The current energy crisis has been precipitated by the limited availability of oil reserves and the accelerating demand of its products such as natural gas, liquefied petroleum gases, gasoline, and heavier constituents. When an oil field reaches the end of its normal life, two-thirds of its oil on average is still left in the ground because it is too difficult or too expensive to extract. But as the global energy demand increases, it is important to find ways of recovering more oil from existing resources. Modern techniques have been developed and employed on oil fields in recent decades for higher recovery of oil. These improved or tertiary methods are termed as enhanced oil recovery (EOR).

Enhanced oil recovery is oil recovery by the injection of materials not normally present in the reservoir. This definition embraces all modes of oil recovery processes (drive, push-pull, and well treatments) and covers many oil recovery agents. Most importantly, the definition does not restrict EOR to a particular phase (primary, secondary, or tertiary) in the producing life of a reservoir. Primary recovery is oil recovery by natural drive mechanism, solution gas, water influx, gas cap drive or gravity drainage. Secondary recovery refers to techniques, such as gas or water injection, whose purpose, in part, is to maintain reservoir pressure. Tertiary recovery is any technique applied after secondary recovery. While EOR methods can be applied at any stages of oil production.

The EOR mechanism is based on improvement of mobility ratio, reduction of interfacial tension between oil and water, wettability alteration, reduction of oil viscosity, formation of oil bank, etc.

**INTRODUCTION**

**OBJECTIVES**

Upon completion of this course, participants will be able to:

- Understand the basic mechanisms of different EOR processes.
- Understand the screening criteria of EOR processes.
- Have an idea related to the different steps to follow to implement different EOR processes.
- An overall knowledge on EOR Processes.

**COURSE CONTENTS**

- Chemical Process
- Solvent/Miscible Displacement Process
- Thermal Process
- Nanotechnology in EOR
- Low Salinity Water Flooding and Smart Water Flooding
- Techno-economic Feasibility Analysis

**DATE:** 11th October 2018  
**TIME:** 9.00am - 5.00pm  
**VENUE:** Level 16, Menara 2, Menara Kembar Bank Rakyat, Jalan Travers, 50470 Kuala Lumpur.
Dr. Ajay Mandal, an Associate Professor in the Department of Petroleum Engineering at the Indian Institute of Technology (ISM), Dhanbad, is a graduate from Calcutta University in Chemistry (Hons-1st Bronze medalist) and Chemical Engineering. He was awarded the Gold Medal as the best student in the Master’s Degree in Chemical Engineering from Jadavpur University, India. He obtained his PhD degree from IIT-Kharagpur and did his post-doctoral research in the same Institute as the DST Young Scientist.

Dr. Mandal is a recipient of the prestigious DAAD Fellowship of Germany in 2008. At present, he serves as Associate Dean (Sponsored Research) at IIT (ISM). Currently Dr. Mandal is carrying out his research works on reservoir engineering, enhanced oil recovery, gas hydrates oil, water emulsion and multi-phase flow system. He has authored more than 150 research papers, books and book chapters.

Dr. Mandal has worked on more than 15 R&D projects and consultancy projects from different government funding agencies as well as oil & gas sectors. Dr. Mandal has also been awarded with the 2015 SPE South Asia Regional Distinguished Achievement Award for Petroleum Engineering Faculty; IICHE (Indian Institute of Chemical Engineers) Award for the Year 2017; The Inder Mohan Thapar Foundation (IMTF)” Research Award from IIT(ISM) for the year 2016-17 and 17-18. Dr Mandal has also reviewed many International Journals as well as in editorial board.

HOW TO APPLY

Email to cape@utp.edu.my for registration by 27th September 2018.

Seats are limited. A seat will be confirmed once the payment / LOU is received. Confirmed participants will be informed via email.

WHO SHOULD ATTEND?

Reservoir engineers, production engineers, petro-physicists, geologists and geoscientists who are interested in enhanced oil processes and development of mature oil fields, postgraduate students in petroleum engineering

COURSE FEES

* RM 1,050 (Professionals)
* 10% Discount (UTP Alumni, PETRONAS, & Group Registrations)
* 20% Discount (Students)

Course fee is inclusive of 0% GST.
Group registrations are applicable to 3 pax and above from the same company.
The fees include refreshments and the course materials.
A certificate of attendance will be issued upon successful completion of the course.

CONTACT DETAILS

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