Module Title **Introduction to Building Technology** **Keywords** Human dwellings, sustainable built environment, timber frame construction, building envelope, elementary environmental science, elementary structural concepts.	Reference AC1002 SCQF SCQF Level 7 SCQF Points 15 ECTS Points 7.5 Created July 2002 Approved July 2005 Amended August 2009 Version No. 6

This Version is No Longer Current

The latest version of this module is available here

Prerequisites for Module

None.

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To provide the student with the ability to understand the key principles of building superstructure and how buildings act as systems

Learning Outcomes for Module

Indicative Student Workload

	Full Time	Part Time
Contact Hours		
Assessment	10	10
Lectures	20	20
Tutorials/Workshop/Studio	20	20
Directed Study		
Directed Study	70	70
Private Study		
Private Study	30	30

Mode of Delivery

This is a lecture based module supplemented with workshops and practical work, which may include laboratory work and site visits.

On completion of this module, students are expected to be able to:

1. Explain the general performance needs for human dwellings relative to specific site context.
2. Explain the principles of fundamental archetypes of building superstructure and be able to apply fundamental principles relating to material selection.
3. Discuss and reproduce key technical details of buildings.
4. Discuss building structure principles and apply basic environmental science to the construction of buildings.

Indicative Module Content

In depth case studies of vernacular and contemporary buildings will be used to explain how buildings act as systems. Fundamental principles and characteristics of vernacular human shelters and contemporary timber frame construction will be introduced from structural and constructional points

Assessment Plan

	Learning Outcomes Assessed
Component 1	1,2,3,4
Component 2	1,2,3,4

Component 2 - The examination will assess understanding of technology.

Component 1 - The coursework is in the form of a portfolio consisting of technical glossary and detailed annotated construction drawings, documenting site visits, experiments, construction principles and case studies. The coursework may be assessed by time controlled studio assessment.

Indicative Bibliography

1. Borer P. & Harris C., 2005. The Whole House Book. 2nd Edition. Centre for Alternative Technology Publications).
2. Ching F D K., 2008. Building Construction Illustrated. 4th Edition . John Wiley & Son.
3. Deplazes A., 2013. 3rd edition. Constructing Architecture: Materials, Processes, Structures; A Handbook. Birkhauser Verlag AG.
4. Mitchell, J., 1997. The Craft of Modular Post & Beam. Hartley & Marks Publishers.
5. Zaretsky M., 2009. Precedents in Zero Energy Design. 1st Edition, Routledge.

and constructional points of view.

Main performance characteristics and design criteria for building envelopes, roof construction methods, building materials and coverings will be introduced.

Introduction of basic structural principles: tension; compression; moments as well as passive environmental design responses.

Sustainable concepts with regard to climate, site and context are also introduced.

6. Seward D, Understanding Structures-Analysis, Materials, Design (2003) 3rd edition.