# Aerospace Drawings I Course No. 41500 Credit: 0.5

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| **Student name:**  |  | **Graduation Date:** |  |

Pathways and CIP Codes:Aviation Production (15.0000) - Design Strand

Course Description: This is an **application level** course that teaches students Part Design process through creation of solid parts without complex contours. (CATIA 1)

Directions:The following competencies are required for full approval of this course. Check the appropriate number to indicate the level of competency reached for learner evaluation.

**RATING SCALE:**

4. Exemplary Achievement: Student possesses outstanding knowledge, skills or professional attitude.

3. Proficient Achievement:Student demonstrates good knowledge, skills or professional attitude. Requires limited supervision.

2. Limited Achievement:Student demonstrates fragmented knowledge, skills or professional attitude. Requires close supervision.

1. Inadequate Achievement:Student lacks knowledge, skills or professional attitude.

0. No Instruction/Training:Student has not received instruction or training in this area.

## Benchmark 1: Demonstrate basic concepts of the part structure

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Navigate the “product life” data management system. |  |
| 1.2 | Identify the part sketching and design tools. |  |
| 1.3 | Manipulate components within the environment. |  |
| 1.4 | Manage documents: search, open, close, save, and delete. |  |

## Benchmark 2: Demonstrate how to effectively use the sketching and part design tools.

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 2.1 | Create, constrain and modify parameters and sketches. |  |
| 2.2 | Create solid objects: pads, pockets, shafts, grooves, holes, ribs, and slots. |  |
| 2.3 | Create fillets, chamfers, and drafts. |  |
| 2.4 | Create patterns, perform transformations and splits. |  |
| 2.5 | Modify parts using parameters. |  |
| 2.6 | Work with multiple bodies and perform Boolean operations. |  |
| 2.7 | Integrate surfaces in the creation of solid objects. |  |
| 2.8 | Apply materials to parts. |  |

## Benchmark 3: Create projects that utilize the components of assembly design

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 3.1 | Identify the Assembly Design Workbench. |  |
| 3.2 | Manipulate, constrain and modify components in an assembly. |  |
| 3.3 | Insert components in an assembly. |  |
| 3.4 | Work with the links of the assembly. |  |
| 3.5 | Create parts within the assembly structure. |  |
| 3.6 | Create scenes and annotated views. |  |
| 3.7 | Utilize all of the navigation tools. |  |

## Benchmark 4: Demonstrate how to effectively measure and analyze concepts using digital mock up analysis tools

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 4.1 | Identify the digital mock up tools. |  |
| 4.2 | Perform measurements. |  |
| 4.3 | Perform analyses including clash and section. |  |
| 4.4 | Capture pictures and create xml files for external use. |  |

I certify that the student has received training in the areas indicated.

Instructor Signature:

For more information, contact:

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