

Case Study - Network Rail and Sheffield Hallam University; Foundation Degree in Railway Engineering.

Introduction

Sheffield Hallam University developed a Foundation Degree in Railway Engineering jointly with Network Rail and other employers who have responsibility for the maintenance and renewal of the railway infrastructure, including Jarvis Rail, Balfour Beatty Rail and Grant Rail. In October 2002 Network Rail took over the running of Britain's rail infrastructure and its mission is to provide a safe, reliable and efficient railway fit for the 21st century.

There are two study routes for the Foundation Degree in Railway Engineering: a part time route and a full time route. The part time route is aimed at those who are employed in the industry and have the support of their employer. The full time route is aimed at those who plan to enter the industry.

Background

The Foundation Degree in Railway Engineering:

- was developed between 2001 and 2004 in response to the industry need for more rail specific and work-based qualifications;
- aims to produce 'home grown' hands-on technicians and engineers, nurtured from within the business; with the skills, knowledge and experience that can only be gained from a formal and structured development process;
- is part of a new approach to recruitment and development and our ability to offer a wide range of options to school leavers and mature applicants.

Business impact

- helps to address the engineering skills shortage;
- vehicle to attract and train new starters;
- teaches rail specific engineering;
- generates awareness of other engineering disciplines;
- cost effective alternative to graduate recruitment;
- opportunity to 'grow our own' graduate engineers;
- complements our other development programmes;
- centre of excellence for existing employees;
- networking opportunity for students across engineering disciplines and business functions;
- encourages movement within the business, employee development and career progression.

Learning at university

From September to March the students study at the university. *"Every Wednesday is designated an 'industry day' when senior managers deliver presentations, engineers give technical talks and hold workshops, or students make industrial site visits."*

Learning in industry

From April to September the students spend time in the workplace rotating around the different engineering functions.

Specialisms

There are four specialist routes which are; signal engineering; civil engineering, track engineering; and electrical and mechanical engineering.

Sheffield Hallam University

Sheffield Hallam University is proud to be associated with the Foundation Degree in Railway Engineering. The close collaboration between Network Rail, Jarvis Rail, Balfour Beatty and the University has been instrumental in the design and implementation of a course that satisfies the needs of industry. The course has provided challenges to the University, in terms of the module delivery patterns and the significant elements of work-based learning, but these problems have been resolved, to the satisfaction of all parties.

We will continue to develop our relationship with the rail industry, and look forward to the launch of the BEng (Hons.) degree in Railway Engineering at Sheffield Hallam University in January 2008.

Interview with a current student

Interviewed at the end of his 1st Year, age 27
FdEng Railway Engineering (Signalling Engineering Route)

"I was first attracted to the foundation degree, because I wanted to get into the industry at the right level, but I had no relevant experience. I have found the University is much less daunting than I had originally imagined and I have particularly enjoyed the weekly guest speakers who have visited in the first year. They have passed on invaluable industry stories and advice.

I have recently started the work placement in signalling, which has been an interesting and comprehensive introduction to working in the rail industry. Everyone has been really friendly and willing to answer my endless questions! I am currently working in signalling and I will soon be moving on to track renewals. I am originally from Leeds and it is an added bonus that I am based in Leeds, which means I have been able to move back home.

So far, the whole experience has been great fun, especially the university learning. The course is very social, and our entire group meets up to go out regularly. We are all on work placements and spread throughout the UK, but we are still keeping in close contact, helping each other with problems and making sure we know what everyone else is up to.

I have had little time to get the hands-on experience in all the different areas the course covers, so I am a little unsure of what I want to specialise in when I graduate. I just know I want to succeed in engineering and go as far as I can. I know the Railway Engineering course will help me do that."