Amarillo College

PET FORM
Planning and Evaluation Tracking
(2011-2012 Assessment Period)

Division of: Career and Technical Division

Person Responsible for this Division: Shawn Foust

Department of: Instrumentation Control and Renewable Energy (Wind, Solar, Instrumentation, and Electronics)

Person Responsible for this Form: Ronald Mashburn and Art Schneider

Purpose Statement (With Last Updated Date): **To educate quality technicians in the growing fields of Instrumentation Control and Renewable Energy.**

Goal Statement #1: Standardize curriculum by getting industrial seal of approval such as the AWEA (American Wind Energy Association), ISA (Industrial Society of America) or other industry seal of approval (*AC Strategic Plan through 2015: Strategy 1.3)*.

Outcome/Objective Statement

Review outcomes using industry, faculty and student input from survey's and feedback (*AC Strategic Plan through 2015: Task 1.3.1.1)*.

- Results (Provide Numbers and Percentages for Quantitative Data)
  All students will receive the same basic instruction from all instructors. Labs will be updated in both equipment and procedures. Courses curriculum and labs will follow industrial standards of content and activity.
- Analysis
  - Provide Previous Data/Result Analysis
    Submitted documents to AWEA were submitted but no action has taken place as of this date.
    Students are completing courses with varying levels of knowledge and experience. Students may not be job ready and fully trained in instrumentation control or renewable energy.
- Improvements
  - List any Improvements Made in the **2010-2011** (Last Academic) Year Based on the **2009-2010** PET Results:
    Curriculum has been standardized through all campuses and sections of same classes. Textbooks have been reviewed and common textbooks have been adopted. Hands on activity for all classes has been developed and implemented.
  - Evaluate Why Improvements Were Successful/Were Not Successful:
    All classes have common material and goals. Course now follow industrial acceptable guidelines.
  - Provide the Budget Information Needed to Make Past Improvements (Cost/Details): N/A
- Recommendations/Actions for **2011-2012**
  - Person Responsible (Who will complete the action?):
    Ronald Mashburn and Delane McUne will work on curriculum changes and implement changes to follow industrial guidelines.
  - Action Plan:
    Review curriculum and guidelines provided by industry to achieve acceptance by industry certifications. Utilize an industrial standard curriculum and lab activities for each class, follow an adopted textbook or manual for all common sections of classes and labs. Repair, purchase, or implement new lab equipment

where needed. Continue to seek the guidance of industry expertise. Utilize regular advisory committee input.

- Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date): One year to achieve at least one certification. This will be an ongoing process of review and changes to maintain any certification.
- Budget Information Needed for Future Action (Cost/Details): $5000

Goal Statement #2: Combine training equipment of courses shared by Instrumentation, Renewable Energy and Electronics. Use new technology in all areas. Share common equipment and develop schedules and activities for each piece of equipment. Fully utilize training equipment during courses and labs. Integrate new technology i.e. SCADA in both instrumentation and renewable energy classes. Incorporate simulation into courses where technology is satisfactory for replacement of physical equipment. Continue to upgrade curriculum to meet the needs of industry (*AC Strategic Plan through 2015: Strategy 4.6)***.**

Outcome/Objective Statement
(Be sure to include audience, behavior, conditions, degree/benchmark, and evaluation method): Assess the uses of equipment by faculty and student feedback (*AC Strategic Plan through 2015: Task 4.6.1.5).*

1. Build capacity in faculty and staff to create high-quality, sustainable and innovative learning and educational resources
2. Provide the required tools, infrastructure and professional development resources to use emerging technologies for expanding learning and educational resources
3. Explore the effectiveness of the learning and educational resources by continuously examining and evaluating the effectiveness of the use of technology.

- Results (Provide Numbers and Percentages for Quantitative Data)
  Assess the ability of students completing courses through questionnaires, interviews and employer satisfaction surveys.
- Analysis
  Provide Previous Data/Result Analysis
  (Include if benchmark was met and how results relate to outcome statement): Provide faculty with training activities, schedules and training of use of each piece of equipment. Modify curriculum and teaching strategies as needed.
- Improvements
  - List any Improvements Made in the **2010-2011** (Last Academic) Year Based on the **2009-2010** PET Results: New equipment was purchase to start the solar program. Common trainers between instrumentation, renewable energy, and electronics.
  - Evaluate Why Improvements Were Successful/Were Not Successful:
    More work needs to be done in this area but increase uses of equipment between programs is working.
  - Provide the Budget Information Needed to Make Past Improvements (Cost/Details): N/A
- Recommendations/Actions for **2011-2012**
  - Person Responsible (Who will complete the action?): All faculty will be responsible for this action. Program coordinator will oversee that equipment is obtained and that faculty have properly implemented them into their courses.
  - Action Plan: Provide faculty training to provide for a unified educational foundation for students.

- Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date): By start of the Spring semester 2012 the action plan should be fully implemented.
- Budget Information Needed for Future Action (Cost/Details):$20,000

Goal Statement #3: **Develop industrial partnerships for employment opportunities and support for programs.**

Outcome/Objective Statement
(Be sure to include audience, behavior, conditions, degree/benchmark, and evaluation method):
As the instrumentation control and renewable industry grows, opportunities will be available for the graduates of the program.

- Results (Provide Numbers and Percentages for Quantitative Data)
  Companies are calling us asking for students to apply and to come on campus and do job interviews. Students will realize the opportunity to interview and for jobs at graduation.
- Analysis
  - Provide Previous Data/Result Analysis
    (Include if benchmark was met and how results relate to outcome statement):
    Number of jobs available and companies doing interviews will drive the programs development.
- Improvements
  - List any Improvements Made in the **2010-2011** (Last Academic) Year Based on the **2009-2010** PET Results:
    Companies are calling us asking for students to apply.
  - Evaluate Why Improvements Were Successful/Were Not Successful:
    Companies have come on campus to do job interviews.
  - Provide the Budget Information Needed to Make Past Improvements (Cost/Details): N/A
- Recommendations/Actions for **2011-2012**
  - Person Responsible (Who will complete the action?):
    All faculty members.
  - Action Plan:
    Visit with industry, develop contact information, seek out industry support and corporation for the program.
  - Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date):
    Action plan has been implement and will be ongoing throughout the year.
  - Budget Information Needed for Future Action (Cost/Details): $2000

Goal Statement #4: To develop a solar technician option in the Renewable Energy Program (*AC Strategic Plan through 2015: Strategy 1.1).*

Outcome/Objective Statement
(Be sure to include audience, behavior, conditions, degree/benchmark, and evaluation method):
The Solar Technician Basic Certificate, Advanced Certificate and AAS degree will be an option of the Renewable Energy offerings at Amarillo College. Students taking the core curriculum can either choose Wind or Solar as their focus of study. Four new solar specific courses are being developed with the introduction of the first in the Spring 2012 semester. Evaluations will be conducted by the WTAMU office of research as well as the standard course assessments done by the instructors (*AC Strategic Plan through 2015: Task 1.1.1.5.3).*

- Results (Provide Numbers and Percentages for Quantitative Data) ***** NA- **New department**
- Analysis * NA- **New department**
- Improvements ***** NA- **New department**
- Recommendations/Actions for **2011-2012**

- Person Responsible (Who will complete the action?): Ron Mashburn and Art Schneider , grant PI
- Action Plan: Complete solar course development - develop labs, do program outreach & complete grant stated objectives.
- Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date**):** Spring 2012, & Fall 2012
- Budget Information Needed for Future Action (Cost/Details**):** Provided in NSF Grant