UNIT REPORT

Agricultural Engineering Technology BS
Assessment Plan Summary

Agricultural Engineering Technology BS

Develop Professional Skills

Goal Description:

Students earning a BS in Agricultural Engineering Technology will learn the skills necessary for seeking job placement and technical writing in the work place.

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

Development of Marketplace Skills
Learning Objective Description:

Students completing the BS in Agricultural Engineering Technology will demonstrate skills necessary to compete in the professional marketplace.

Attached Files

AGRI 4120 Portfolio Rubric Matrix

RELATED ITEM LEVEL 2

AGRI 4120- Professional Employment Portfolio
Indicator Description:

All students seeking a degree in Agricultural Engineering Technologyare required to complete AGRI 4120 in their senior year. The course addresses essential skills necessary for job placement in the work force for agriculture employment - resume preparation, interview skills, technical writing skills and employment opportunities. Faculty will review student assignments and assess student performance on a portfolio of artifacts using a faculty-developed rubric.

Criterion Description:

Faculty evaluations will indicate that at least 70% of the Agricultural Engineering Technology students enrolled in AGRI 4120 will perform at an acceptable level and score a 3 (meets expectations) or higher on a scale of 1-5. Technical writing skills with emphasis on cohesiveness and concise writing were concerns from previous evaluations and continue to be an area addressed.

Findings Description:

On average, 83% of Agricultural Engineering Technology students in the class scored 3 or higher on the professional portfolio submission, while 33% scored a 5. The portfolio included a cover letter, resume, reference page, letters of recommendation and an application. This is an indication that students are taking this assignment seriously as they prepare to exit the university.

RELATED ITEM LEVEL 3

Development of Marketplace Skills
Action Description:

Students are exceeding expectations based on the criterion description. This is a positive outcome. Based on these findings, we will continue monitoring student performance on an annual basis. We must be diligent in continuous assessment of this learning objective to ensure that our students are prepared to enter the marketplace. We may consider moving the criterion description standard to 70% of Agricultural Engineering Technology students enrolled in the course scoring a 4 or higher, rather than a 3 or higher, but we believe it is too early to make this change at this point in time.

Knowledge of Key Concepts and Skills

Goal Description:

Increase students' knowledge of key concepts and skills in agricultural engineering technology.

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

Development of Students' Knowledge and Skills
Learning Objective Description:

During their enrollment in the program, students will be required to complete assignments that demonstrate competency in key STEM areas (physics, math, and technology) associated with Agricultural Engineering Technology (AET).

RELATED ITEM LEVEL 2

AGET 4381- Advanced AET Course Assignment Rubric
Indicator Description:

All students enrolled in the Agricultural Engineering Technology (AET) program must complete a capstone course (AGET 4381). The course addresses key concepts in AET and STEM skills (technology, math, and engineering - physics) relevant to AET Seven randomly selected student assignments and projects will be reviewed by faculty members with expertise in the field of AET. Faculty members will score the assignments using a scale of 1 - 5 with 3 "meets expectations," 4 "exceeds expectations," and 5 "far exceeds expectations."

Criterion Description:

At least 70% of the students enrolled in the advanced AET capstone course will perform at an acceptable level with an assessed score of 3 (meets expectations) or higher.

Findings Description:

AGET 4381 serves as a capstone course for AET majors and minors.

In Fall 2015, projects included completing a larger goose-neck stock trailer, a smaller bumper pull trailer, and numerous smaller projects. Students were given theory and lecture tests, completed written assignments, and developed plans and bill of materials throughout the semester. On a scale of 1 – 5, all students enrolled scored a 3 or better. Three students exceeded expectations with a score of 4 and five students far exceeded expectation with a score of 5.

Students also completed a self-assessment at semester's end. Five areas were chosen for the assessment rubric: 1) knowledge and application of tech information, 2) working in teams, 3) knowledge and implementation of safety procedures, 4) following plans and instructions, 5) and performance of skills. A 5-point Likert-type scale, with 5 being greatest, was used. Overall, students' self-assessment averaged 4.1 across all areas.

RELATED ITEM LEVEL 3

Development of Students' Knowledge and Skills

Action Description:

During this academic year, all students enrolled in AGET 4381 (capstone) met the criterion description based on a series of assessments. This was confirmed with a self-assessment by students. It is expected that future students will achieve at a similar level and at some point, the criterion measure may be increased.

Update to Previous Cycle's Plan for Continuous Improvement

Previous Cycle's Plan For Continuous Improvement (Do Not Modify):

Technical AET skills and their application are a major concern of AET faculty. Students will have more out of class assignments and readings to improve technical knowledge of AET and STEM core concepts.

Update of Progress to the Previous Cycle's PCI:

Additional written assessment instruments were given this semester to assess student learning. With a large class size this semester, more small group projects were assigned with students' responsible for designing, planning, and construction in laboratory settings. Some students also displayed personal motivation by completing the larger project committed to at the start of the semester. The presence of teaching assistants provided more “open lab” (flexible) opportunities for students to come in for hands-on practice. This provided a forum where students could more easily work towards completing project construction/fabrication, and complete plans and bill of materials. Skill mastery often comes with practice and seeing a project completed.

Means to potentially improve student learning in the near future include: 1) facilitating and encouraging increased reading outside of class, 2) increased expectation of problem set assignments completion due to limited classroom contact time, and 3) continue "open lab" as long as teaching assistants are available.

Marketplace Skills and Content Knowledge

Closing Summary:

We must be diligent in continuous assessment of the learning objective, "Development of Marketplace Skills" to ensure that our students are prepared to enter the marketplace. We may consider moving the criterion description standard to 70% of Agricultural Engineering Technology students enrolled in the course scoring a 4 or higher, rather than a 3 or higher, but we believe it is too early to make this change at this point in time.

During this academic year, all students enrolled in AGET 4381 (capstone) met the criterion description based on a series of assessments. This was confirmed with a self-assessment by students. It is expected that future students will achieve at a similar level and at some point, the criterion measure may be increased.