MODULE DESCRIPTION FORM

DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING

ME109 CAD for BME

Module Registrar: Dr Emma Henderson e.henderson@strath.ac.uk	**Taught To (Course): Cohorts for whom class is compulsory**		
Other Lecturers Involved: Mr Liam Kirkwood	**Credit Weighting: 10**	**Semester: 2**	
Assumed Prerequisites: none	**Compulsory class**	**Academic Level: 1**	**Suitable for Exchange: N**

Module Format and Delivery (HOURS i.e. 1 credit = 10hrs of study):

Lecture	Tutorial	Laboratory	Groupwork	External	Online	Project	Assignments	Private Study	**Total**
	10				3		10	77	100

Educational Aim

This module aims to introduce the concept of engineering communication, standards, and modern manufacturing techniques (CAD-CAM). Students will be expected to work through structured problem solving and communication exercises during the labs and in their own time.

Learning Outcomes

On completion of the module the student is expected to be able to:

LO1 Appreciation of formal design methods and standards, and the use of sketching and drawing as an essential component of communication.

LO2 Appreciation of modern CAD-CAM techniques and software.

Syllabus

The module will teach the following:

a) An introduction to Engineering Communication, including engineering drawings and their place within the wider context of the manufacturing process.

b) An Introduction to the Design Process.

c) An introduction to CAD-CAM techniques and basic techniques in the use of specialised software.

Assessment of Learning Outcomes

Criteria

For each of the Module Learning Outcomes the following criteria will be used to make judgements on student learning:

LO1
C1 Students should be able to communicate their design ideas using graphical communication skills.
C2 Students should have an understanding of basic requirements and standards for Engineering Drawings.

LO2
C1 Students should have a basic working knowledge of CAD & CAM software and
C2 Students should understand the benefits of CAD-CAM techniques in modern manufacture.

The standards set for each criterion per Module Learning Outcome to achieve a pass grade are indicated on the assessment sheet for all assessment.

Principles of Assessment and Feedback
(within Assessment and Feedback Policy at: https://www.strath.ac.uk/staff/policies/academic/)

Deliver high quality feedback information that helps learners self-correct:
High quality feedback will be provided by staff to students at all stages of their work. This will involve group discussions in tutorial slots, and feedback on project work.

Ensure that summative assessment has a positive impact on learning.
Summative assessments will be responded to by detailed feedback on an individual basis.

Assessment Method(s) Including Percentage Breakdown and Duration of Exams

Examination				**Coursework**		**Practical**		**Project**	
Number	Month(s)	Duration	***Weighting***	Number	***Weighting***	Number	***Weighting***	Number	***Weighting***
								1	100%
*				*		*		* LO1, LO2	

* ***L/Os:*** *Indicate which Learning Outcomes (L01, L02, etc) are to be assessed by exam/coursework/project/practical as required.*

Coursework / Submissions deadlines (*academic weeks*):
End of semester 2 (wk11).

Resit Assessment Procedures:
Submission of alternate ^^project prior to commencement of the August exam diet.

^^Students must contact the module Registrar for details as soon as results confirm that a resit is required.

PLEASE NOTE:
Students must gain a summative mark of 40% to pass the module. Students who fail the module at the first attempt will be re-assessed during the August diet. This re- assessment will consist entirely of coursework. No marks from any previous attempts will be transferred to a new resit attempt.

Recommended Reading

*****Purchase recommended **Highly recommended reading *For reference**

*** BS 8888:2017 “Technical product documentation and specification.”, British Standards. Can be downloaded free on DS using the following link. (https://bsol-bsigroup-com.proxy.lib.strath.ac.uk/Home).

* “Materials Science and Engineering: an Introduction” by Wm D Callister, John Wiley & Sons, Copies in the Main Library.

* “Mastering Manufacturing” by Gordon Mair, Macmillan, 1993, ISBN 0333542304. Copies available in Main Library.

* “Manufacturing Engineering and Technology” by S. Kalpakjian, Addison-Wesley, 1995, ISBN 0201538466. Copies in Main Library.

* “Materials and Processes in Manufacturing” by E.P. DeGarmo, Macmillan, 1984, ISBN 0029-401405. Copies in Main Library.

Additional Student Feedback
(Please specify details of when additional feedback will be provided)

Date	Time	Room No
Depending on group’s schedule of activities.		Check timetable webpages for details

Session: 2020/21

Students receive regular feedback through discussion with staff during activities throughout the year. Detailed, written feedback for the submitted project element of assessment. All aspects of the course involve verbal feedback, in the context of group discussions with supervising staff.

Approved:

Course Director Signature: Dr Stuart Grey

Date of Last Modifications: 11/8/20

(Updated August 2020)

MODULE TIMETABLE

Module Code:	**ME109**	**Module Title:**	**CAD FOR BME**

Brief Description of Assessment:

Sem 1 Engineering Communication: Each student must complete a short Design Project to fulfil a brief supplied by staff incorporating CAD-CAM elements and Drawing Standards.

Assessment Timing

Design project will be due in end of semester 2.

Please note: Timings can and will change, this should only be used as a guide.

Semester One	W&D Wk	WK1	WK2	WK3	WK4	WK5	WK6	WK7	WK8	WK9	WK10	WK11	Exam Period
	Choose an item. Choose an item.	Choose an item.	Choose an item. Choose an item.	Choose an item. Choose an item.	Choose an item. Choose an item.	Choose an item. Choose an item.	Choose an item. Choose an item.	Choose an item. Choose an item.	Choose an item. Choose an item.	Choose an item. Choose an item.	Choose an item. Choose an item.	Choose an item. Choose an item.	Choose an item.

Semester Two	C&D Wk	WK1	WK2	WK3	WK4	WK5	WK6	WK7	WK8	WK9	WK10	WK11	Exam Period
	Choose an item. Choose an item.	Choose an item. Choose an item.	Choose an item. Choose an item.	Choose an item.	Course work Set Choose an item.	Choose an item. Choose an item.	Choose an item.	Choose an item. Choose an item.	Choose an item. Choose an item.	Choose an item. Choose an item.	Choose an item. Choose an item.	Course work Submit	Choose an item.