

### Summary Information

Module Code	5106SBC
Formal Module Title	Design and Manufacture
Owning School	Engineering
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

### Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

### Partner Teaching Institution

Institution Name
Sino British College of USST

### Learning Methods

Learning Method Type	Hours
Lecture	11
Practical	22
Tutorial	22

### Module Offering(s)

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

## Aims and Outcomes

Aims	The aim of this module is to give students an opportunity to experience the process of carrying out a design to manufacture project. It integrates the two subject areas of computer-aided design and computer-aided manufacture (CAD/CAM).
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**After completing the module the student should be able to:**

### Learning Outcomes

Code	Number	Description
MLO1	1	Undertake a systematic design procedure to progress a design from the brief to a solution
MLO2	2	Appraise a design solution and prepare for its manufacture
MLO3	3	Use CAD/CAM systems during the design process and to prove manufacture
MLO4	4	Produce components with the aid of computer assisted manufacture, to specification using safe working practices

## Module Content

Outline Syllabus	Design process: conceptual, embodiment and final design stages Machining processes: Turning and milling, cutting tool selection, determination of machining parameters. Applying tolerances and dimensions. 3D CAD modelling; CAD/CAM data transfer; computer assisted part programming; cutter path simulation; computer aided machining and inspection.
Module Overview	
Additional Information	The module aims to build on and apply the skills developed in the level 4 Engineering Practice module and enable students to apply a systematic approach to the design process.

## Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	CAD based assignment	40	0	MLO1, MLO2
Report	CAM/lab assignment	60	0	MLO3, MLO4

## Module Contacts

### Module Leader

Contact Name	Applies to all offerings	Offerings
Tahsin Opoz	Yes	N/A

### Partner Module Team

Contact Name	Applies to all offerings	Offerings
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