

Consortium of Companies Who Sponsor the MEng Innovative Manufacturing Engineering Programme <http://ime.lboro.ac.uk>

Richard Newman, Industrial Liaison Officer, engCETL, Loughborough University, November 2008

How a consortium of companies provide sponsorship and placements for students on the MEng Innovative Manufacturing Engineering (IME) programme in the Wolfson School of Mechanical and Manufacturing Engineering at Loughborough University.

Reasons for engagement

The Innovative Manufacturing Engineering (IME) programme is a unique MEng manufacturing degree within the Wolfson School of Mechanical and Manufacturing Engineering at Loughborough University. The course was launched in October 2003 and is supported by a consortium of eight companies; ArvinMeritor, Bentley, Perkins/Caterpillar, IMI, Indesit, Rolls Royce, Siemens Industrial Turbomachinery and GE Aviation/Smiths Aerospace. The consortium model is based on the sponsored degree programmes within the Department of Civil and Building Engineering at Loughborough University (see McCaffer – CS11).

MEng degree programmes at Loughborough usually involve four years of academic study, those with industrial experience usually involve an additional placement year and award the Diploma in Industrial Studies (DIS). The MEng IME programme successfully integrates both academic study and industrial experience in four years.

The IME degree was designed to give students an MEng with industrial

experience with sponsorship where the students have excellent employment prospects with high earning potential. The IME programme was created in partnership with the consortium companies because they want to recruit well qualified manufacturing engineering graduates and were keen to work with the University to support students with industrial placements and sponsorship. Students receive £1000 in each of their four years and the industrial placements throughout the course are also paid.

The engagement

In Part A (Year 1) the students spend two short placements with different companies. The first placement is for two weeks in January and the second placement is for four weeks during the summer vacation. In Part B/C, students spend at least 26 weeks with a sponsoring company - usually one of the two companies visited in Year 1 - involving 10 weeks during the summer vacation and 16 weeks during Semester 1 of Year 3. In Part A and Part B, each student receives sponsorship from the consortium, in Part C and Part D, students are sponsored by an individual company.

Many of the sponsoring companies are aiming to recruit future IME graduates and all of the companies are keen to play their part in attracting students to manufacturing engineering, to increase the pool of potential employees. Companies also benefit from having a student on placement who can work on a specific project but due to the low numbers of applicants this has not happened in all cases.

Students work on an individual project during their 26 week placement, which is assessed by their Academic Supervisor and their Industrial Supervisor. The student completes a project proposal form in cooperation with their Industrial Supervisor, which needs to be approved by their Academic Supervisor.

The placement is assessed using two modules, a Project module and a Personal and Professional Development module. The Project module involves the student writing a project thesis, initiative evidenced by visits, weekly email updates and a viva voce. The aim of the Personal and Professional Development module is “to develop interpersonal and vocational skills appropriate to the student’s intended career destination through experience of an engineering company” and “to record this development in a professional manner.” The module is assessed through a written company profile report, an oral presentation at the company, assessment of the student’s day to day performance, and a personal and professional development record.

Issues

There are a reducing number of applicants to manufacturing engineering degree courses and subsequently a smaller pool of students with good ‘A’ levels who might be suitable candidates for the IME programme. There are a relatively small number of students on the IME course and there is a need to increase the number of applicants for it to continue to be viable. The degree programme currently has 20 students; nine students on Part A, five students on Part B, three students on Part C and three students on Part D.

In order to promote the IME degree to potential students engCETL created a website and encouraged six current students to write a case study of their placement experience. The IME website and case studies are promoted through various University websites, undergraduate prospectus and the ‘Engineering Opportunities’ publication aimed at school leavers.

Benefits

Students gain experience in industry, further develop their employability skills, work with people with a wide variety of backgrounds and experience and gain contacts in the manufacturing sector. They often work on several projects that allow them to apply their knowledge and demonstrate their technical abilities. Students develop their written and verbal communication skills, presentation skills, time management skills and report writing skills.

Students often initially spend time on the production line to gain an insight in to the manufacturing process and work with a wide variety of people. They are treated like an employee of the company and often work with different departments and suppliers. They also usually benefit from internal and external training courses funded by their employer.

Companies gain a placement student who can work on a specific project for a 6 month period and can offer the student the opportunity of further employment during and after their degree. The department gains from closely working with manufacturing companies who provide sponsorship and placements for students as part of the degree programme.

Academic/Industrialist/Student perspective

I enjoy supporting the students and working with people from industry. I communicate with students on a weekly basis via email, visit students at least three times during their six month placement to discuss their projects and any issues they might have. I observe and

assess their presentation on my final visit to the company and also meet with their mentor and supervisor as appropriate.

Students gain in confidence, develop their employability skills, gain knowledge and earn a salary. They have the opportunity to impress a future employer who might be in a position to offer them employment after graduation.

Reflections

It provides the students with an industrial experience and the companies also gain from having a student work for them on a specific project. The tutors need to make it clearer to companies that they should try to make offers of employment to students as early as possible in their final two years of study otherwise they may look elsewhere for graduate employment.

Context

Richard Newman is the Industrial Liaison Officer in the engCETL located within the Faculty of Engineering at Loughborough University. Richard is a Visiting Tutor for the IME programme and since 2006 has supported students on placement at Indesit in Yate, near Bristol; Rolls-Royce in Derby and Siemens Industrial Turbomachinery in Lincoln. Case studies written by IME students whilst on placement are available from the IME website (<http://ime.lboro.ac.uk>).

