

Construction

Foundation Degree, BEng and BSc (Hons) in Building Services

INSTITUTION

Liverpool John Moores University

SKILLS DEMAND

The fundamental employer need was to have clearly established progression routes for a range of entry points for new and existing employees to building services contractors and consultants.

This project aims to develop two new progression routes from an existing Foundation Degree (FD) in Building Services Engineering, which is currently offered in collaboration with Liverpool Community College. The two new progression routes will be a BEng (Hons) Building Services Engineering, which will aim to achieve Chartered Institution of Building Services Engineers (CIBSE) accreditation, and a BSc (Hons) Building Services Project Management. The project will also review the curriculum of the existing FD to broaden its scope to include developing environmental technologies, and in light of revised National Occupational Standards, established by employers in the sector.

COLLABORATIVE ACTIVITY

A Steering Group with membership representing all sides of the building services industry (20+ employers plus academic, Sector Skills Council and CIBSE representatives) has met and initial feedback supports the need for the project.

A Correspondence Group of a further 40+ organisations (contractors and consultants mainly in North West England but also in South East) has been established to provide wider feedback on industry requirements.



"The foundation degree provided me with a convenient stepping stone from which I could easily progress to degree level studies and fulfil my desire to graduate as a 21st century engineer."

Mike Travis,
Level 3 Building Services Engineering student at LJMU. Mike has progressed during his studies from being a site operative to now carrying out a responsible role with a consultancy.

SummitSkills, the Sector Skills Council for the Building Services Industry, has been consulted in a number of formal and informal meetings to guide the direction of the project.

Employers involved include: Faber Maunsell, Haden Young, WSP Group, Steven A Hunt & Associates, Kimpton Building Services.

INNOVATIVE FEATURES

- Steering Group members have agreed to provide occasional specialist lectures, contribute real project information and drawings for student projects, set scenarios for student work and act as workplace mentors.
- Vocational relevance is a central theme of the programmes, which are to be offered as a mixture of part and full-time attendance modes with sandwich options, to those students who are both employed by Building Services Engineering organisations and new entrants to the industry.
- There is always a tension between any vocational academic education programme's aims and the parent industry, the pivotal issue being the relevance and currency of course content. The programme team considers that by maintaining a regular dialogue with its industrial advisory group, these concerns may be adequately answered.
- Contact with employers and local FE colleges would suggest that there are large numbers of people at various stages of their career, holding a variety of qualifications in Building Services Engineering and related disciplines, who seek professional and personal advancement. LJMU's suite of programmes seeks to offer suitable progression routes for such people. APEL procedures will therefore be utilised thoughtfully to facilitate entry to various stages of the programmes in a flexible and responsive manner.
- Students on these programmes will undertake group or individual projects at every level of study. These projects are designed to simulate 'real life' situations and will introduce students to the pressures of time management and team working that they will face in industry.
- Students will be encouraged, when carrying out design work, to use industry standard building services design, building modelling and energy analysis software, which has been made available on the University network.

TARGET AUDIENCE

This course applies to new and existing employees of building services contractors and consultants.

Initially the courses introduce students to the built environment and sustainability in buildings, as well as the main principles of engineering. The basic tools needed by today's engineer, such as CAD drafting skills, mathematics, and scientific and engineering principles are developed, along with the study of sustainable energy technologies. These core topics build a firm foundation upon which more focussed and in-depth learning can take place in subsequent studies.

As students progress, those following the engineering pathways are given the opportunity to specialise and study the specifics of energy efficient and sustainable building services systems in the mechanical or electrical engineering services fields, while BSc (Hons) students will specialise in building services project management and the more commercial aspects of the industry. Students' skills in these vocationally focussed subjects are contextualised along with prior theoretical work, through the completion of multi-disciplinary projects. Later on in their studies, students have the opportunity to choose specialist optional modules which reflect their own interests and career aspirations, and more self-directed research into relevant areas of particular interest is encouraged.

It is the intention of the course team that these programmes be vocationally relevant such that graduates at FdSc, BSc (Hons) and BEng (Hons) possess not only theoretical knowledge, but also the practical skills necessary to be immediately operationally competent in their chosen profession.

WHO CAN I CONTACT FOR MORE INFORMATION?

For more information about this course development, please contact: Laurie Brady on **0151 231 2848**, email **L.J.Brady@ljmu.ac.uk** or Derek King on **0151 231 2845**, email **D.C.King@ljmu.ac.uk**