Module Proforma

Approved, 2022.02

Summary Information

Module Code	5565NCCG
Formal Module Title	Smart Cities
Owning School	Civil Engineering and Built Environment
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Graham Sherwood	Yes	N/A

Module Team Member

Contact Name	Applies to all offerings	Offerings

Partner Module Team

Contact Name	Applies to all offerings	Offerings

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Nelson and Colne College Group

Learning Methods

Learning Method Type	Hours
Lecture	48

Module Offering(s)

Offering Code	Location	Start Month	Duration
SEP-PAR	PAR	September	28 Weeks

Aims and Outcomes

Aims	The aim of this module will introduce the concept of smart cities, which brings together infrastructure, social capital including local skills and community institutions, and digital technologies to fuel sustainable economic development which lead to the creation of smart cities and attractive environment. On completion of the module the students will have knowledge and understanding of the different aspects of smart cities and their impacts on our lives.

Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Demonstrate understanding of the concept of smart cities
MLO2	Explain different approaches to smart cities design and delivery
MLO3	Create a theoretical smart city within a community using a range of tools and techniques
MLO4	Outline the key challenges on the development of smart cities and state recommendations on overcome them

Module Content

Outline Syllabus
Introduction to smart cities Concept of city as a system of systems Smart citizens Elements required for creating smart cities • Infrastructure, technology and data • Innovation and enterprise • Smart leadership and strategy • Standards and capacity building Social impacts of smart cities Security of smart cities Sustainable food production in smart cities Energy, waste and water in smart cities Digital technologies in smart cities

Module Overview

Additional Information
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Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Report	Report	60	0	MLO3, MLO2
Presentation	Seminar Paper	40	0	MLO1, MLO4