

UNIVERSITY OF PLYMOUTH MODULE RECORD

Module Code: MFRG 318	Credits: 10	Level : 3
Module Title : Manufacturing Processes		
Pre-Requisites :		
Co – Requisites : None		
If Linked, Module linked to : N/A		
Short Module Descriptor - (Maximum four lines 9pt print):		
To introduce certain, non-traditional manufacturing processes and develop an appreciation of up to date technology, as used in the manufacturing industries.		
Elements of Assessment		
COURSEWORK	30 %	EXAMINATION
		70%
		EoM TEST
		N/A
		%
Module Aims :		
To extend the students' appreciation of manufacturing processes and develop an awareness of modern manufacturing technology.		
Skills Elements :		
The selection and analysis of non-traditional manufacturing processes for component manufacture coupled with an understanding of current safety and environmental considerations. Written communication, numeracy, IT, independent learning, practical and professional skills.		
Objectives / Learning Outcomes :		
Students should be able to:		
1. Identify a suitable non-traditional process for the manufacture of a particular engineering component.		
2. Discuss the need for CNC techniques and the use of robots in a modern manufacturing environment.		
3. Demonstrate an understanding of the environmental and safety issues concerned with certain manufacturing processes.		
Indicative Syllabus Content :		
1. Non-traditional manufacturing techniques such as ultrasonically assisted machining, high pressure water cutting and the machining of hybrid materials and an introduction to micro and nano-manufacturing techniques.		
2. The use of CNC machine tools, rapid prototyping techniques and robots.		
3. Safety and environmental issues.		
4. Surface treatment and plating processes.		
5. Metrology and inspection techniques including the mathematical prediction of machined surfaces.		
Please complete the information below		
Faculty: Technology	Dept: SoE	Partner Institution: N/A
Module Leader: T.Paterson	Subject Group: B5	Term: Spring
Registry Use Only		
VALIDATION- DATE OF APPROVAL:		DATE OF IMPLEMENTATION :
DATES(S) OF APPROVED CHANGES:		
ASC:	FEEBAND :	RESOURCE UNITS :