# Particular Topics in Computer Programming Course No. 10160 Credit: 1.0

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

Pathways and CIP Codes:Programming & Software Development (11.0201)

Course Description: **Application Level:** Coursework should represent explicit objectives measured against specific target employment skills that are not available in other courses and should be enumerated in addition to those listed below. Topics (you will have others): Data Structures Object Characteristics &Methods of Advanced Algorithms. Additional competencies should reflect the particular work environment and the essential skills addressed reflective of previous coursework: (e.g., workplace experience, game design, authoring the web).

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: Click or tap here to enter text.

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Summarize the process of IT product/service design. |  |
| 1.2 | Plan for products/services using reliability factors. |  |
| 1.3 | Create products/services using reliability factors |  |
| 1.4 | Test new products/services for reliability |  |
| 1.5 | Maintain the reliability of new products/services. |  |
| 1.6 | Identify input and output requirements, |  |
| 1.7 | Identify system processing requirements. |  |
| 1.8 | Define scope of work to meet customer needs. |  |
| 1.9 | Demonstrate knowledge of the key functions and subsystems of the software product. |  |
| 1.10 | Demonstrate knowledge of cross- functional team structures and team members' roles. |  |
| 1.11 | Assess the importance of new technology to future developments. |  |
| 1.12 | Identify data communication trends and major current issues. |  |
| 1.13 | Identify new technologies relevant to information technology. |  |
| 1.14 | Identify system processing requirements. |  |
| 1.15 | Determine compatibility of hardware and software. |  |
| 1.16 | Identify new and emerging classes of software. |  |
| 1.17 | Identify the elements of the information processing cycle (i.e., input, process, output, storage) |  |
| 1.18 | Demonstrate knowledge of software development environment. |  |
| 1.19 | Develop programs using appropriate language. |  |
| 1.20 | Demonstrate knowledge of the information system life cycle. |  |
| 1.21 | Demonstrate knowledge of the concepts of data and procedural representations. |  |
| 1.22 | Demonstrate knowledge of key constructs and commands specific to a language. |  |
| 1.23 | Demonstrate knowledge of how programming control structures are used to verify correctness |  |

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



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.