

# EXCEL THROUGH UTP CIVIL ENGINEERING PROGRAMME

Universiti Teknologi PETRONAS (UTP) firmly believes that knowledge without application is like a book that is never read.

And so UTP has put together a Civil Engineering Programme that not only focuses on research and education but more importantly is relevant to industry and develops skilled human capital. This is a noteworthy point of difference which sets the university apart from many other conventional academic programmes that mainly emphasises on teaching and research activities.

UTP's Bachelor of Engineering (Honours) in Civil Engineering programme offers an honours degree as well as Masters and PhD postgraduate courses. These latter are research based with the taught courses expected to begin in September 2014. Presently, this engineering programme is the only one that offers major electives related to specific Oil and Gas industry requirements.

Students who choose to earn their civil engineering degree from UTP are immersed in real time environments which enhance their knowledge of the engineering and design industry, while also exposing them to working in teams, as they would in the actual job environment.

A very significant portion of the programme is the Civil Engineering Design project called Capstone I and II, a two-semester group activity which exposes them to working on actual buildings on land or on an offshore platform.

This Capstone in Civil is by far the most extensive course undertaken by final year engineering undergraduates. It is an invaluable hands-on experience that takes them through the entire design process from site planning to submission to local authorities, really offering them a feel of the actual work environment.

## UTP Civil Engineering undergraduates can specialise in any of these 4 areas:

- Offshore Engineering
- Coastal Engineering
- Sustainable Development and Construction
- Environmental Pollution Control

The university's focus areas, particularly in reserach is directed to Offshore Engineering and Deepwater Offshore structures in line with the needs of PETRONAS and the National Key Economic Area (NKEA). Meanwhile majors in Sustainable Development and Construction concentrate on courses which focus on sustainability and the latest technology in the industry i.e. Building Information Modelling (BIM).

## Collaboration

To widen student exposure to the industry, UTP partners with numerous industries across the board and these encompass government agencies, academic institutions and commercial partners.

Among some of the institutional and government collaboration are those with MOGSC, MSSA, SIRIM, the National Oceanography Directorate in MOSTI, and JKR. Academically, UTP has tieswith local universities such as UNITEN and UTM, and foreign institutions including PUSAN National University, Korea Maritime Offshore University, University of Stavanger in Denmark, NUS, and Texas Tech University.

Strategic alliances with various oil and gas industries both locally and abroad also greatly contribute to the education and development of the engineering student, providing them with valuable experience in

the industry. Some of UTP's strategic partners are PETRONAS Carigali, Sapura-Kencana, MISC, Platform Brokers Netherlands, Shell, and Aker Solutions, among many others.

A chair from Technip is also parked under the Civil Engineering Department, offering valuable insight into industry needs and requirements to increase industry-relevant skills and employability of the undergraduates.

## Noteworthy Achievements of the Department

Initiated to meet the needs and to develop human capital in civil engineering, UTP's Civil Engineering Department has reached significant milestones. Today, it is playing a key role in nurturing skills and competency, especially for the oil and gas sector which is a NKEA.

UTP has the mandate to implement the objectives and goals of the Advanced Engineering, Science and Innovation Discipline Sector and is greatly contributing to filling the skills gap in project management skills and other technical and engineering skills related to civil engineering.

The Offshore Engineering Centre of UTP (OECU) within the Civil Engineering Department is another example of collaboration with various industrial and institutional partners, both local and foreign, to meet the increasing demand and competency required in the industry.

Having secured 13 research oriented projects and 26 joint Industrial Partnerships and consultancy projects with grants worth RM6.937 million in just 4 years, the OECU provides another opportunity for students to learn and work within the Civil Engineering Programme with a flavour for Offshore Engineering.

All these come together to bring the best of knowledge and practical

application which effectively nurtures and trains some of the best civil engineers Malaysia produces.

## UTP's Success Stories



**Azhari Haron, (CEng MIMarEst) Structural Integrity Engineer, Talisman Malaysia Limited (Graduated in 2004)**

Azhari, a successful UK Chartered Engineer within the oil and gas industry, commends UTP for including an excellent internship opportunity in its Civil Engineering programme. He is grateful for his time at the university which he says has moulded him to become the success he is today, both as a professional and a person.

"I feel really fortunate that I obtained my engineering degree at UTP. The university has excellent learning opportunities and teaches

undergraduates to multi-task. I am truly proud to hold a degree from UTP.

I am grateful that I can effectively contribute not only to the company I work with, but also to the community and nation as well."



**Ong Shiou Ting, Material and Corrosion engineer (Graduated in 2010) works currently at PETRONAS Carigali Sdn Bhd**

She received both her Bachelor and Masters Degree in Civil Engineering from Universiti Teknologi PETRONAS.

I started working at Bluescope Lysaght (M) Sdn. Bhd, a manufacturer of steel building products after I completed my Bachelor degree. During that period, I continued with my Masters degree on part time basis. Upon completion, I decided to move to the oil and gas industry. Hence, I joined PETRONAS in Dec 2012.

"UTP is the perfect fit for students that are dedicated in their studies and career path, able to play hard but work harder and has an appreciation for diversity."