

Liverpool John Moores University

Title: ENVIRONMENTAL PRACTICE
Status: Definitive
Code: **4233BEUG** (125679)
Version Start Date: 01-08-2020

Owning School/Faculty: Civil Engineering and Built Environment
Teaching School/Faculty: Civil Engineering and Built Environment

Team	Leader
Alison Cotgrave	Y

Academic Level: FHEQ4
Credit Value: 20
Total Delivered Hours: 35
Total Learning Hours: 200
Private Study: 165

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	22
Practical	2
Tutorial	11

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Laboratory Report	50	
Test	AS2	Online MCQ Test	50	

Aims

To evaluate the impact of construction work on the environment and the contribution of the built environment to the three pillars of sustainability.

To introduce students to the global issue of sustainability and how standards and legislation have been introduced to reduce the impact of buildings on the environment.

To enable students to understand the scientific principles that are utilised in the design of the internal environment of buildings that ensure occupier comfort, including heating, sound and light.

To allow students to undertake laboratory work to attain results that can be used in the design of internal environments within buildings.

Learning Outcomes

After completing the module the student should be able to:

- 1 Evaluate the environmental impact of buildings and identify the contribution of construction work to the three pillars of sustainability.
- 2 Analyse the scientific principles utilised in the design of the internal environment that ensure occupier comfort, including heating sound and light.
- 3 To successfully undertake laboratory experiments and produce good quality laboratory reports.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Laboratory Report	2	3
MCQ Online	1	2

Outline Syllabus

Sustainability as a global concept.

Sustainable development, design and construction.

Environmental Impact Assessments.

Frameworks used to assess the environmental impacts of buildings, such as BREEAM and LEED.

Daylight factor calculations and basic lighting design.

Sound proofing in buildings and the principles of acoustics.

Heat gain and loss in buildings.

Basic principles of building services installation and design.

Learning Activities

Lectures, tutorials and environmental science practicals. Industry scenarios and case studies will be used.

Notes

This module aims to give students an introduction to the impact of buildings on the environment and will feature the discussion of case studies where buildings have

been designed to enhance the three pillars of sustainability. Barriers that prevent the construction of sustainable buildings will be evaluated and frameworks that have been developed to encourage sustainable development will be reviewed. The module will emphasise the need for comfort in buildings via the services installation and will introduce students to the methods used to identify the optimal design required for lighting, optimal sound levels and heating/cooling. The overarching theme of the module is to demonstrate to students that buildings can be designed for high levels of comfort and fulfil the requirements of the end user, whilst also contributing to the three pillars of sustainability.