

Programming for Engineers

Module Information

2022.01, Approved

Summary Information

Module Code	3116FNDET
Formal Module Title	Programming for Engineers
Owning School	Engineering
Career	Undergraduate
Credits	10
Academic level	FHEQ Level 3
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
Engineering

Learning Methods

Learning Method Type	Hours
Lecture	11
Practical	22

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-CTY	CTY	January	12 Weeks

Aims and Outcomes

Aims	- To become conversant with a range of engineering oriented computer programming environments and their applications.- To develop problem solving skills in computing with applications to engineering and technology- To introduce the student to the software development process within an engineering context.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Apply knowledge of programming constructs and basic algorithms.
MLO2	2	Demonstrate problem solving skills by producing simple programming solutions for engineering applications.
MLO3	3	Evaluate alternatives and make sound judgements regarding programming solutions.

Module Content

Outline Syllabus	Programming Overview The Language (e.g. Python/MATLAB) & the Integrated Development Environment (IDE) Basic Elements Procedural Programming Setting up a programming environment Scripting Fundamentals Producing a script Formatting a script Variables Data types Input to scripts Programming arithmetic Mathematical operators Division, floors and truncation Program Control Selection Statements Loop Constructs Functions Vectors and matrices represented as arrays Using Top Down Design Techniques & Pseudo Code for Solving Engineering Problems
Module Overview	
Additional Information	This course is an introduction to programming for Engineers.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Centralised Exam	Programming Tasks	100	0	MLO1, MLO2, MLO3

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Gerard Edwards	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings