BP Design and Professional Skills Programme

Through a unique partnership with BP, the University of Birmingham is proud to offer the BP Design and Professional Skills (BP-DPS) Programme - a structured theme running throughout the first three years of the undergraduate Mechanical Engineering degree.

Throughout the BP-DPS Programme, Mechanical Engineering undergraduates will have the opportunity to apply academic learning to real life engineering challenges and relate classroom theory to industrial case studies from the experiences of one of Britains largest companies.

BP's business is the exploration, production, refining, marketing, trading and distribution of energy, and it is done on a phenomenal scale. BP owns or part-owns 17 refineries around the world, operates tens of thousands of miles of pipelines and runs a fleet of more than 80 ships. BP produces about 4 million barrels of oil equivalent per day and owns world-leading brands, such as BP, Amoco, Aral and Castrol serving millions of customers each day.

The BP-DPS programme consists of three main elements which follow the progression of the undergraduate through the first three years of their mechanical engineering degree.

Element 1: BP Workshop Training

BP Workshop Training offers all first year Mechanical Engineering undergraduates hands-on experience turning a design concept into a finished, functional item using a variety of metalworking and joining techniques in a fully equipped workshop.

This kind of experience is invaluable for the developing mechanical engineer, a view shared by the University, BP and the IMechE.

Element 2: BP Guest Lectures

Visiting speakers from BP will deliver a series of engaging lectures within the department on a range of topics, selected in partnership with the University module coordinators. The lectures are highly relevant to Year 2 undergraduates and provide industrial context to back up classroom theory.

These interactive sessions will challenge the undergraduate engineer to apply their knowledge and skills to solve real world problems and get a taste of the critical role engineers play within a business as large and diverse as BP.

Past BP Guest Lecture topics include: Health Safety Security and the Environment, Project Management and Sustainability.

Element 3: BP Design Challenge

In teams, Year 3 undergraduates will execute a project to identify a market need, develop a novel solution to the problem and prepare and present a business case to compete for financing to commercialise the team's product solution. The financing is virtual, but there is a very real prize on offer. The winning MEng team* will be taken on an all expenses paid trip to a BP operating site somewhere in the UK to see first hand how BP operates at the forefront of its industry.

This assignment is a real challenge which requires the teams to successfully apply core engineering with a full range of other professional skills to meet the demanding scrutiny of the judging panel which will consist of both University of Birmingham academic staff and BP representatives.

A past BP Design Challenge prize was a visit to BP Wytch Farm, known as "The Hidden Oilfield" and site of Western Europe's largest onshore oil production facility.

* BEng submission requirements will be different, so BEng entries will be judged separately and an alternative prize will be offered for the winning BEng team.