

## Module Specification

### Module Summary Information

<b>1</b>	<b>Module Title</b>	Built Environment Commercial Technology
<b>2</b>	<b>Module Credits</b>	20
<b>3</b>	<b>Module Level</b>	5
<b>4</b>	<b>Module Code</b>	BNV5129

<b>5</b>	<b>Module Overview</b>
<p>This module will explore the wider implications of the key factors which affect the selection of both traditional and new building methods and materials used in the construction of new build commercial and industrial buildings and introduce environmental and mechanical services systems which need to be installed in these buildings.</p> <p>In particular you will gain an insight into the operational complexities involved in the construction of large-scale commercial and industrial buildings to ensure that projects are delivered in time and on budget to meet the required standard of quality.</p> <p>You will be introduced to the key technology concepts to develop understanding of the technical terminology used in commercial construction. Individually, the module provides in-depth understanding of the construction methods and systems which can be applied to meet varying commercial and industrial building types and to apply the technology principles gained at Level 4 to large scale buildings.</p> <p>Application of learning will be through problem-based tasks to identify different building material and methods which can be used in commercial construction. You will also be introduced to environmental and mechanical services systems which you need to identify, compare and contrast in order to make a well informed decision about the most appropriate system to select which should be based on efficiency, operation, performance requirements and cost effectiveness.</p> <p>The problem-based tasks will be facilitated by case studies, research, direct questioning and reflective learning. A formative assessment will be provided, as a feed-forward tool, at different point of the module progression to underpin and consolidate your understanding. Resources for learning, teaching and assessment will all be available on the university virtual learning environment (VLE), Moodle.</p>	

<b>6</b>	<b>Indicative Content</b>
<p>The module introduces the student to the methods and techniques that are required in the construction of commercial and industrial buildings with particular emphasis on building substructure and superstructure.</p> <p>Topic areas include:-</p> <ol style="list-style-type: none"> <li>1. Factors affecting the design and construction of industrial and commercial buildings (function, structure, regulatory, legal and cost)</li> <li>2. Materials and processes used in the construction of industrial and commercial buildings.</li> </ol>	

3. High rise commercial and office buildings (short and medium span frames).
4. Low rise industrial and warehouses (Long span frames).
5. External walls and cladding.
6. Upper floors and roofs.
7. Health and safety risks/accidents associated with construction of commercial and industrial buildings
8. Fire Engineering design for commercial and industrial buildings.
9. Commercial services-Cold and hot water supply and distribution systems.
10. Commercial services- Mechanical Ventilation.
11. Commercial Services- Electrical Distribution Systems.
12. Commercial services- Vertical Movement (lifts and escalators).
13. Commercial Services- Plumbing and Drainage Systems.

7		Module Learning Outcomes	
7		On successful completion of the module, students will be able to:	
	<b>1</b>	Employ appropriate terminology, regulation and guidance influencing the design of large scale buildings.	
	<b>2</b>	Compare and contrast both traditional and new innovative materials and concepts in the construction of large scale buildings.	
	<b>3</b>	Identify, employing illustrations, performance requirements of floors, walls, and facade finishes to the construction of commercial buildings and recognise how these requirements can inform technical innovation and development of new construction materials.	
	<b>4</b>	Recognise the principal legislation and regulation that affect commercial and industrial buildings and their influences on environmental and mechanical services systems and formulate solutions to satisfy the performance requirements of these buildings sustainably.	

8		Module Assessment		
Learning Outcome				
		Coursework	Exam	In-Person
1-4		X		

9		Breakdown Learning and Teaching Activities	
Learning Activities		Hours	
<b>Scheduled Learning (SL)</b> includes lectures, practical classes and workshops, peer group learning, Graduate+, as specified in timetable		48	
			You will be set a series of basic and complex problem-based class tasks, you will be expected to complete these tasks within the class and in your own time as directed by the Module leader These will be an effective learning tool to enhance and consolidate your conceptual understanding of commercial technology by applying theory to practical scenarios incorporating both traditional and new eco-friendly building materials and innovative environmental technology to meet the current requirements of Building Regulation.
<b>Directed Learning (DL)</b> includes placements, work-based learning, external visits, on-line		52	

activity, Graduate+, peer learning, as directed on VLE	You will be expected to continually work on your individual coursework which include 4 critical reflection mini-reports 750 words each to be uploaded to Moodle as shown on Assessment Schedule below. Each aligned to the class tasks set so you so your attendance and active participation will be critical to the successful completion of the tasks. You have to methodically review and apply what you have learnt during the lecture, seminar and site visit to make a well informed decision about the most appropriate solution to the problem-based tasks. You should engage using Moodle and other resources provided in the module documentation and expand into other self-selected resources as appropriate.
<b>Private Study (PS)</b> includes preparation for exams	100  You should use the time given in Private Study to research reflect and consolidate you understanding of commercial construction methods materials and innovative services technology by accessing Trade Literature and construction web sites, research current technology and actively incorporate your reflective analysis.
<b>Total Study Hours:</b>	200