LIVERPOOL JOHN MOORES UNIVERSITY

Module Proforma

Approved, 2022.02

Summary Information

Module Code	5161PDE
Formal Module Title	Advanced Computer Aided Modelling
Owning School	Engineering
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Andrew Naylor	Yes	N/A

Module Team Member

Contact Name	Applies to all offerings	Offerings

Partner Module Team

Contact Name	Applies to all offerings	Offerings

Teaching Responsibility

LJMU Schools involved in Delivery
Engineering

Learning Methods

Learning Method Type	Hours

Lecture	11
Tutorial	33

Module Offering(s)

Offering Code	Location	Start Month	Duration
SEP-CTY	CTY	September	12 Weeks

Aims and Outcomes

Aims	To give students the knowledge and skills needed to use advanced computer aided modelling techniques, such as use of surfaces in creating organic, flowing geometric entities.

Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Create 3D part models using surface modelling and other advanced modelling techniques
MLO2	Demonstrate knowledge of injection moulding requirements to produce a suitable CAD mould and component.
MLO3	Analyse a modelling problem and select appropriate tools for specific modelling operations.

Module Content

Outline Syllabus
Module introductionModule guide; aims; learning outcomes; assessment and marking schemes. Outline syllabus; module timetable and student feedback.Surface modellingImport of sketch pictures into CAD. Creation of surface based features, construction surfaces. Use of splines, advanced filleting, deleting faces, face deformation, utilizing shape and dome features, offset surfaces, extend surfaces, intersection curves.Mould designMould analysis, draft, scale, parting lines, shut of surfaces, parting surfaces, tooling split, optimising wall thickness, viewing and interpreting results.

Module Overview
The aim of this module is to develop your knowledge and skills needed to use advanced computer aided modelling techniques, such as use of surfaces in creating organic, flowing geometric entities.

Additional Information
This module is delivered using a variety methods including lectures and hands-on workshop sessions.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Centralised Exam	CAD Examination	100	3	MLO2, MLO3, MLO1