

Building Pathology

Module Descriptor

Module Code: BSU6BPA

Version: 9.00

Status: Final

Date: 18/03/2021

Summary Module Details

Module details

Module Title: Building Pathology

Module Leader: James Ritson

Module Mode: Supported online learning

Semester: Autumn (UK)

Level: 6

Credits: 20

Learning Hours: 200

Contact & Study Hours:

Directed Study Time: 90hrs (45%)

Self-Directed Study Time: 50hrs (25%)

Assessment Study Time: 60hrs (30%)

Assessment Type:

Coursework: 100%

Computer Marked Assessment: 0%

Self-directed Research Project: 0%

Portfolio: 0%

Module Summary

This module is concerned with the pathology of buildings. It will develop students' ability to effectively diagnose and evaluate a range of commonly encountered building defects through a process of inspection, testing, survey and analysis.

Taken on which Programmes

BSc (Hons) Building Control (C)

BSc (Hons) Building Surveying (C)

Core (C) or Elective (E)

Module Aims

This module aims to:

- Build upon students' previously developed knowledge in order that they may be better able to address building pathology;
- Advance the students' ability to recognise, analyse and remedy building defects;
- Progress the students' ability to apply building pathology to different situations;
- Provide building pathology perspective on principles, materials, construction and specific situations; and
- Encourage competence in the professional skills of communicating, reporting and communicating to clients on building pathology matters.

Module Learning Outcomes

- LO1. Consider and evaluate key concepts, theories and principles in building pathology using technical information, legislation and standards and communicate clearly and concisely on building pathology matters.
- LO2. Recognise and analyse building defects in a range of situations.
- LO3. Propose remedial action arising from the critical diagnosis of building defects.
- LO4. Locate information sources and use judgement to devise a range of reasoned solutions to building pathology problems and advise on the most appropriate.

Indicative Module Content

Module topics

- **Fundamentals of Decay and Diagnosis of pathology**
Providing the basis of pathology science by examining the causes of decay and diagnosis of pathology.
- **Investigation and testing**
Reviewing the various technologies and methods of building pathology such as thermal IR cameras and monitoring.
- **External defects**
Reviewing the major exterior defects of buildings such as building movement, façade damage and exterior fabric and services defects.
- **Internal defects**
Review the general defects and diagnosis of typical interior defects such as damp, staining and ceiling and partition defects.
- **Concrete defects**
A more focused review of concrete defects such as reinforcement failure cracking, structural failure and repair methods.

Building Pathology

- **Brick defects**

An overview of typical brick defects such as pointing, lime/cement mix, cracking efflorescence and moisture movement.

- **Timber defects**

A specific look at the main defect that affects timber such as damp, wet and dry rot, insects and the differences between structural failure and cleavage.

- **Materials**

An overview of defects in less common materials, such as metals, glass etc., found within the built environment.

- **Specialist Equipment Testing**

A more focused study of specialist diagnosis of pathology. Focusing on more recent modern technologies available to the building surveyor such a thermal imaging.

- **Domestic surveys**

An overview of the method and typical defects found in domestic properties and the types of reports to be completed by the surveyor.

- **Commercial/ industrial surveys**

An overview of the more specialist field of industrial and commercial surveys, looking at the different types of survey and their requirements.

- **Historic building surveys**

Specifically review historic building issues such as breathability and specific types of defect found in buildings of different ages.

- **Special situations/ international**

Showing more specialised surveys required both in the UK and around the world.

This content will be reviewed and updated regularly to reflect the legal, moral and financial changes in professional standards and practice.

Overview of Summative Assessment

Module learning outcomes	Assessment	Word count or equivalent	Weighting
LO1, LO2 & LO4	Assessment 1 Coursework	1,000	20%
LO1, LO2, LO3, LO4	Assessment 2 Coursework	4,000	80%

Module Pass Mark (as a weighted average of all assessments): 40%

Key Module Learning Resources

Core Sources and Texts

The core reading resources within each module will be provided via the specific Virtual Learning Environment (VLE) module pages and within the e-Library. Additional reference material and supplementary resources to support your studies are available through the UCEM e-Library

Module tools

Students will have access to study materials, dedicated academic support, student forums, and learning activities via an online learning platform (VLE).

The module page on the VLE is broken down into structured study weeks to help students plan their time, with each week containing a mixture of reading, case studies, videos/recordings and interactive activities to go through. Online webinars/seminars led by the Module Leader can be attended in real time and provide opportunities to consolidate knowledge, ask questions, discuss topics and work through learning activities together. These sessions are recorded to support students who cannot attend and to enable students to recap the session and work through it at their own pace. Module forums on the VLE provide further opportunities to discuss topics with other students, complete collaborative work and get extra help from the module team.

Professional online resources

The e-Library provides access to trusted, quality online resources, selected by subject specialists, to support students' study. This includes journals, industry publications, magazines, academic books and a dissertation/work-based library. For a list of the key industry specific and education resources available please visit [the VLE e-Library](#).

Other relevant resources

Access is also provided to further information sources that include the British Library and Open University UK catalogues, as well as providing a monthly current awareness service entitled, **Knowledge Foundations** - a compendium of news, research and resources relating to the educational sector and the Built Environment.

The module resource list is available on the module website and is updated regularly to ensure materials are relevant and current.