UNIVERSITY OF SALFORD FORM MS (2015/16)

MODULE SPECIFICATION

Please contact the Quality Enhancement Office for guidance completing this form on QEO-General@salford.ac.uk

This form is available to download from http://www.governance.salford.ac.uk/page/aqa_forms

Date of completion of this version of Module Specification: 09/12/2016						
Date of approval by the PARP: 16/12/2016						
1. Module Title: (Full title and short title no more than 30 characters) Engineering Methodology S0.1				2.CRN: 20750 41464 (A1, Jan start S1)		
3.University module code: SG-H300-00016			4.HESA/JACS subject area code[i]: H208			
5.Level: Level 3	6.Credit Value: 20	7.ECTS Value[ii]: 10	8.Length of module in semesters: 1	9.Month(s) in which to be offered[iii]: September February		
10.Module Status[iv] Existing	11.Title of Module being replaced *(if any):*			12.With effect from[v] (academic year): September 2016		
13.Originating School: School of Computing, Science & Engineering	14.Module Leader(s) Mr A Kadir					
15.Programme(s) in which to be offered[vi]: BEng Aeronautical Engineering with Foundation Year BEng Mechanical Engineering with Foundation Year BEng Civil Engineering with Foundation Year BEng Audio Acoustics with Foundation Year BSc Electronic Engineering with Foundation Year BSc Physics with Foundation Year						
16.Pre-requisites *(between levels):*			17.Co-requisites *(within a level):*			
18.Indicative learning hours (breakdown of hours required)[vii] 200						
Lecture	40		Fieldwork			
Seminar			External visits			
Tutorial	20		Work based learning			
Project supervision			Guided independent study	140		
Demonstration Practical classes and workshops			Placement			
Supervised time in studio/workshop			Year abroad			
Other – please specify[viii]						
19.Percentage of module taught by School(s) other than originating School: 0%						
20.Aims of Module[ix]: (maximum of 5) To develop mathematical knowledge and the ability to develop the methodologies and modelling for real problems.						
21.Intended Learning Outcomes[x]						

Knowledge and Understanding (maximum of 5)[xi]
On successful completion the student will be able to:

1. Understand and use various methods and techniques in algebra.
2. Select and apply appropriate analytical methods to solve engineering problems.
3. Ability to transpose formulas related to engineering and science.
4. Application of the laws of growth and decay in engineering and science.
5. Advantages of calculus in determining areas and volumes.

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Transferable/Key Skills and other attributes (maximum of 5)
On completion the student will have had the opportunity to:

6. Demonstrate problem solving skills acquired by way of tutorial examples.
7. Demonstrate improvements in learning and performance by way of time management in private study and tutorial exercises and use of library and other sources of supplementary learning materials.
8. Demonstrate numeracy skills acquired by way of quantitative mathematical analysis in tutorial examples.

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22. Module mark calculation: Method A

23.Assessment components (in chronological order of submission/examination date)
Denote final assessment component in box marked **final assessment component (99)**

Type of assessment	Identify which ILO is met by number[xii]	Weighting %	Duration	Word count	Component pass required[xiii]	E Submission	Assessment organised by
Phase Tests x 4	1,3,4,6,7	30	1 hr each		No	Yes	School
					Choose an item.	Choose an item.	Choose an item.
Final assessment component (99) Examination	2,3,4,5,8	70	2 hours		No	No	SID

24. Is ethical approval for the module required?	No	25. Is ethical approval for an assessment component required?[xiv]	No

26.Learning, teaching and assessment strategies:

The Module is delivered by Lectures and Tutorials, for every chapter in the module examples and are solved and explained its relevance in Engineering applications, in addition the Lecture for every class are inputted on VLE. Tutorial question solutions are carried with smaller groups of students and additional support are provided with Mathscope plus the solution of the Tutorial question are provided on VLE.

Four Phase Tests are carried out for the module. A resit opportunity will be given to students who fail the tests, to improve their knowledge and learning ability.

Phase Tests 1-4: 30%
Final examination : 70% Duration: Two Hours

27.Syllabus outline:

Algebraic manipulation in scientific problems,

Transposition of formulae,

Co-ordinate systems: Cartesian and polar.

Logarithmic functions

Laws of decay and growth and their application

Graphical solution for experimental problems

Introduction to calculus to solve problems in velocity and acceleration, also for maximum and minimum values of various shapes to calculate volumes and areas.

28.Indicative texts and/or other learning materials/resources[xv]:

After initial approval, up to date reading lists can be accessed at https://salford.rl.talis.com/index.html
Note: This replaces the LaSU reading lists from September 2015 onwards.

For Office Use only:

QEO Comments:	

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i See UoS guidance notes on selecting JACS codes (http://www.planning.salford.ac.uk/jacs_codes/)
see HESA JACS Codes webpage http://www.hesa.ac.uk/index.php/content/view/356/233/

ii The ECTS value is half of the module credit value

iii Please indicate the month (s) in which delivery of the module will commence.

iv Amendments to the title or credit value constitute a new module.

v If the delivery month of the module is to be available for different intakes of a programme, please indicate this here. E.g. Module effective from Sept 2014 – to state the module is to be available for Sept 2014 intake & Feb 2014 intake.

vi The module will only be attached to programmes specified in this section. Any approved module can be available as a stand-alone module.

vii These categories are used for the Key Information Set which currently applies only to full time undergraduate students only but please include for all students – for more information including definitions see http://www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/contact_hours.pdf and http://www.hesa.ac.uk/component/option,com_studrec/task,show_file/Itemid,233/mnl,13061/href,Calculations_methods.html/#LearningandTeaching

viii The 'other' category should not be used for learning undertaken by full undergraduate students as 'other' is not used in KIS categories

ix The aims should express the purpose of the module.

x The intended learning outcomes should detail the knowledge, understanding and skills that students will be able to demonstrate on successful completion.

xi In some circumstances it may be necessary to have more than 5 intended learning outcomes. You will be asked to provide your rationale for this in discussion at the PARP.

xii For example, if the assessment is an essay and the essay meets ILOs number 1-4 and 6-7, state 1-4,6-7

xiii If Method B is used for module mark calculation, indicate Yes to specify the assessment component(s) to be passed in order to pass the module

xiv Please specify component(s) for which ethical approval is required.

xv The "Indicative texts and/or learning materials/resources" box should include a maximum of five items for new modules. These should be formatted using the University's agreed referencing style for the subject area (usually APA Harvard System 6th). See http://www.salford.ac.uk/library/infolit/tool#referencing_tab for more information. The texts should normally be recent texts (i.e. within the last six years) unless they are a particularly "classic" text. For existing modules, the "Indicative texts and/or learning materials/resources" box should include a link for PARP reviewers and readers to the comprehensive reading list at http://lasu.salford.ac.uk