Programme Specification Document

Approved, 2022.02

Overview

Programme Code	36296
Programme Title	Architectural Engineering
Awarding Institution	Liverpool John Moores University
Programme Type	Level 3/4/5 Qualification
Language of Programme	All LJMU programmes are delivered and assessed in English
Programme Leader	
Link Tutor(s)	Karl Jones

Partner Name	Partnership Type
International College of Business and Technology	Validated

Awards

Award Type	Award Description	Award Learning Outcomes
Target Award	Higher Diploma - HD	See Learning Outcomes Below
Alternative Exit	Certificate of Higher Education - CHE	Demonstrate a knowledge of the underlying concepts and principles associated with Building Services Engineering, and an ability to evaluate and interpret these within that context. Demonstrate a knowledge of the underlying concepts and principles associated with Building Services Engineering, and an ability to evaluate and interpret these within that context. Evaluate the appropriateness of different approaches to solving problems related to Building Services Engineering. Evaluate the appropriateness of different approaches to solving problems related to Building Services Engineering. Communicate the results of their study accurately and reliably using structured and coherent arguments. Communicate the results of their study accurately and reliably using structured and coherent arguments. Demonstrate the qualities and transferable skills necessary for employment requiring the exercise of some personal responsibility. Demonstrate the qualities and transferable skills necessary for employment requiring the exercise of some personal responsibility.

Alternate Award Names	

External Benchmarks

Subject Benchmark Statement	UG-Engineering (2019)

Programme Offering(s)

Mode of Study, Mode of Delivery	Intake Month	Teaching Institution	Programme Length
Full-Time, Face to Face	May	ICBT, Colombo	18 Months
Full-Time, Face to Face	September	ICBT, Colombo	18 Months

Aims and Outcomes

Educational Aims of the Programme

The overall aim of the programme is to develop knowledge, understanding and intellectual and practical skills appropriate to a variety of roles within the Building Services Engineering sector at levels 4 and 5. The intention is to provide a stimulating and challenging programme of study that accurately reflects the activities in the Building Services Engineering industry and prepares students for effective, productive and responsible employment in the sector and/or progression to level 6 studies. The programme will offer the appropriate type and level of support as students build their knowledge, understanding and skills to become independent learners for the future. Since the programme has a bias towards providing students with engineering skills and knowledge and the design of engineering services systems for buildings, it is suited to those employed in or seeking employment in the design and consultancy arm of the Building Services Engineering industry. The specific aims of the programme are to provide: 1. A programme of study in Building Services Engineering which facilitates acquisition of the essential skills and knowledge of the subject supported by industry. 2. An awareness of existing and future issues in the construction and property industry and how they are likely to impinge on the role and function of the Building Services Engineer. 3. Opportunities for development of the student's interpersonal and communication skills, with special reference to aspects of Building Services Engineering, Technology, Design and Management. 4. Raised awareness of the responsibilities of the Building Services professional in relation to sustainability, energy efficiency and environmental issues within the built environment. 5. To prepare students for the transition from Higher Education to employment within a professional context; and develop those transferable, specialist and employability skills that all stakeholders could reasonably expect of students who successfully complete a Building Services Engineering programme.

Learning Outcomes

Code	Description
PLO1	Apply mathematical and scientific skills that are relevant to the various disciplines within the Building Services Engineering industry.
PLO2	Prepare technical reports/drawings appropriate for a range of technical and non-technical purposes.

Code	Description
PLO3	Make technical presentations to specialist and non-specialist audiences.
PLO4	Work as an effective member of a team.
PLO5	Use appropriate mathematical methods for analysing Building Services Engineering problems.
PLO6	Use industry best practice procurement and managerial techniques.
PLO7	Apply appropriate economic and environmental principles to Building Services Engineering design.
PLO8	Identify ways to improve their own learning.
PLO9	Use information and communications technology effectively.
PLO10	Manage resources and time effectively.
PLO11	Transfer techniques and solutions from one field of engineering to another.
PLO12	Apply the fundamental concepts, principles and theories of Building Services Engineering.
PLO13	Manipulate and sort data.
PLO14	Present data in a variety of ways.
PLO15	Work effectively with others.
PLO16	Apply appropriate legal, economic, design, environmental business and management techniques that are relevant to Building Services Engineers and other professionals working within the construction and building services industries.
PLO17	Demonstrate a detailed knowledge and critical understanding of the essential facts, concepts, principles and theories relevant to the Building Services Engineering profession.
PLO18	Apply technical solutions to problems.
PLO19	Apply project management skills related to Building Services Engineering projects in the construction sector.
PLO20	Apply appropriate Engineering solutions to real industrial needs.
PLO21	Use standard as well as specialist building services engineering, commercial or construction computational tools and packages effectively.
PLO22	Analyse surveys, reports, data, information and experimental results accurately.

Programme Structure

Programme Structure Description

Structure - 240 credit points	
Level 4 - 120 credit points	
Level 4 Core - 120 credit points	CORE
[MODULE] 4500ICBTBS Construction Technology Approved 2022.01 - 15 credit points	
[MODULE] 4501ICBTBS Introduction to Building Services Approved 2022.01 - 15 credit points	
[MODULE] 4502ICBTBS Management Studies Approved 2022.01 - 15 credit points	
[MODULE] 4503ICBTBS Engineering Principles Approved 2022.01 - 15 credit points	
[MODULE] 4504ICBTBS Building Services I Approved 2022.01 - 15 credit points	
[MODULE] 4505ICBTBS Building Services Drawing (CAD) Approved 2022.01 - 15 credit points	
[MODULE] 4506ICBTBS Procurement and Contracts Approved 2022.01 - 15 credit points	
[MODULE] 4507ICBTBS Science and Materials Approved 2022.01 - 15 credit points	
Level 5 - 120 credit points	
Level 5 Core - 120 credit points	CORE
[MODULE] 5500ICBTBS Building Services II Approved 2022.01 - 15 credit points	
[MODULE] 5501ICBTBS Facilities Management Approved 2022.01 - 15 credit points	
[MODULE] 5502ICBTBS Energy Management Approved 2022.01 - 15 credit points	
[MODULE] 5503ICBTBS Sustainable Built Environment Approved 2022.01 - 15 credit points	
[MODULE] 5504ICBTBS Building Services III Approved 2022.01 - 15 credit points	
[MODULE] 5505ICBTBS Building Automation Approved 2022.01 - 15 credit points	
[MODULE] 5506ICBTBS Building Maintenance Approved 2022.01 - 15 credit points	
[MODULE] 5507ICBTBS Group Project Approved 2022.01 - 15 credit points	

Module specifications may be accessed at https://proformas.ljmu.ac.uk/Default.aspx

Approved variance from Academic Framework Regulations

Variance
A variance has been approved to allow the inclusion of 15 credit modules in this programme.

Teaching, Learning and Assessment

The programme will be delivered using a mixture of lectures, tutorials, workshops, laboratory practical classes and design studio sessions. All aspects of the programme will seek to develop vocationally relevant skills and knowledge. Assessment will be carried out using a mixture of examinations and coursework; specifically assessments could consists of formal unseen examinations, in-class open book tests, online multiple choice tests, technical written reports and simulated design projects.

Opportunities for work related learning

Modules and assessments have been carefully planned to mimic real projects that the student would encounter in the workplace wherever possible.

Entry Requirements

Type	Description
Alternative qualifications considered	Completion of 13 years of formal education in Sri Lanka (or equivalent) and have studied A levels in subjects that include Maths, a Science or Technology.Ordinary level qualifications plus the successful completion of a NARIC approved Foundation programme in a construction subject.A programme of study that is equivalent to a UK level 3 qualification.
Other international requirements	English Language requirements: Students are required to have a minimum English language level of Sri Lankan General Certificate of Education (Ordinary Level) English Grade C or above, or a pass in the ICBT Academic English Studies course or recognised equivalent, such as the below: • GCSE/O-Level in English from a UK awarding body grade C • IGCSE English as a First Language grade C • IGCSE English as a Second Language grade C • Internet based TOEFL with an overall score of 72 (UG), 79 (PG) including 17 in Listening, 20 in Writing, 18 in Reading and 18 in Speaking • Pearson Test of English (PTE) • International Baccalaureate (Standard Level Grade 5/Higher Level grade 4 in English) • Cambridge Advanced English Grade C (minimum of “weak” in all four components (listening, reading, speaking and writing). Mature entry: In exceptional circumstances, candidates with non-standard qualifications, may qualify for entry to the course on the basis of considerable work experience in the automotive engineering industry.

Extra Entry Requirements