



UNIVERSITI  
TEKNOLOGI  
PETRONAS

A 2-Day Short Course on

# HEAT INTEGRATION FOR PROCESS INDUSTRIES: CONCEPTS TO REALITY

**HRDF CLAIMABLE**

Organized by Centre for Advanced and Professional Education (CAPE) Universiti Teknologi PETRONAS  
(HRDF Registered Training Provider as Institute of Technology PETRONAS Sdn Bhd (ITPSB)-352875U)



## INTRODUCTION

This course is designed to provide knowledge and skills to participants for applying the heat integration concept in designing an optimum process flowsheet for minimum energy consumption. This course covers minimum utility targeting, design and optimization of heat exchanger network, as well as network retrofiting.

## OBJECTIVES

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

- ◆ To apply the heat integration concept in designing an optimum process flowsheet for maximum energy savings
- ◆ To apply the integration techniques into design projects

## COURSE CONTENTS

- ◆ Overview of process integration as a tool to reduce energy consumption in process industry
- ◆ Setting the minimum utility targets
- ◆ Multiple utility optimization
- ◆ Heat Exchanger Network design
- ◆ Process modification and retrofit
- ◆ Integration of processes
- ◆ Industrial applications and case studies

DATE: 25-26<sup>th</sup> November 2019

TIME: 9.00am - 5.00pm

VENUE: Level 16, Menara 2, Menara Kembar Bank Rakyat, Jalan Travers, 50470 Kuala Lumpur.

## COURSE TRAINERS



**Zulfan Adi Putra, PDEng** is a senior lecturer at the Chemical Engineering Department of Universiti Teknologi PETRONAS, Malaysia. His areas of teaching and research are process synthesis and design, process modeling and simulation, process optimization, pinch analysis, and process integration. For almost a decade before being a lecturer, he was a process engineer and a consultant for various chemical companies in The Netherlands such as Trespa International, AkzoNobel, SABIC, Momentive, SC Johnson, DSM, and Hexion. He has been involved in different phases of chemical lifecycle such as research and development, feasibility studies, conceptual design, basic engineering, plant modeling and optimization, troubleshooting, as well as techno-economic analysis.



**Ir. Fadzrul Izwan Muhd Ali** is a Staff Engineer in the area of Process Simulation and Optimization with PETRONAS Group Technical Solutions. He graduated as a Chemical Engineer from UMIST in 1997 before receiving an MSc in Process Integration from the same university in 1998. Across his career in PETRONAS, he has applied steady-state and dynamic modelling approach for various process troubleshooting, investigation, improvement and engineering projects. His focus area is utility and cogen system modelling, monitoring and optimization. He previously worked with SIRIM Berhad as a Research Engineer for natural product processing development.



**Dr. Nor Erniza Mohammad Rozali** is currently a lecturer at the Chemical Engineering Department, Universiti Teknologi PETRONAS, Malaysia. Her core expertise is in the area of process systems engineering for resource conservation, as well as for energy planning and management. She is among the key pioneers in the development of Pinch Analysis extension for power system network. Her research on Power Pinch Analysis (PoPA) is a breakthrough in Pinch Analysis development, which has resulted in a suite of PoPA tools for planning, targeting, design and optimization of hybrid power systems. She has also involved in providing professional services to local and multinational companies such as SIRIM and PERTAMINA Indonesia.

## HOW TO APPLY

Email [cape@utp.edu.my](mailto:cape@utp.edu.my) for registration by **11<sup>th</sup> November 2019**. Seats are limited. A seat will be confirmed once the payment / LOU is received. Confirmed participants will be informed via email.

## WHO SHOULD ATTEND?

- Plant engineers
- Executives
- Managers,
- Post-graduate students
- Researchers

## COURSE FEES

- \* **RM 1,680** (Professionals)
- \* **10% Discount** (UTP Alumni, PETRONAS & Group Registration)
- \* **20% Discount** (Student)

Course fee is not inclusive of 6% SST.

Group registration is applicable for 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

### Course Coordinator:

Dr. Zulfan Adi Putra  
Tel: +605-368 7562  
Email: [zulfan.adiputra@utp.edu.my](mailto:zulfan.adiputra@utp.edu.my)

### Course Registration:

Mr. Farhan Zulkefly  
Tel: +603-2276 0136 / +60143150602  
Email: [farhan.zulkefly@utp.edu.my](mailto:farhan.zulkefly@utp.edu.my)