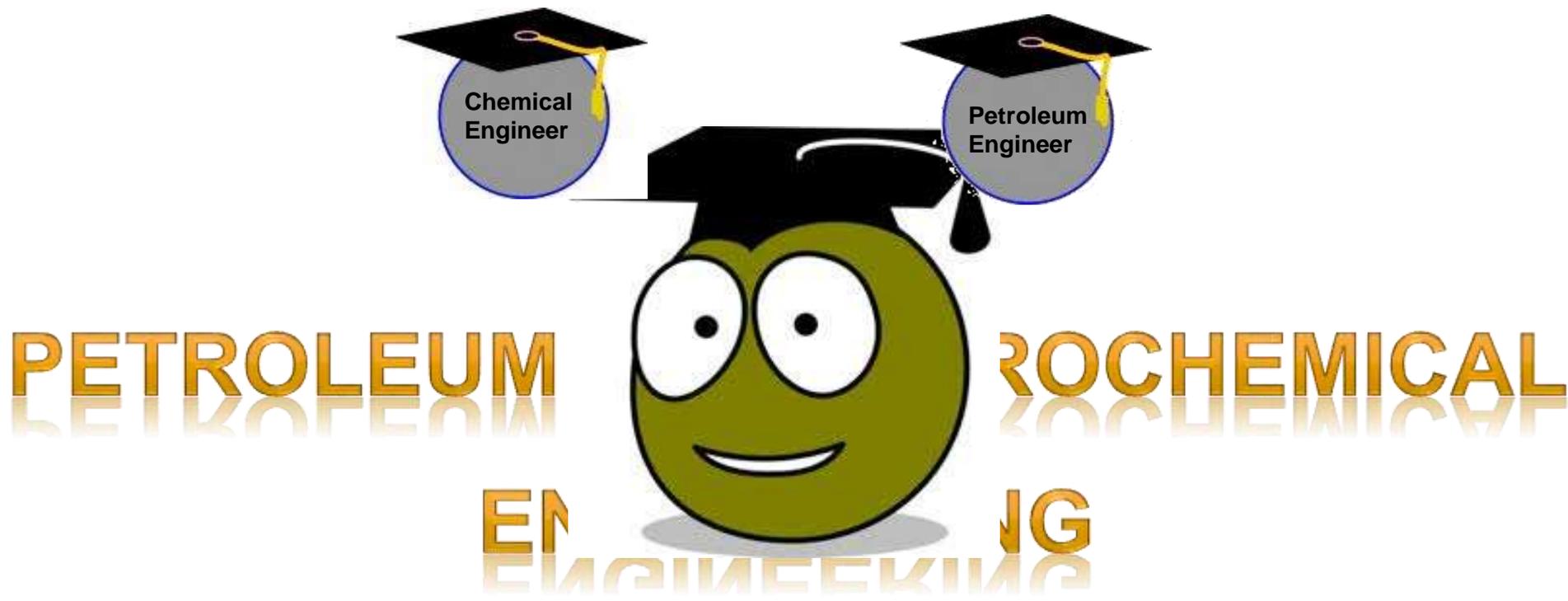
Petroleum Related Operations



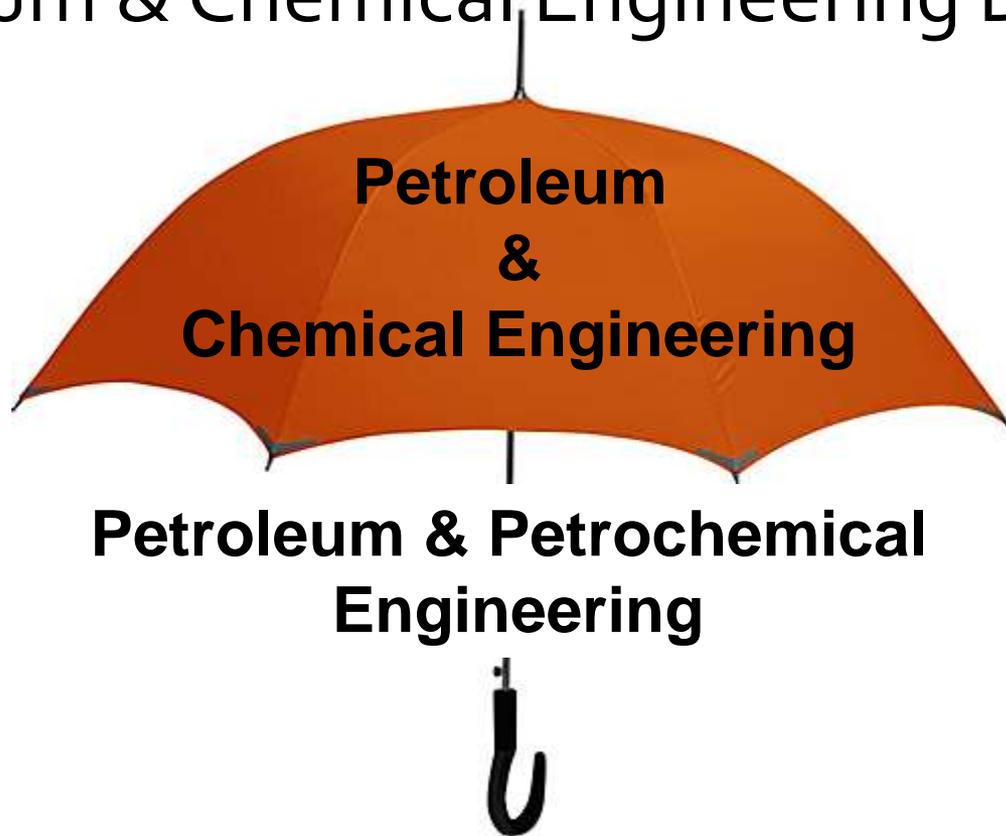
- Usually chemical engineering graduates work in the downstream sector while petroleum graduates work in the upstream sector.
- In many cases, graduates from the petroleum engineering department had to assume responsibilities in refining and petrochemical plants while many chemical engineers have been assigned jobs in the prospecting and oil field operations.



- This situation called for the formation of a hybrid engineer combining the qualifications of both disciplines.



- The Petroleum and Petrochemical Program is a credit hour system under the umbrella of both Petroleum & Chemical Engineering Departments



Petroleum and Petrochemical Engineering

The Petroleum and Petrochemical Engineering is a discipline that integrates knowledge and skills required for both upstream and downstream industries of oil and gas. Graduates will major in either of the following:

- Petroleum Engineering (PPC-P), Upstream.
- Petrochemical Engineering (PPC-C), Downstream.



Thus, graduates majoring in either upstream or downstream industries of oil and gas will in the same time acquire the background of the other and thus improving fieldwork flexibilities in career development.

Coordinator

Main Coordinator



Prof. Mai Fouad

Petroleum Track Coordinator



Prof. Eissa Shokeir

Petrochemical Track Coordinator



Dr. Ayat Ossama

Companies Related to Upstream

- Exploration and Production (E&P) Joint venture (eg. Khalda, Gupco, Petrobel,.....)
- Drilling Contractor (EDC, ECDC, Senotharwa, Weatherford,)
- Service Companies (Schlumberger, Baker,)



Companies Related to Downstream

- Refineries: eg. Cairo Mostorod Refinery, Alexandria Ameriya Refinery, Alexandria Midor Refinery,.....
- Natural Gas Processing: e.g. RASGAS, GASCO, SEGAS,.....
- Petrochemicals: Styrenics, Methanex,....
- Distributors: EgyptGas,
- Design: ENPPI,....



When do I have to choose the major???



- Students have to choose the major once they choose the PPC program. Students are allowed to change the major only once.
- Students majoring in either upstream or downstream study the same courses during the sophomore through Senior 1 levels.
- Thus graduates majoring in either upstream or downstream industries of oil and gas will in the same time acquire the background of the other and thus improving fieldwork flexibilities in career development.

Industrial Training



Bahaa Saeid



Ahmed Gamal



**Amr Kamal
(Segas)**



**Youssef
Selim
(Sino Tharwa)**



**Ali Hatem
(Weatherford)**



**Noura Zidan
(Agiba)**

Abroad Industrial Training





Azerbaijan, 2015



Field Trips

**Midor,
Alexandria**



**Oyoun
Moussa**

Conferences

La Semaine Économique - 2012



Waste Management & Renuable Development- 2013



Workshops

Michelangelo Workshop- Rome- 2015



Student Activities





SPE - Croatia - 2014



Student Activities



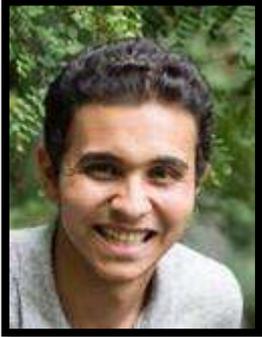
SPE - Poland - 2015





SPE - China - 2015

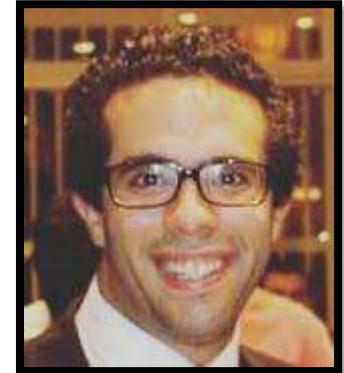
Graduates of 2016



Graduates of 2016



Graduates of 2016



Graduates of 2016



Weatherford[™]



EGYPTANODE
Egyptian Anode Block Co.



NPS
NPS Energy



thank
you