# Aerospace Drawings I Course No. 41500 Credit: 0.5

|  |  |  |  |
| --- | --- | --- | --- |
| **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:

CTE Pathways Help Desk

(785) 296-4908

[pathwayshelpdesk@ksde.org](mailto:pathwayshelpdesk@ksde.org)



900 S.W. Jackson Street, Suite 102

Topeka, Kansas 66612-1212

[https://www.ksde.org](https://www.ksde.org/)

The Kansas State Department of Education does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities and provides equal access to any group officially affiliated with the Boy Scouts of America and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: KSDE General Counsel, Office of General Counsel, KSDE, Landon State Office Building, 900 S.W. Jackson, Suite 102, Topeka, KS 66612, (785) 296-3201.