

Module Title: Building Performance Assessment and Evaluation	Module Code: EV7109 Level: 7 Credit: 15 ECTS credit: 7.5	Module Leader: Tim Coleridge Additional tutors: Bryce Gilroy-Scott Alan Owen Frances Hill Jane Fisher Louise Halestrap Siobhan Maderson Ruth Stevenson
Pre-requisite: none	Pre-cursor: none	
Co-requisite: none	Excluded combinations: none	
Location of delivery: At CAT and by DL		
<p>The main aims of the module are to enable students to:</p> <p>Synthesise an understanding of the frameworks and tools available for assessment and guidance in the design of buildings for sustainability and adaptation.</p> <p>Approach the use of these tools with critical insight, identifying the different political and practical influences involved and the impact of these on future sustainability and contribution to adaptation.</p> <p>Develop a deep understanding of the differences that occur between design and operation of a building, and, in particular, the impacts of occupant experience on the sustainability of a building, and its potential for adaptation.</p>		
<p style="text-align: center;">Main topics of study:</p> <ul style="list-style-type: none"> • Environmental impact of buildings • Environmental assessment tools (eg BREEAM, LEED) • Building Performance Assessment • UK regulatory/statutory frameworks and compliance requirements • A range of voluntary performance assessment tools form UK and elsewhere • Design for deconstruction • Life cycle assessment 		
Learning Outcomes for the module		

At the end of this module, students will be able to:

Knowledge

1. Demonstrate a critical understanding of the elements of national regulatory, statutory frameworks and voluntary codes relating to building energy, performance assessment and evaluation, and evaluate these in relation to their impacts on the sustainability of a building or built environment scheme;
2. Display a thorough understanding of the principles of life cycle analysis and other assessment and evaluation methodologies for building materials, processes and/or products;
3. Synthesise the implications of the above for design, with particular recognition of design for deconstruction.

Thinking skills

4. Critically evaluate the impact of regulatory frameworks and voluntary codes for environmental building accreditation on the prioritisation of features within the design of the built environment, and the subsequent impacts on the overall sustainability of a building or built environment scheme and its capacity for adaptation;
5. Astutely discern the potential for building performance assessment and evaluation to impact on the occupant experience and performance in use.

Subject-based practical skills

6. Demonstrate an ability to critically evaluate processes, systems and compliance criteria of innovative or sectoral best practice within the field.

Skills for life and work (general skills)

7. Effectively communicate (written and oral) to a team or a wider audience.

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:

The factual content of the module is taught through lectures, seminars, practical workshop, presentations, and tutorials, and throughout this process an active exchange of views and opinions is encouraged. Both theoretical and practical aspects are covered. The summative coursework consists of an essay and a presentation.

There is formative learning element to the module to allow the students to receive critical feedback on their work without the pressure of marked assessment.

On-site students will be supported through lectures, seminars and tutorials within the subject areas and in study skills. On-site students will also gain hands-on experience through practical tuition facilitated by specialist practitioners.

For distance learning (DL) students, learning will be supported through Internet-based lectures (of the onsite lectures), situation related practical exercises, seminars and tutorials.

All students also have access to Moodle discussion boards and regular Skype surgeries, where they can meet with their peers and a tutor to discuss any academic issue.

Lectures onsite and through DL highlight key concepts, models and frameworks, and integrate additional resources (such as journal articles). They encourage deep learning through the use of self-assessment questions which encourage students to engage with the topic, to help students understand new topics and skills.

Assessment methods which enable students to demonstrate the learning outcomes for the module:	Weighting:	Learning Outcomes demonstrated:
For on-site and DL students:		
1. Essay (2400 word max.)	80%	1,2,3,4,5, 6
• 2. Individual Presentation, 10 minutes (600 word equivalent)	20%	7

Reading and resources for the module:

Core

Glasson, (2011) *Introduction to Environmental Impact Assessment*, Routledge, Abingdon.

Recommended

Architecture for Humanity. (2012) *Design Like You Give a Damn [2]: Building Change from the Ground Up*. Abrams, San Francisco.

Barrow, C. (1999) *Environmental Management: Principles and Practice*, Routledge, Oxford (reprinted 2005).

Bell, S. and Morse, S. (2008). *Sustainability Indicators: Measuring the Immeasurable?* 2nd edition, Earthscan, London. (*)

Birkeland, J. (2008). *Positive Development: From Vicious Circles to Virtuous Cycles through Built Environment Design*. Routledge, London.

Bokalders, V. and Block, M. (2010). *The Whole Building Handbook: How to Design Healthy, Efficient and Sustainable Buildings*. Earthscan, London.

Braungart, M. and McDonough, W. (2009). *Cradle to Cradle*. Random House.

BSRIA and UBT (2009) *The Soft Landings Framework: for better briefing, design, handover and building performance in-use*. BISRIA, Berkshire. (*)

Gething, B. (2011) *Green Overlay to the RIBA Outline Plan of Work*. RIBA Publishing, London. (*)

Lee, N. and George, C. (2000) *Environmental Assessment in Developing and Transitional Countries*, Wiley, Chichester.

Further relevant journals, websites and other relevant resources will be provided within reading materials that are made available for the module.

(*) Available as an e-book

Indicative learning and teaching time (10 hrs per credit):	Activity
1. Student/tutor interaction:	Lectures, seminar, tutorial, presentation, practical / demonstration 30 hours
2. Student learning time:	Seminar reading and preparation, Assignment preparation, Background reading, On-line research activities. 120 hours
Total hours (1 and 2):	150hr