

# Industrial and Systems Sustainability

## Programme Information

2022.01, Approved

### Overview

Programme Code	36789
Programme Title	Industrial and Systems Sustainability
Awarding Institution	Liverpool John Moores University
Programme Type	Level 3/4/5 Qualification

### Awards

Award Type	Award Description	Award Learning Outcomes
Target Award	Higher National Diploma - HND	N/A

Alternate Award Names	
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Partner Name	Partnership Type
Nelson and Colne College Group	Supported Distance Learning

### External Benchmarks

Subject Benchmark Statement	UG-Architectural technology (2019), UG-Engineering (2019), UG-Housing studies (2019), 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 Programme Length Unit
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	<p>The general aims of the programme are:</p> <ul style="list-style-type: none"> <li>• To provide students with the knowledge, skills, techniques and behaviours needed to support a career as a 'sustainability' professional in industry</li> <li>• 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.</li> <li>• 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.</li> </ul> <p>Alternative Exit/ Interim Award Learning Outcomes - Higher National Certificate in Sustainable Technologies A student who is eligible for this award will be able to:</p> <p>Apply a systematic approach to the acquisition of knowledge, underpinning concepts and principles and deploy a range of subject specific, cognitive and transferable skills.</p> <p>Evaluate the appropriateness of different approaches to solving well defined problems and communicate outcomes in a structured and clear manner.</p> <p>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.</p>
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## Learning Outcomes

Code	Number	Description
PLO1	1	Demonstrate understanding of the key issues and technologies related to sustainability in industry.
PLO2	2	Understand, select and apply appropriate technologies, processes and methods to improve sustainability in the workplace.
PLO3	3	Demonstrate an understanding of the need to enhance sustainability within the constraints of common business, commercial and financial environments.
PLO4	4	Recognise the responsibility that professionals have in designing, creating and maintaining sustainable solutions in the workplace, and how this can be discharged.
PLO5	5	Identify problems and apply appropriate methods to identify causes and solutions that enhance sustainability.
PLO6	6	Analyse, synthesise and summarise information from a variety of sources.

PLO7	7	Make valid recommendations in situations characterised by incomplete information, and technical and financial uncertainty.
PLO8	8	Demonstrate an understanding of the environmental impact of industry and commerce.
PLO9	9	Apply investigative methods and skills to sustainability problems.
PLO10	10	Assess emerging technologies and their likely impact in the workplace.
PLO11	11	Communicate appropriately with others in person, in writing and through ICT.
PLO12	12	Make effective use of IT
PLO13	13	Demonstrate an ability to work collaboratively with people with different roles and from diverse backgrounds.
PLO14	14	Reflect on own performance, evaluate own capabilities, set personal targets and plan to achieve those targets.

## Course Structure

Programme Structure Description	Students will study 3 modules per academic year. None of the modules need to be completed in a particular order.
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<b>Structure - 240 credit points</b>	
<b>Level 4 Core - 120 credit points</b>	CORE
[MODULE] 4557NCCG Individual Project and Introduction to Professional Skills Approved 2022.01 - 20 credit points	
[MODULE] 4558NCCG Introduction to Sustainability Approved 2022.01 - 20 credit points	
[MODULE] 4559NCCG Energy Supply Infrastructures Approved 2022.01 - 20 credit points	
[MODULE] 4560NCCG Sustainability in Buildings Approved 2022.01 - 20 credit points	
[MODULE] 4561NCCG Sustainability in Transport Approved 2022.01 - 20 credit points	
[MODULE] 4562NCCG Sustainability in Industry Approved 2022.01 - 20 credit points	
<b>Level 5 Core - 100 credit points</b>	CORE
[MODULE] 5563NCCG Investigative Project and Professional Skills Approved 2022.01 - 20 credit points	
[MODULE] 5564NCCG Renewable Energy Approved 2022.01 - 20 credit points	
[MODULE] 5565NCCG Smart Cities Approved 2022.01 - 20 credit points	
[MODULE] 5566NCCG Life-cycle Assessment Approved 2022.01 - 20 credit points	
[MODULE] 5572NCCG Eco-friendly Manufacturing Approved 2022.01 - 20 credit points	
<b>Level 5 Options - 20 credit points</b>	OPTIONAL
[MODULE] 5567NCCG Sustainable HVAC Systems Approved 2022.01 - 20 credit points	
[MODULE] 5568NCCG Application of Renewable Energy in Buildings Approved 2022.01 - 20 credit points	
[MODULE] 5569NCCG Smart Facilities Management Approved 2022.01 - 20 credit points	

## Teaching, Learning and Assessment

Teaching, Learning and Assessment	<p>Key themes of the teaching and learning strategy on this programme are:</p> <ul style="list-style-type: none"> <li>• Varied assessment and feedback to enhance the experience of the student.</li> <li>• The availability of flexible teaching and learning modes, using face to face, on-line and some blended learning.</li> <li>• Student support through the use of structured and targeted tutorials.</li> <li>• The development and application of theory into practice.</li> <li>• The use of inclusive learning methods.</li> <li>• Development of students' skills in making balanced fitness-for-purpose decisions.</li> </ul> <p>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.</p> <p>Students will learn to produce employment-relevant outcomes, designs, presentations, reports and projects.</p> <p>Students will be expected to think for themselves as independent learners, encouraged by using flexible teaching methods and varied methods of assessment.</p> <p>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.</p> <p>There is considerable diversity of delivery needs among the likely candidates for this programme. These include:</p> <ul style="list-style-type: none"> <li>• Traditional full-time learners, mainly students progressing internally from level 3 awards.</li> <li>• Day-release part-time learners, mainly those on day release from partner employers.</li> <li>• 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.</li> <li>• Those unable to study on a week-by-week basis but who could attend in week-long blocks.</li> <li>• Those who wish to offset RPEL of their previous studies or experience against module learning outcomes.</li> </ul> <p>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.</p> <p>The programme is designed to take students from a broad range of backgrounds and accommodate some variance in skill levels. The programme includes an induction week prior to formal delivery, in which all new students have the opportunity to meet the team and ask questions. Topics covered during this week are focused on developing an awareness and appreciation for higher education learning teaching and assessment, and includes sessions on: understanding tasks and grading criteria; strategies for a successful academic career; using the institution's Virtual Learning Environment, Moodle; academic regulations and misconduct; note taking and digital tools.</p> <p>Returning students also receive an induction, where any changes to academic regulations are communicated as well as an introduction to the expectations of the level of study they are progressing to. Recap on other aspects of the course may also be given upon student's request.</p>
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### Opportunities for work related learning

<p>Opportunities for work related learning</p> <p>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.</p> <p>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.</p>
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### Entry Requirements

Type	Description
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Alternative qualifications considered	Mature Students: 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.
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.
Access awards	A pass in a recognised Access course.
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> <li>• Other qualifications such as Scottish Highers, Welsh Baccalaureate, Irish Leaving Certificates, International Baccalaureate, with the required UCAS points.</li> <li>• Equivalent Scottish or Irish qualifications.</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.

## Programme Contacts

### Programme Leader

Contact Name
Graham Sherwood

### Link Tutor

Contact Name
Graham Sherwood