**INFORMATION TECHNOLOGY CAREER CLUSTER DESIGN**

***CHECKLIST*:** ***Emerging Technologies* (10040)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Standard** | **Dates Taught** | | | | **Notes** |
| **Emerging Technologies** | | | | | |
| 1. Demonstrate the research skills necessary to identify and evaluate emerging technologies. |  |  |  |  |  |
| 1. Seek and identify sources of information on new technology. |  |  |  |  |  |
| 1. Identify solutions and problems that go beyond the expected and obvious. |  |  |  |  |  |
| 1. Identify sciences and technology areas most impacted and with most potential to utilize the new technologies. |  |  |  |  |  |
| 1. Be able to explain why it is important for STEM professionals to keep abreast of evolving technologies. |  |  |  |  |  |
| 1. Be able to discuss the advantages, disadvantages, and prospects of current emerging technologies. |  |  |  |  |  |
| 1. Discuss in depth a chosen emerging technology, based on independent research. |  |  |  |  |  |
| 1. Explain the change process. |  |  |  |  |  |
| 1. Develop a plan for anticipating change. |  |  |  |  |  |

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| **Emerging Technologies (2)** | | | | | |
| 1. Address each of the following areas to varying degrees based on available information: |  |  |  |  |  |
| 1. anticipated employment |  |  |  |  |  |
| 1. drivers and constraints |  |  |  |  |  |
| 1. size and location of market |  |  |  |  |  |
| 1. connection(s) to existing technologies |  |  |  |  |  |
| 1. ability and ease of replication |  |  |  |  |  |
| 1. physical and capital costs |  |  |  |  |  |
| 1. industry and education partnerships to be leveraged |  |  |  |  |  |
| 1. national best practices |  |  |  |  |  |
| 1. illustrate qualifications, and recommendations, aims and approaches for the Technological innovation |  |  |  |  |  |
| 1. Innovation system modeling |  |  |  |  |  |
| 1. Technology monitoring, forecasting and assessment |  |  |  |  |  |
| 1. Trend analysis methods & scenarios |  |  |  |  |  |
| 1. Impact assessment |  |  |  |  |  |
|  |  |  |  |  |  |
| 1. Risk analysis |  |  |  |  |  |
| 1. Action (policy) analysis |  |  |  |  |  |
| 1. Technology road mapping |  |  |  |  |  |
| 1. Communication and implementation of innovation forecasts |  |  |  |  |  |