

Professional Development for Competency-Based/Hybrid Curriculum

This document will overview the content and sequence of the training that will be presented to the NSF ATE Project (CREATE) grant team, at Terra State Community College, on the elements that make up a Competency-Based Hybrid instructional model. The facilitator will be Tom Wylie from Northwest State Community College. This training will consist of 12 hours of interactive instruction that will include activities that will align with the CREATE project.

The 3 days of professional development will be delivered in July 2022, scheduled for 8:00AM to 12:00 PM on July 25, 27 & 29, 2022. Daily activities will be included that will assist in the development and support of the CREATE project.

1. Overview of the CREATE project
 - a. 2 Primary Goals
 - b. Activities for Instructor professional development
 - c. 3 lecture/lab courses to convert
 - d. 3 year time frame to create, implement and evaluate
 - e. Success will drive more grants
 - f. How much has been done thus far in the courses?
 - g. Do not start from scratch - Build from other course models

2. Traditional Education versus Competency-Based Education
 - a. Review a traditional technical course model
 - b. What is CBE?
 - c. What are competencies?
 - d. What are measurable outcomes?
 - e. Traditional models based on seat-time and instructor pacing
 - f. Competency-Based Curriculum - validated competencies
 - g. CBE is mastery of skills, and flexible pacing
 - h. CBE requires 3-4 times the number of assessments compared to a traditional model
 - i. Stakeholders: students, faculty, employers, college

3. Overview of the HOME4TECHS project (CREATE project is based on this model)
 - a. Driving factors for change - Employers
 - b. Development of a new instructional model: Competency-based/Hybrid
 - c. Realignment of the curriculum
 - d. Moving to a competency-based model and changing the faculty/student culture
 - e. Changing the assessment model (explanation of KAA and HOA)
 - f. Moving students and faculty online
 - g. Examples of an online course with all learning objects

- h. Increasing the development of hands-on skills
 - i. A few lessons learned through the process: What we thought, and where we actually landed (also discussed throughout the training)
4. Aligning the curriculum to employer needs
- a. Employer engagement: 3 types, and the purpose of each type
 - b. Employer involvement in creating content (DACUM, job descriptions, vetting changes)
 - c. Validated competencies through a DACUM process
 - d. Acquiring input through industry roundtables
 - e. Advisory boards versus industry roundtables
 - f. Focus group visit to employer site
 - g. Creating an SME employer group
 - h. Process for vetting curriculum changes
 - i. Aligning the skills development to the workplace
 - j. Learning experience skills transferred to the workplace
 - k. Focused competencies and measurable outcomes
5. What is an Assessment Model?
- a. How traditional technical courses are assessed
 - b. Assessment is faculty responsibility
 - c. Assessing technical knowledge
 - d. Assessing technical skills
 - e. Assessing skills and knowledge in one assessment
 - f. Using the assessment model for the PLA process
 - g. Assessment will determine student preparedness upon course completion
6. Creating Hands-On Assessments and lab exercises
- a. Hands-On Assessments (HOAs) based on workplace skills
 - b. HOAs and direct assessment of technical skills
 - c. Indirect measurement of technical skills
 - d. Labs were traditionally used to support understanding
 - e. Labs should develop skills
 - f. Troubleshooting and “root cause analysis”, are critical workplace skills
 - g. Integrating troubleshooting into every HOA

7. Backward Design (A different approach)
 - a. Introduce the text: Understanding by Design by Wiggins and McTighe (2nd edition)
 - b. Why backward design is the best process for technical course development
 - c. Determining the knowledge/skills required when course is completed
 - d. The 3 stages of backward design
 - e. Tying all the CBE/hybrid model elements together through this process
 - f. Applying the backward design to the rework of an existing course

8. If time allows:
 - a. Intro to OER and licensing
 - b. Overview of learning objects