Building Construction II
Semester: 2 (Spring)
Stage: 2
Number of Credits: 4 semester credits/6 quarter units

Prerequisites	Design Technology I –Building Construction I
Assessment weighting	100% continuous assessment
Element	Technology
Supports stage learning outcomes	• Integrate conceptual, contextual, ethical and material considerations in the **design** and realisation of space and form. • Communicate concepts, ideas and proposals to a high degree of visual and technical expertise in terms of **drawing** - freehand sketching, architectural drawings and computer-generated imagery. • Demonstrate and apply knowledge of **structural, technological and constructional principles**, the properties and meanings of materials and their influence on design decisions.

Module aims	The primary aims of the module are to: • Assist students in their development of the knowledge and understanding of building construction materials and methods, drafting details and service provision. • Enable students to apply knowledge of the structural, non-structural and decorative elements of a building The secondary aim is to: • Support the course and stage learning outcomes specifically with reference to the Design (Project Work), Technology and Drawing.

Module learning outcomes

On completion of this subject students will be able to:

- Identify the structural and non-structural elements of a building
- Source information/suitability of relevant products
- Work with other professionals in the design and construction industry
- Communicate effectively through drafting, sketching and C.A.D.
- Recognise and understand the decorative and structural properties of materials

Syllabus content

Materials
Joinery: design and fabrication. Structural, non-structural and decorative.
Metals: design and fabrication. Structural, non-structural and decorative.

Sanitation:
Cold water supply, elements, single stack system, high rise situations, drainage etc

Hot Water Supply:
Principles of operation, circulation, cylinders, boilers, pumps, heaters and fittings

Electrical Services:
Wiring systems, distribution, control gear, safety, building requirements, telecommunications systems.

Lifts:
Lift well and pit sizes, motor rooms, lift design and lift cars, escalators.

Floor Finishes:
Considerations: Wear and tear; Comfort and noise; Chemical resistance; Maintenance.
Painting and decorative finishes.

Insulation:
Heat: estimating values, condensation.
Sound: Values, absorption, transmission, construction details.

Glass and Glazing:
Glass products, fixtures and fittings, double glazing, architectural glass, curtain walls,

Wall and Ceiling Finishes:
Sheeting materials: Roof lining systems; Tiles; Plasters and rendering (internal and external).

Project
Design a two storey domestic dwelling to planning submission stage.

Teaching/learning methodology:

The subject is taught primarily by means of lectures, demonstrations and workshops. Construction site and building exhibition visits will complement the student learning experience.

Architectural drawing will be used to reinforce the students' knowledge of building construction details, sections and component parts.

Method of assessment:

Continuous Assessment. The module is assessed by a series of written and architectural drafting assignments. The final project is assessed in accordance with the “Faculty Assessment Manual”

Recommended reading			
Materials	Alan Everett	Longman	1994
Structure & Fabric		Longman	1994
Construction Technology 1-4 Construction Series 1-5	Barry	Crosby Locke Staples	1984 - 92
Building Regulations 1991: Technical Guidelines	Department of the Environment	Stationery Office	1991
The Building Regulations explained	Eoin 0' Cofaigh	RIAI	1993
Wood in Construction	Barry A. Richardson	Construction Press	1976
TRADA Elementary Surveying	A.L. Higgins	Longman	1970

Module aims:	The primary aims of the module are to: • Develop students' knowledge of building services and understanding of the principles, properties and requirements of service integration. • Develop students' ability to source and use relevant formulae to determine correct requirements for services in commercial, domestic and institutional situations. The secondary aim is to: • Support the course and stage learning outcomes specifically with reference to the Design (Project Work), Technology and Drawing..