

## Overview

<b>Programme Code</b>	36787
<b>Programme Title</b>	Sustainable Technologies
<b>Awarding Institution</b>	Liverpool John Moores University
<b>Programme Type</b>	Level 3/4/5 Qualification
<b>Language of Programme</b>	All LJMU programmes are delivered and assessed in English
<b>Programme Leader</b>	Graham Sherwood
<b>Link Tutor(s)</b>	Graham Sherwood

<b>Partner Name</b>	<b>Partnership Type</b>
Nelson and Colne College Group	Supported Distance Learning

## Awards

<b>Award Type</b>	<b>Award Description</b>	<b>Award Learning Outcomes</b>
Target Award	Higher National Diploma - HND	See Learning Outcomes Below
Recruitable Target	Higher National Certificate - HNC	See Learning Outcomes Below
Alternative Exit	Higher National Certificate - HNC	Apply a systematic approach to the acquisition of knowledge, underpinning concepts and principles and deploy a range of subject specific, cognitive and transferable skills. Evaluate the appropriateness of different approaches to solving well defined problems and communicate outcomes in a structured and clear manner. Identify and discuss the relationship between personal, and any workplace, experience and findings from books and journals and other data drawn from the field of study.

<b>Alternate Award Names</b>	
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## External Benchmarks

<b>Subject Benchmark Statement</b>	UG-Architectural technology (2019), UG-Engineering (2019), UG-Housing studies (2022), UG-Land, Construction, Real Estate and Surveying (2019), UG-Social Policy (2019), UG-Town and Country Planning (2019)
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## Programme Offering(s)

Mode of Study, Mode of Delivery	Intake Month	Teaching Institution	Programme Length
Part-Time, Distance Learning	January	Accrington Campus, Nelson and Colne College	4 Years
Part-Time, Distance Learning	September	Accrington Campus, Nelson and Colne College	4 Years
Part-Time, Distance Learning	January	Nelson Campus, Nelson and Colne College	4 Years
Part-Time, Distance Learning	September	Nelson Campus, Nelson and Colne College	4 Years

## Aims and Outcomes

### Educational Aims of the Programme

The general aims of the programme are:

- To provide students with the knowledge, skills, techniques and behaviours needed to support a career as a 'sustainability' professional.
- To provide a structured ladder of progression to well-rounded and valuable qualifications at levels 4 and 5, tailored to the needs of local and regional employers.
- To provide students with the maximum practicable flexibility of study (in terms of study mode, timescales and recognition of prior learning) thus enabling them to match their study commitments to personal needs and aspirations.

### Learning Outcomes

Code	Description
PLO1	Demonstrate understanding of the key issues and technologies related to sustainability in the workplace.
PLO2	Understand, select and apply appropriate technologies, processes and methods to improve sustainability in the workplace.

<b>Code</b>	<b>Description</b>
PLO3	Demonstrate an understanding of the need to enhance sustainability within the constraints of common business, commercial and financial environments.
PLO4	Recognise the responsibility that professionals have in designing, creating and maintaining sustainable solutions in the workplace, and how this can be discharged.
PLO5	Identify problems and apply appropriate methods to identify causes and solutions that enhance sustainability.
PLO6	Analyse, synthesise and summarise information from a variety of sources.
PLO7	Make valid recommendations in situations characterised by incomplete information, and technical and financial uncertainty.
PLO8	Demonstrate an understanding of the environmental impact of industry and commerce.
PLO9	Apply investigative methods and skills to sustainability problems.
PLO10	Assess emerging technologies and their likely impact in the workplace.
PLO11	Communicate appropriately with others in person, in writing and through ICT.
PLO12	Make effective use of IT.
PLO13	Demonstrate an ability to work collaboratively with people with different roles and from diverse backgrounds.
PLO14	Reflect on own performance, evaluate own capabilities, set personal targets and plan to achieve those targets.

## Programme Structure

### Programme Structure Description

Students will study 3 modules per academic year. None of the modules need to be completed in a particular order.

<b>Structure - 240 credit points</b>	
<b>Level 4 Core - 120 credit points</b>	<b>CORE</b>
[MODULE] 4557NCCG Individual Project and Introduction to Professional Skills Approved 2022.02 - 20 credit points	
[MODULE] 4558NCCG Introduction to Sustainability Approved 2022.02 - 20 credit points	
[MODULE] 4559NCCG Energy Supply Infrastructures Approved 2022.02 - 20 credit points	
[MODULE] 4560NCCG Sustainability in Buildings Approved 2022.02 - 20 credit points	
[MODULE] 4561NCCG Sustainability in Transport Approved 2022.02 - 20 credit points	
[MODULE] 4562NCCG Sustainability in Industry Approved 2022.02 - 20 credit points	
<b>Level 5 Core - 80 credit points</b>	<b>CORE</b>
[MODULE] 5563NCCG Investigative Project and Professional Skills Approved 2022.02 - 20 credit points	
[MODULE] 5564NCCG Renewable Energy Approved 2022.02 - 20 credit points	
[MODULE] 5565NCCG Smart Cities Approved 2022.02 - 20 credit points	
[MODULE] 5566NCCG Life-cycle Assessment Approved 2022.02 - 20 credit points	
<b>Level 5 Options - 40 credit points</b>	<b>OPTIONAL</b>
[MODULE] 5567NCCG Sustainable HVAC Systems Approved 2022.02 - 20 credit points	
[MODULE] 5568NCCG Application of Renewable Energy in Buildings Approved 2022.02 - 20 credit points	
[MODULE] 5569NCCG Smart Facilities Management Approved 2022.02 - 20 credit points	
[MODULE] 5570NCCG Future Vehicles Approved 2022.02 - 20 credit points	
[MODULE] 5571NCCG Green Aviation Approved 2022.02 - 20 credit points	
[MODULE] 5572NCCG Eco-friendly Manufacturing Approved 2022.02 - 20 credit points	

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

## Teaching, Learning and Assessment

Key themes of the teaching and learning strategy on this programme are:

- Varied assessment and feedback to enhance the experience of the student.
- The availability of flexible teaching and learning modes, using face to face, on-line and some blended learning.
- Student support through the use of structured and targeted tutorials.
- The development and application of theory into practice.
- The use of inclusive learning methods.
- Development of students' skills in making balanced fitness-for-purpose decisions.

Teaching sessions will allow for the introduction of new skills, techniques, concepts and theories to enable students to develop their own practice further. Learning and teaching opportunities will be designed to allow for the transfer of learning between the different modules and the integration of theory with practice.

Students will learn to produce employment-relevant outcomes, designs, presentations, reports and projects.

Students will be expected to think for themselves as independent learners, encouraged by using flexible teaching methods and varied methods of assessment.

Each stream has a mandatory synoptic task at each level. At level 4 this is an individual project. At level 5 students are introduced to the wider academic community through an investigative research project, which will contain a significant element of group work.

There is considerable diversity of delivery needs among the likely candidates for this programme. These include:

- Traditional full-time learners, mainly students progressing internally from level 3 awards.
- Day-release part-time learners, mainly those on day release from partner employers.
- Evening class students, principally either those in relevant employment whose employers will not release them during the day or those in other employment wishing to change careers.
- Those unable to study on a week-by-week basis but who could attend in week-long blocks.
- Those who wish to offset RPEL of their previous studies or experience against module learning outcomes.

This programme is intended to meet all of these needs. While the mode and timing of delivery may vary, all students will be assessed against the same learning outcomes and will have the same skills on exit.

## Opportunities for work related learning

An important element of the programme is practical experiential learning which is achieved and demonstrated through an engagement within college and a work based placement. Students are normally employed within a relevant industry and will fulfil the learning outcomes through their work based role.

Work-based learning is not restricted to work experience or placement learning. It also includes relevant and appropriate assessed theoretical learning which links academic study with work situations and issues.

## Entry Requirements

Type	Description
Alternative qualifications considered	Other qualifications such as Scottish Highers, Welsh Baccalaureate, Irish Leaving Certificates, International Baccalaureate, with the required UCAS points. Mature entry: Candidates are selected on the basis of their ability to cope with and benefit from the programme. Their suitability can be demonstrated either through previous educational achievement or through experience and aptitude.
UCAS points	Admission by prior qualification will normally require a minimum 32 UCAS Tariff points. Typically, points can be derived from: <ul style="list-style-type: none"><li>• One GCE A level or Vocational A level pass or equivalent.</li><li>• Two AS level passes.</li><li>• BTEC National Diploma/Certificate.</li></ul>
Other international requirements	Candidates whose first language is not English will be required to demonstrate English language competence equivalent to IELTS 5.5 or higher.

Access awards	A pass in a recognised Access course.
Relevant work experience	Admission by experience and aptitude will be based on the length and type of the candidate's employment experience and his/her ability to demonstrate an aptitude and enthusiasm for the subject. As part of this process, candidates may be required to undertake aptitude tests and/or to provide personal and/or employment references.

### **Extra Entry Requirements**