# Emerging Technologies Course No. 21053 Credit: 1.0

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

Pathways and CIP Codes: **Engineering & Applied Mathematics (14.0101)**; Biochemistry (14.1401); Biomedical (14.0501)

Course Description: An **application leve**l course that emphasizes students’ exposure to and understanding of new and emerging technologies. The range of technological issues varies widely but might include Artificial Intelligence, Virtual Reality Augmentation Technology, Automation, Robotics, Lasers, Fiber Optics, Information Technology, Electronics, Biotechnology, Nanotechnology, Green Technology and Alternative Energy Sources, Communication Modalities, and Future Transportation Technology.

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: Identification and research

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Research and identify major areas where emerging technology is being applied and how the implications for change in the industry. |  |
| 1.2 | Identify sciences and technology areas most impacted and with most potential to utilize the new technologies. |  |
| 1.3 | Research how current and emerging technologies are impacting social condtions, the economic impact our personal daily life. |  |
| 1.4 | Be able to discuss the advantages, disadvantages, and prospects of current emerging technologies. |  |
| 1.5 | Recognize the importance of ethical practices with new technologies. |  |
| 1.6 | Be able to explain why it is important for industry professionals to keep abreast of evolving technologies. |  |

## Benchmark 2: Analyzing and Project Planning

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 2.1 | Develop a project plan that incorporates a new and emerging technology and illustrates its impact on organizations and industries and possible future . |  |
| 2.2 | Create a research question for the project plan and develop goals and objectives for the research process. |  |
| 2.3 | Based on research discuss and defend the impact of disruptive technologies on project design, implementation, and future transformation. |  |
| 2.4 | Conduct a cased study on a new technology that is being implemented in an organization or industry. |  |

## Benchmark 3: Presentation

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 3.1 | Develop a report, model, video and/or presentation summarizing the processes, results, and conclusions of the project plan to industry professionals/real world audiences |  |

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/)

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