Module Code	CSU33081								
Module Name									
ECTS Weighting ¹	5 ECTS								
Semester taught	Semester 2								
Module Coordinator/s	Eamonn O Nuallain								
Module Learning Outcomes	On successful completion of this module, students will be able to: LO1. To understand the computational limitations of floating point arithmetic LO2. To be able to perform error analysis on computational methods LO3. To be able to understand and implement in Matlab fundamental computational methods such as solving systems of equations or numerical differentiation LO4. To be able to solve theoretical and applied mathematical problems using numerical techniques by hand LO5. To gain an understanding of the range of applicability across disciplines of the material covered.								
Module Content	Floating point number systems; Mathematical Background, Solving Non-Linear Equations; Solving Systems of Linear Equations; Eigenvalues and Eigenvectors; Curve Fitting and Interpolation; Numerical Differentiation; Numerical Integration.								
Teaching and Learning Methods	lectures, tutorials and in-term assignments.								
Assessment Details ²	Assessment Component Examination Assignment 1	Brief Description 2 hour written examination Matlab and Multichoice Mathematical Problems to be evaluable for the second	Learning Outcomes Addressed LO1, LO2, LO3, LO4, LO5 LO1-LO5	% of total 80% 6.66%	Week set n/a 2-4	Week due n/a 4-6			
	Assignment 2	Matlab and Multichoice Mathematical Problems to be solved by hand	L01-L05	6.66%	4-6	7-9			

¹ <u>TEP Glossary</u> ² <u>TEP Guidelines on Workload and Assessment</u>

	Assignment 3	Matlab and Multichoice Mathematical Problems to be solved by hand	LO1-LO5	6.66%	7-9	9-11			
Reassessment Details	Examinati	on (2 hours, 100%)							
Contact Hours and	Contact Hours	33 hou	33 hours						
Indicative Student	by:				22 1.0				
Workload	lecture				22 hou	22 hours			
Workioad		y r seminar			11 hou	11 hours			
	other					0 hours			
	Independent s	tudy (outside scheduled contac	t hours), broken	down by:	80 hou	irs			
	preparation for classes and review of material (including preparation for examination, if applicable)					irs			
	completion of assessments (including examination, if applicable)					irs			
	Total Hours				113 ho	ours			
Recommended Reading List									
Module Pre-requisites	Prerequisite modules:								
	CSU11001, CSU11002, MA2C03								
	Other/alternative non-module prerequisites:								
	Mathematics, Matlab								
Module Co-requisites									
Module Website									
Last Update	8/7/2019 by	Eamonn O Nuallain							