

STUDENT NAME:

STUDENT ID. NO.

PROGRAMME:

BENG / AB / HD – AE / AV / ME

ISSUE DATE:

04-Mar-25, Tuesday

SUBMISSION DATE:

25-Mar-25, Tuesday

MARK & FEEDBACK DATE:

10-Apr-25, Thursday

Spring-2025 / ASSESSMENT (ASSIGNMENT 1)

MODULE TITLE:	Computer Aided Design and Manufacture	MODULE CODE:	EG121
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ASSESSED LEARNING OUTCOMES

	LO1	Describe the key principles of manufacturing using a CAD/CAM system.
	LO2	Produce 3D solid models of a component suitable for transfer into a CAM system.
✓	LO3	Use CAM software to generate manufacturing simulations of a component
	LO6	Design and produce a dimensionally accurate component on a CNC machine using a CAD/CAM system.

Student Declaration

Submission requirement:

1. Signed cover sheet

2. Assignment report

3. Soft / Hard copy of turnitin report

I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. All the sources from which information has been obtained for this assignment, have been referenced. I understand that making a false declaration is a form of malpractice.

I further confirm that I have read and understood the Emirates Aviation University rules and regulations about plagiarism and copying and agree to be bound by them.

Student Signature:

Submitted on:

RESULT

QUESTIONS	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	OVERALL (/20%)
LEARNING OUTCOMES	LO3	LO3	LO3	LO3	LO3	--	--	--	--	--	
TOTAL MARK	7	4	3	3	3	--	--	--	--	--	
ACHIEVED MARK											

Assessor's Overall Feedback:

1st Assessor's Name: Yasmine Morhebi

Signature:

Date:

2nd Assessor's Name:

Signature:

Date:

Submission Format

The submission should be in the form of an MS Word / PDF document with appropriate use of structure and referencing, as per the below:

1. Preferred font is Arial and size 10. Heading size can be increased but make sure to keep the same format throughout this report.
2. 1.5x spacing is required between sentences.
3. Notes should be typed and drawings presented neatly. Images/Pictures may be copied & pasted but need to be referenced.
4. Headings, Images/Pictures, Used equations must be numbered for traceability purpose.
5. The last page should have your reference sources. Preferable style - Harvard style. Always make sure to write the source of the copied images/pictures.

Plagiarism

Plagiarism is defined as the presentation of another person's work as your own. It is a particular form of cheating. Plagiarism must be avoided at all costs and students who break the rules, however innocently, may be penalised. It is your responsibility to ensure that you understand correct referencing practices. As a university level student, you are expected to use appropriate references throughout and keep carefully detailed notes of all your sources of materials for material you have used in your work, including any material downloaded from the Internet.

In this be the case, Emirates Aviation University considers plagiarism as theft and any student found to have plagiarised would be awarded an automatic fail for the piece of work submitted and may be excluded from further study at the University.

Questions:

1. Using the CAD part of Boxford software, design a logo along with your initial. The logo should be suitable for production on a CNC Machine knowing that your stock material has the following dimensions 75x125x50 mm (7 marks)
2. Using the CAM Boxford software, select the appropriate tools, depth and style of Manufacturing such as Area, Inside, outside or drill. (4 marks)
3. Generate the cutter tool path simulations and the G-Codes to manufacture the component. (3 marks)
4. Analyse the impact of modifying and using different manufacturing operations to the cycle time and improve program performance. (3 marks)
5. Taking into consideration your usage of the CAD/CAM system to manufacture components, critically evaluate how effective the use of those systems is and support your evaluation with examples (3 marks)