



<b>Module Code: EJ215036S</b>	Version: 1 Date: 9 <sup>th</sup> December 2005
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**1. Module Title:** *maximum 100 characters*

Introduction to Advanced Computer Aided Design

<b>2a. Module Leader:</b>	<b>2b. Department:</b>	<b>2c. Faculty:</b>
R Mootanah	Computing and Technology	Science and Technology

<b>3a. Level:</b> <i>see guidance notes</i>	<b>3b. Module Type:</b> <i>see guidance notes</i>
2	Standard

<b>4a. Credits:</b> <i>see guidance notes</i>	<b>4b. Study Hours:</b> <i>see guidance notes</i>
15	150

**5. Restrictions**

<b>Pre-requisites:</b>	Awareness of computer drawing
<b>Co-requisites:</b>	
<b>Exclusions:</b>	
<b>Pathways to which this module is restricted:</b>	

**LEARNING, TEACHING AND ASSESSMENT INFORMATION (for inclusion in the Module Guide)**

**6a. Module Description:** *200 – 300 words*

Students entering this module should already have experience of simple drawing on the computer. This module develops the ability to create components in true 3D with all the associated parametric dimensioning. Students will be expected to use their creativity to produce new and original designs using the computer. Module assessed by assignment only.

**6b. Outline Content:**

- Create 3D models using extrude and revolve.
- Use Boolean operations such as cut, protrude, join, shell etc
- Edit or modify models using the history tree.
- Use shading give a realistic impression of the product
- Create and modify original designs
- Revise common manufacturing methods

**6c. Key Texts/Literature:**

Shih R H (2005), Parametric Modeling with I-deas, SDS Publications, ISBN 1 58503 203 4

**6d. Specialist Learning Resources:**

CAD centre  
Study guide and on-line tutorials

**7. Learning Outcomes (threshold standards):**

	On successful completion of this module the student will be expected to be able to:
<b>Knowledge and understanding</b>	1. Applies design techniques taking into account aesthetics, likely market and manufacturing method.
<b>Intellectual, practical, affective and transferable skills</b>	2. Constructs and edits designs using a parametric modeller

**8. Learning Activities**

Learning Activities	Hours	Learning Outcomes	Additional Comments (including details of use of web-CT)
Teacher managed learning:	36	All	
Student managed learning:	114	All	
<b>TOTAL</b>	150		

9. Assessment		
Assessment Method	% contribution to module mark or P/F	Learning Outcomes
Computer generated design and report of 1000 words	100	All
<p><b>In order to pass this module, students are required to achieve an overall mark of 40%</b></p> <p><b>In addition, students are required to (a) for each element of fine graded assessment listed above, achieve a minimum mark of 30% (or higher - see Module Guide) and (b) pass any pass/fail elements</b></p>		

**OTHER TECHNICAL DETAILS**

10. Delivery of the Module <i>Please delete as appropriate</i>					
Delivery	This module is delivered over...	Yes or No?	Indicate which by deleting as appropriate		
1	...a single semester	Y	Semester 1	Semester 2	
2	...two semesters	N	Semester 1	Semester 2	
3	...a single trimester	N	Trimester 1	Trimester 2	Trimester 3
4	...two trimesters	N	Trimester 1	Trimester 2	Trimester 3
5	...three trimesters	N	Trimester 1	Trimester 2	Trimester 3
6	...multiple delivery patterns	N			
7	... an exceptional delivery pattern	N	<i>Give details (see guidance notes)</i>		

11. Learning Activities – further details	
Learning Activities	Details of duration and frequency of learning activities
Teacher managed learning:	Lecture (weekly) and CAD laboratory (weekly) Total 3 hours per week
Student managed learning:	CAD centre

12. Module Assessment – further details				
Method	Length/duration	Fine graded (FG) or pass/fail (PF)	Minimum Qualifying Mark <i>see guidance notes</i>	Comments
CW	Design + 1000 words	FG	40	

13. Subject: <i>see guidance notes</i>