

Module Title:	Structural Analysis I
Language of Instruction:	English
Credits:	5
NFQ Level:	6
Module Delivered In	2 programme(s)
Teaching & Learning Strategies:	Lectures Project work Private study
Module Aim:	The aims of the module are: (1) to develop an understanding of structural theory and analysis;
Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	to draw a shear force and bending moment diagram for statically determinate members.
LO2	to calculate the section properties for symmetrical and non-symmetrical sections.
LO3	to analyse a simple truss using the method of sections and method of joints.
Pre-requisite learning	
Module Recommendations <i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
Incompatible Modules <i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements <i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>	
No requirements listed	

Module Content & Assessment

Indicative Content

Theory of Structures

(a) Section properties:- area, second moment of area, elastic modulus and radius of gyration (b) Shear force and bending moment diagrams (c) Theory of simple bending (d) Tension and compression members (e) Effective length and slenderness ratio. (f) Axial capacity of compressive members. (g) Analysis of pinned jointed frames

Assessment Breakdown	%
Continuous Assessment	85.00%
Project	15.00%

Continuous Assessment

<i>Assessment Type</i>	<i>Assessment Description</i>	<i>Outcome addressed</i>	<i>% of total</i>	<i>Assessment Date</i>
Other	n/a	1,2,3	85.00	n/a

Project

<i>Assessment Type</i>	<i>Assessment Description</i>	<i>Outcome addressed</i>	<i>% of total</i>	<i>Assessment Date</i>
Project	In conjunction with 2nd year Architects project , the design of a timber flat roof.	1	15.00	End-of-Semester

No Practical

No End of Module Formal Examination

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	12 Weeks per Stage	3.00
Estimated Learner Hours	12 Weeks per Stage	7.42
Total Hours		125.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_CMHCE_B	Bachelor of Engineering (Honours) in Civil Engineering	3	Mandatory
CW_CMCIV_D	Bachelor of Engineering in Civil Engineering	3	Mandatory