

## Liverpool John Moores University

Title: ADVANCED BUILDING PATHOLOGY  
Status: Definitive  
Code: **6009BEUG** (102789)  
Version Start Date: 01-08-2011

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

| Team          | Leader |
|---------------|--------|
| Martin Turley | Y      |

**Academic Level:** FHEQ6  
**Credit Value:** 12.00  
**Total Delivered Hours:** 38.00  
**Total Learning Hours:** 120  
**Private Study:** 82

### Delivery Options

Course typically offered: Semester 1

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

**Grading Basis:** 40 %

### Assessment Details

| Category | Short Description | Description          | Weighting (%) | Exam Duration |
|----------|-------------------|----------------------|---------------|---------------|
| Exam     | AS1               | 3 from 5 questions   | 70.0          | 2.00          |
| Report   | AS2               | Diagnosis case study | 30.0          |               |

### Aims

*To provide students with a detailed knowledge of advanced building pathology, methods of building evaluation and defects diagnosis and analysis together with appraising alternative remedial solutions.*

### Learning Outcomes

After completing the module the student should be able to:

- 1 Identify, select and apply appropriate analytical models for defects in a range of building forms.
- 2 Analyse and comment upon specific defects associated with a range of building forms.
- 3 Prepare professional quality reports relating to defects in buildings and their remediation.
- 4 Assess the impact of defects upon the whole life performance of buildings.
- 5 Make informed judgements relating to building defects and overall condition in the context of building use, ownership and associated legal frameworks.

## Learning Outcomes of Assessments

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

|            |   |   |   |
|------------|---|---|---|
| EXAM       | 1 | 4 | 5 |
| CASE STUDY | 2 | 3 |   |

## Outline Syllabus

*Defects in context. Building obsolescence, dilapidations and users obligations. Building and defect analysis models. BRE and PSA evaluation and diagnosis models.*

*Common defects in industrial, commercial and residential buildings.*

*Advanced monitoring and analysis techniques.*

*Reporting conclusions and recommendations.*

*Selection criteria for remediation options.*

*Method statements and risk assessments for building surveys and remedial works.*

## Learning Activities

Lectures and tutorials.

## References

|                        |   |
|------------------------|---|
| <b>Course Material</b> | Book  |
| <b>Author</b>          | Harris, S.  |
| <b>Publishing Year</b> | 2001  |
| <b>Title</b>           | Building Pathology: Deterioration, Diagnostics and Intervention |
| <b>Subtitle</b>        |   |
| <b>Edition</b>         |   |
| <b>Publisher</b>       | John Wiley & Sons Inc   |
| <b>ISBN</b>            | 0471331724  |

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|------------------------|---|
| <b>Course Material</b> | Book  |
| <b>Author</b>          | Watt, D.                                      |
| <b>Publishing Year</b> | 1999  |
| <b>Title</b>           | Building Pathology: Introduction and Practice |
| <b>Subtitle</b>        |   |
| <b>Edition</b>         |   |
| <b>Publisher</b>       | Blackwell Science                             |
| <b>ISBN</b>            | 0632048751                                    |

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|------------------------|-----------------------|
| <b>Course Material</b> | Book                  |
| <b>Author</b>          | Glover, P.            |
| <b>Publishing Year</b> | 2006                  |
| <b>Title</b>           | Building Surveys      |
| <b>Subtitle</b>        |                       |
| <b>Edition</b>         |                       |
| <b>Publisher</b>       | Butterworth-Heinemann |
| <b>ISBN</b>            | 0750681284            |

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|------------------------|------------------------------|
| <b>Course Material</b> | Book                         |
| <b>Author</b>          | Noy, E. & Douglas, J.        |
| <b>Publishing Year</b> | 2005                         |
| <b>Title</b>           | Building Surveys and Reports |
| <b>Subtitle</b>        |                              |
| <b>Edition</b>         |                              |
| <b>Publisher</b>       | Blackwell Publishing         |
| <b>ISBN</b>            | 1405121475                   |

|                        |   |
|------------------------|---|
| <b>Course Material</b> | Book  |
| <b>Author</b>          | Carillion Services  |
| <b>Publishing Year</b> | 2001  |
| <b>Title</b>           | Defects in Buildings: Symptoms, Investigation, Diagnosis and Cure |
| <b>Subtitle</b>        |   |
| <b>Edition</b>         |   |
| <b>Publisher</b>       | Stationery Office Books   |
| <b>ISBN</b>            | 0117024368  |

|                        |   |
|------------------------|---|
| <b>Course Material</b> | Book  |
| <b>Author</b>          | Richardson, B.  |
| <b>Publishing Year</b> | 2000  |
| <b>Title</b>           | Defects and Deterioration in Buildings: A Practical Guide to the Science and Technology of Material Failure |
| <b>Subtitle</b>        |   |
| <b>Edition</b>         |   |
| <b>Publisher</b>       | Spon Press  |
| <b>ISBN</b>            | 041925210X  |

## **Notes**

The module provides students with a detailed understanding of the diagnostic techniques associated with defects in a range of building forms.