

Liverpool John Moores University

Title: ENVIRONMENT
Status: Definitive
Code: **4008BEHN** (102274)
Version Start Date: 01-08-2011

Owning School/Faculty: Built Environment
Teaching School/Faculty: Built Environment

| Team | Leader |
|----------------|--------|
| Laurence Brady | Y |

Academic Level: FHEQ4 **Credit Value:** 12.00 **Total Delivered Hours:** 60.00
Total Learning Hours: 120 **Private Study:** 60

Delivery Options

Course typically offered: Semester 1

| Component | Contact Hours |
|-----------|---------------|
| Lecture | 24.000 |
| Practical | 24.000 |
| Tutorial | 12.000 |

Grading Basis: BTEC

Assessment Details

| Category | Short Description | Description | Weighting (%) | Exam Duration |
|----------|-------------------|---------------------------------|---------------|---------------|
| Report | AS1 | Group Project | 50.0 | |
| Report | AS2 | Practical Laboratory Assignment | 50.0 | |

Aims

*To develop an understanding of how human activity and in particular the construction and development process impacts on the environment.
To examine how the detrimental impacts may be quantified and addressed.*

Learning Outcomes

After completing the module the student should be able to:

- 1 Discuss the variety of ways in which the construction and development process impacts on the environment.
- 2 Identify and describe the global and local environmental issues of concern to the construction industry and the ways in which such issues are addressed.
- 3 Analyse indoor environmental effects and present advice on how these effects can be minimised.
- 4 Evaluate the environmental assessment systems in common use.

Learning Outcomes of Assessments

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

| | | | | |
|----|---|---|---|---|
| CW | 1 | 2 | 3 | 4 |
| CW | 3 | 4 | | |

Outline Syllabus

*1. Ways in which the construction process impacts upon the environment:
Location, extraction, transportation and refinement of raw materials. Manufacture of construction materials and components.*

Noise from construction sites, dust, dirt and disturbance from construction sites and health risks they present.

Increased pressure upon existing services, increased pressure upon existing infrastructure. Increased consumption of energy, increased production of greenhouse gases, indoor effects.

2. Global and local environmental issues:

Sustainable construction, bio-diversity, global warming, deforestation, depletion of the ozone layer, acid rain, the finite availability of fossil fuels.

Air pollution, water pollution, increased water abstraction, noise pollution, contaminated land, remediation, land-fill waste management.

Legislation and control.

Alternative energy sources.

3. Indoor environmental affects:

Modern artificial lighting, noise, electromagnetic fields, environmental tobacco smoke, radon, legionellosis, carbon monoxide, house dust mites, volatile organic compounds, sick building syndrome.

4. Environmental assessment systems:

Building Research Establishment Environmental Assessment Method (BREEAM), construction, maintenance, use and demolition of buildings. Global issues, neighbourhood issues and indoor effects. Materials, services and techniques used to construct buildings, height and shape of buildings, characteristics of the site.

Learning Activities

A mixture of lectures, case studies, practicals, projects and presentations.

References

| | |
|------------------------|-----------------------|
| Course Material | Book |
| Author | Brown, A. |
| Publishing Year | 1992 |
| Title | The UK Environment |
| Subtitle | |
| Edition | |
| Publisher | The Stationery Office |
| ISBN | |

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|------------------------|-----------------------------------|
| Course Material | Book |
| Author | Mc Mullan, R. |
| Publishing Year | 2001 |
| Title | Environmental Science in Building |
| Subtitle | |
| Edition | 5th Edition |
| Publisher | Palgrave |
| ISBN | |

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|------------------------|-----------------------------|
| Course Material | Book |
| Author | Health and Safety Executive |
| Publishing Year | 1995 |
| Title | Sick Building Syndrome |
| Subtitle | |
| Edition | |
| Publisher | HSE Books |
| ISBN | |

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|------------------------|--------------------------------|
| Course Material | Book |
| Author | National society for Clean Air |
| Publishing Year | 2001 |
| Title | The Pollution Handbook 2001 |
| Subtitle | |
| Edition | |
| Publisher | National Society for Clean Air |
| ISBN | |

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|------------------------|-------------------|
| Course Material | Book |
| Author | Johnson, S. |
| Publishing Year | 1993 |
| Title | Greener Buildings |

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|------------------|-----------|
| Subtitle | |
| Edition | |
| Publisher | Macmillan |
| ISBN | |

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|------------------------|-----------------------------|
| Course Material | Book |
| Author | Health and Safety Executive |
| Publishing Year | 1998 |
| Title | Sick Building Syndrome |
| Subtitle | |
| Edition | |
| Publisher | HSE |
| ISBN | |

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|------------------------|--------------------------------------|
| Course Material | Book |
| Author | CIRIA |
| Publishing Year | 0 |
| Title | Waste Minimalisation in Construction |
| Subtitle | |
| Edition | |
| Publisher | |
| ISBN | |

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|------------------------|---------------------------------------------|
| Course Material | Book |
| Author | Rostron, J. |
| Publishing Year | 2001 |
| Title | Environmental Law for the Built Environment |
| Subtitle | |
| Edition | |
| Publisher | Cavendish |
| ISBN | |

Notes

The module develops an understanding of how human activity and, in particular, the construction and development process impacts on the environment, and examines how the detrimental impacts may be quantified and addressed.