University of East Anglia

ACADEMIC PARTNERSHIPS

Module Outline **Part 1- as validated**

1.	**Title**	**Construction and Materials Technology**
2.	**Level ***	**4**
3.	**Credits**	**20**
4.	**Indicative Student Study Hours**	**36**
5.	**Core (must take and pass), Compulsory (must take) or Optional**	**Compulsory**

**** Foundation Level=3 Degree Year 1 = 4 Degree Year 2 = 5 Degree Year 3 = 6***

PG (Masters) = 7

5. Brief Description of Module (purpose, principal aims and objectives)
The module is designed to introduce the student to the fundamental aspects of construction technology and associated materials as applied to low and medium rise buildings. This will include site evaluation, foundation techniques, structural design forms and their methods of construction, and topics related to building maintenance and degradation. Contemporary topics of sustainability and green issues will be developed in relationship to the selection and use of typical construction materials and building decay and deterioration.

6. Learning Outcomes - On successful completion of this module a student will be able to: (*Add more lines if required)*	
	Subject Specific Learning Outcomes
1.	Explain site evaluation and investigation techniques and their relationship to the design of sub-structures.
2.	Examine structural forms with their application and behaviour under load
3.	Describe the properties of building materials
4.	Explain causes of decay and deterioration of buildings.
	Generic Learning Outcomes
1.	Identify, analyse and propose solutions to problems

2.	Integrate and evaluate information from a variety of sources.

7. Assessment

Pass on aggregate or Pass all components *(modules can only be pass all components if this is a PSRB requirement)*	**Pass on aggregate**

Summary of Assessment Plan

	Type	% Weighting	Annonymous Yes / No	Word Count/ Exam Length	Learning Outcomes Coverage	Comments
1.	Written assignment	50%	Yes	2500	LO 1, 2	
2.	Examination	50%	Yes	3 hours	LO 3, 4	

Further Details of Assessment Proposals

Give brief explanation of each assessment activity listed

Written assignment

Students are required to use a proposed site for construction to examine site evaluation methods and propose and justify foundation solutions in relation to specified soil conditions. The students should examine the various options for the structural form of the proposed structure on the site and recommend and substantiate a solution that reflects the required performance criteria, sustainability issues and aesthetic considerations.

Examination

Students will be presented with a scenario and are asked to analyse why the structure has fallen into disrepair and offer solutions as to how the structure can be recovered. Their findings should include recommendations on the design choice of construction materials together with reflections on construction material performance, maintenance and sustainability.

8. Summary of Pre and / or Co Requisite Requirements

Not applicable

9. For use on following programmes
BSc (Honours) Construction Management (Architectural Technology)

Module Specification **Part 2- to be reviewed annually**

1.	Module Leader	Sean Jeffries

2.	Indicative Content
	Site evaluation: Site survey methods, site investigation techniques, classification and chemical composition of soils and rocks, health and safety issues Sub-structure: effect of water and contaminants in the soil, temporary and permanent treatment, earthwork support, foundations and basements: functions, types, selection, materials, structural considerations, construction techniques, regulations Superstructure: Types, materials and basics of structural behaviour, floor and roof systems, partitions, ceilings, claddings, properties: insulation, fire protection, corrosion and protection, services Buildings: Domestic, industrial and commercial, medium and long span construction, infrastructure, modern methods of construction Materials: Properties, sustainability and green issues, performance and causes of deterioration Maintenance: Decay and deterioration issues, effects of natural phenomena on building materials, cyclical and preventative maintenance

3. Delivery Method (*please tick appropriate box)*

Classroom Based	Supported Open Learning	Distance Learning	E-Learning	Work Based Learning	Other (specify)
Yes					

*If the Delivery Method is **Classroom Based** please complete the following table:*

	Activity (lecture, seminar, tutorial, workshop)	**Activity Duration - Hrs**	**Comments**	**Learning Outcomes**
1	Lectures	34		LO1-4
2	Site visit to construction site	2		LO2
	Total Hours	**36**		

If delivery method is *not* classroom based state lecturer hours to support delivery	

4. Learning Resources

To include contextualised Reading List.

Highly Recommended

Chudley, R. and Greeno, R. (2016) *Building Construction Handbook 11th Edition* Oxford: Butterworth Heinemann

Riley, M. and Cotgrave, A. (2018*) Construction Technology 1: House Construction 4th Edition*, Basingtoke: Palgrave Macmillan

Riley, M. and Cotgrave, A. (2014) *Construction Technology 2: Industrial and Commercial Building 3rd Edition,* Basingtoke: Palgrave Macmillan

Riley, M. and Cotgrave, A. (2011) *Construction Technology 3: The Technology of Refurbishment and Maintenance 2nd Edition*, Basingtoke: Palgrave Macmillan

Recommended

Domone, P. and Illston, J. (2010) *Construction Materials 4th Edition*, Abingdon: Spon Press

Emmitt, S. (2018) *Barry's Advanced Construction of Buildings 4th Edition*, Oxford: Wiley Blackwell

http://steel-sci.com/

http://www.concrete.org.uk/

https://www.trada.co.uk/