UNIT REPORT

Agricultural Engineering Technology BS - Assessment Plan Summary

Agricultural Engineering Technology BS

1-Develop Professional Marketplace Skills

Goal Description:

Students earning a BS in Agricultural Engineering Technology will develop the skills necessary to seek initial job placement as they begin their professional careers.

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

1-Development of Professional 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

1-AGRI 4120- Professional Employment Portfolio

Indicator Description:

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

Criterion Description:

Faculty expect 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.

Findings Description:

The instructor of the course chose to report results based on an average score, rather than the proportion of students achieving a 3 or greater on the portfolio this year. We will likely return to the proportion measurement in future assessments.

On average, Agricultural Engineering Technology students (n=9) scored 3.43/5.0 on the standardized rubric. The portfolio included a cover letter, resume, reference page, letters of recommendation and an employment application. Generally, Agricultural Engineering Technology students performed comparably to previous semesters. However, there is room for improvement.

Strengths:

- Resumes as a whole are well prepared

Weaknesses:

- Alignment between reference page and letters of reference needs to be reinforced
- Letters of recommendation

RELATED ITEM LEVEL 3

1-AGRI 4120- Professional Employment Portfolio

Action Description:

Students are exceeding expectation, but there is room for improvement. Recommendations include to 1) pay more attention to stressing the importance of “Alignment” among items in the portfolio and 2) stressing the importance of selecting references will be added to course expectations in the future.

2-Knowledge of Key Disciplinary Concepts and Skills

Goal Description:

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

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

2-Development of Students' Knowledge of Key Disciplinary Concepts 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 (AGET).

RELATED ITEM LEVEL 2

2-AGET 4381- Capstone, Development of Students' Knowledge of Key Disciplinary Concepts and Skills

Indicator Description:

All students enrolled in the Agricultural Engineering Technology (AGET) program must complete a capstone course (AGET 4381). The course addresses key concepts in AGET and STEM skills (technology, math, and engineering - physics) relevant to AGET. Seven randomly selected student assignments and projects will be reviewed by faculty members with expertise in the field of AGET. 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 AGET capstone course will perform at an acceptable level with an assessed score of 3 (meets expectations) or higher.

Findings Description:

The summer 2017 projects included completing a 10-foot bumper pull trailer and numerous smaller projects. Theory and lecture tests were administered to students. Students completed written assignments, then developed plans and bill of materials during the session. On a scale of 1 – 5, all students enrolled scored a 3 or better. Four 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 the end of the semester. Six areas were chosen for the assessment rubric: knowledge and application of tech information, working in teams, knowledge and implementation of safe procedures, following plans and instructions, performance of skills, attendance and attitude. Overall, summary evaluation showed a 4.28 average on all areas (5-pt scale with 5 highest).

RELATED ITEM LEVEL 3

2-Development of Students' Knowledge of Key Disciplinary Concepts and Skills

Action Description:

Specific areas of concern observed during the summer session and proposed changes for the future include continuing more outside-of-class reading and problem-set assignments, since there is limited classroom contact time.

Additional written assessment instruments were administered this semester. With a large class size this session, there was limited time for individuated instruction, thus there were more small group assigned projects with additional responsibilities in designing, planning and construction during laboratory instruction. Skill mastery often comes with practice and seeing a project completed.

With limited teaching assistant help this semester, there was limited “open lab” opportunities for students to come in for hands-on practice and to work towards completing the construction and fabrication of the projects, and to complete plans and bill of materials.

Update to Previous Cycle's Plan for Continuous Improvement

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

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.

Update of Progress to the Previous Cycle's PCI:

Assessment instruments indicate that students are prepared and have the necessary tools to begin their initial career search.

Students are achieving desired outcomes in the capstone course. However, practice by students in the "open lab" could be improved by availability of a graduate assistant.

Plan for Continuous Improvement

Closing Summary:

1. AGRI 4120: Professional Employment Portfolio: It is imperative that we continue to be diligent in assessment of the learning objective, "Development of Marketplace Skills" to ensure that our students are prepared to enter their career fields. Though students generally exceeded expectation, we will consider adjusting the overall average expectation and/or the percentage exceeding meet expectations in future semesters.

2. AGET 4381: Capstone, Development of Students' Knowledge of Key Disciplinary Concepts and Skills: Specific areas of concern observed during the summer session and proposed changes for the future include continuing more outside-of-class reading and problem-set assignments, since there is limited classroom contact time. With limited teaching assistant help this semester, there was limited “open lab” opportunities for

students to come in for hands-on practice and to work towards completing the construction and fabrication of the projects, and to complete plans and bill of materials. Therefore, as departmental funds allow, we will request that a teaching assistant be available to assist with the "open lab" in future semesters.