

PET FORM  
Planning and Evaluation Tracking  
(2012-2013 Assessment Period)

Division of: Arts & Sciences

Person Responsible for this Division: Jerry Moller

Department of: Math, Sciences, & Engineering

Person Responsible for this Form: Emery Shier

Purpose Statement (With Last Updated Date): To provide quality learning in the physical sciences. (update est. 2005)

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**Goal Statement #1:**

Certify quality instruction and academic support services. (AC Strategic Plan through 2015: Strategy 1.3) (No Excuses Goal 4 and Goal 5).

**Outcome/Objective Statement #1A**

**(Be sure to include audience, behavior, conditions, degree/benchmark, and evaluation method):**

Instructional leadership will assess the quality of each degree for students who have an interest in the Physical Sciences in order to eliminate “road blocks” and improve retention of students as monitored by number of declared majors and number of degrees received. (AC Strategic Plan through 2015: Task 1.3.1) This also aligns with Goals 4 & 5 of No Excuses: to increase Persistence from Term to Term and Year to Year and for students to Attainment of Credentials (Degree, Certificate, or Transfer) (From 2011-2012 PET form)

• Analysis

Fourfold (these changes were all approved by the Curriculum Committee):

- Geology—eliminated Geology major and will monitor pass rates for new classes taught at non-majors level.
- Physics—removed COSC 1317 requirement (class rarely occurs) and replaced with MATH 1342 so completion of the degree is more likely. Will monitor number of declared majors and degrees granted.
- Chemistry—removed COSC 1317 requirement and replaced with MATH 1342. Included option for either Calculus-based or non-Calculus Physics in order to complete degree. These also make Chemistry major more attractive to Pre-Pharm majors since Statistics is required for Pharmacy School. Will monitor number of declared majors and degrees granted.
- Pre-Pharm—eliminated major and encouraged students to enroll as Chemistry majors since they would then fall under STEM and can make use of the grants, scholarships, and other opportunities for STEM students. Will monitor number of declared majors and degrees granted for Chemistry. Monitor number of students from AC that are accepted into Pharmacy Schools.

• Improvements

- List any Improvements Made in the **2011-2012** (Last Academic) Year:  
Major degree changes have been made, but no new data is available at the moment. Will continue to monitor classes, declared majors, and degrees earned as that data becomes available.
- What Budget Implications Were Involved with this Improvement? (Please Provide Cost Estimate/Details):  
No budget costs.

• Recommendations/Actions for 2012-2013

- Person Responsible (Who will complete the action?): Emery Shier
  - Action Plan: Continue to monitor classes, declared majors, and degrees earned as that data becomes available.
  - Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date):  
We should begin to have numbers by July as to graduations and pass rates for all classes.
  - What Budget Implications Are Involved with this Action? (Please Provide Cost Estimate/Details): none
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## Goal Statement #2:

Collaborate with Partners in the Community (AC Strategic Plan through 2015: Goal 3)

### Outcome/Objective Statement

(Be sure to include audience, behavior, conditions, degree/benchmark, and evaluation method):

Work with Region 16 to provide quality training for science teachers in the Texas Panhandle through the Regional Collaborative for Excellence in Science and Mathematics Teaching. (From 2010-2011 & 2011-2012 PET forms)

- Analysis
    - Provide Previous Data/Result Analysis  
There have not been collaborative classes in the last year. Will discontinue analysis as these have dropped to an "as needed" status rather than continuous.
  - Recommendations/Actions for 2012-2013
    - Person Responsible (Who will complete the action?): Emery Shier
    - Action Plan: Maintain dialogue with Region XVI coordinator and offer the classes as needed.
    - Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date): ongoing
    - What Budget Implications Are Involved with this Action? (Please Provide Cost Estimate/Details): none
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## Goal Statement #3:

Align AC's program offerings with university baccalaureate degrees. (AC Strategic Plan through 2015: Strategy 1.7) (No Excuses Goal 5).

### Outcome/Objective Statement

(Be sure to include audience, behavior, conditions, degree/benchmark, and evaluation method):

Maintain high rigor for all students in those classes which transfer to 4-year institutions as monitored by pass rates, baccalaureate degrees granted, and, if available, standardized test scores (e.g. 50-60% of our students score 50<sup>th</sup> percentile or better on standardized tests). This also aligns with Goal 5 of No Excuses: for students to Attainment of Credentials (Degree, Certificate, or Transfer) (From 2011-2012 PET form)

- Results (Provide Numbers and Percentages for Quantitative Data)

Of students who took the American Chemical Society (ACS) nationally standardized test for the 1<sup>st</sup> semester of Chemistry (GC2009F), the number of students who scored in the 50<sup>th</sup> percentile or higher are below.

    - **2010-2011 Data:** Numbers = 77 out of 118 (65.25%) (Seven sections, 4 instructors)
    - **2011-2012 Data:** Numbers = 75 out of 136 (55.2%) (Five sections, 2 instructors)
  - Analysis
    - The nature of the ACS data is such that we would wish 50% of our students score 50<sup>th</sup> percentile or higher at a minimum.
  - Recommendations/Actions for 2012-2013
    - Person Responsible (Who will complete the action?): all Physical Science faculty
    - Action Plan: Maintain rigor and pass on high standards to new faculty. However, we will discontinue monitoring for PET forms.
    - Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date): normal academic calendar.
    - Budget Information Needed for Future Action (Cost/Details): none
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#### **Goal Statement #4:**

Improve pass rates in Principles of Chemistry I classes (No Excuses Goals III, Goal IV, and Goal V).

#### **Outcome/Objective Statement #4A**

**(Be sure to include audience, behavior, conditions, degree/benchmark, and evaluation method):**

While keeping in mind Goal #3, an increase in the percentage of students who successfully complete CHEM 1311 (A-C grades) is desirable. This is tied to several No Excuses goals: Pass with "C" or better, Retention from Term to Term, and Completion of Degree.

- Results (If Applicable, Provide Numbers and Percentages for Quantitative Data)
    - No current results as this is a new initiative.
  - Improvements
    - List any Improvements Made in the **2011-2012** (Last Academic) Year:  
Changes were made for all sections to include daily quizzes which must be passed at 70% or better before a student can take a test. Tutoring is available/required for those who do not meet this benchmark.
    - Evaluate Why Improvements Were Successful/Were Not Successful:  
So far, there seems to be improvement in attendance and an increase in students who actively seek out help when needed. This is ongoing.
    - What Budget Implications Were Involved with this Improvement? (Please Provide Cost Estimate/Details):  
Small increase in paperwork and paper costs
  - Recommendations/Actions for **2012-2013**
    - Person Responsible (Who will complete the action?): Mark Shadix & Emery Shier
    - Action Plan: Will continue to monitor students' success in CHEM 1311, making changes as needed. There is also a planned redesign of the attached CHEM 1111 course.
    - Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date): CHEM 1311 is ongoing. Redesign of CHEM 1111 is planned for this summer.
    - What Budget Implications Are Involved with this Action? (Please Provide Cost Estimate/Details): not projected.
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### Goal Statement #5:

Increase student use of the Science Enrichment Center (SEC) and improve the usefulness of the SEC to both students and instructors through analysis of students' needs and understanding of material (No Excuses Goals II, Goal III, and Goal IV).

### Outcome/Objective Statement #5A

**(Be sure to include audience, behavior, conditions, degree/benchmark, and evaluation method):**

The Science Enrichment Center (SEC) will provide tutoring services to struggling and/or failing biological and physical sciences students prior to major chapter tests. The SEC will track tutor effectiveness and student success through short post-tutoring quizzes.

For all students who come for tutoring, a goal of 70% of students will score 70% or better on after-tutoring quizzes. For CHEM 1311 students (who have a numerical grade on quizzes from class), in addition to 70% pass-rate, 85% of students will show at least a 10% improvement on quiz grades.

These goals tie to several No Excuses Goals: Completion of Courses with a "C" or Better; Completion of Gateway Courses (Anatomy and Physiology courses); & Persistence from Term to Term and Year to Year

- Results (If Applicable, Provide Numbers and Percentages for Quantitative Data)
    - No current results available – New Goal/Outcome.
  - Improvements
    - List any Improvements Made in the **2011-2012** (Last Academic) Year: Both Anatomy and Physiology (A&P) instructors and CHEM 1311 instructors have instituted mandatory tutoring for students who have been identified as struggling in the course. These students are tutored, then their understanding is evaluated by taking a post-tutoring quiz. Several students (2 assistant supervisors, 2 chemistry, 2 biology tutors) were hired as tutors.  
For example, if a student fails a lecture quiz in CHEM 1311, the student has the option of getting tutored over quiz material. That student also has the option of retaking a similar quiz to regain a percentage of their grade back. However, if a student has a failing quiz average at the end of that chapter, s/he is mandated to receive 30 minutes of tutoring and must retake all the chapter quizzes prior to taking the test.
    - Evaluate Why Improvements Were Successful/Were Not Successful: Analysis is ongoing.
    - What Budget Implications Were Involved with this Improvement? (Please Provide Cost Estimate/Details):  
For two-19 hour assistant supervisors it costs \$15,180 for a 16 week semester. For 4 tutors (combined 54.75 hours) it costs \$7,884 for 16 week semester.
  - Recommendations/Actions for 2012-2013
    - Person Responsible (Who will complete the action?): Dalila Paredes, A&P instructors, CHEM 1311 instructors.
    - Action Plan: Continue with existing tutoring plans. Adjust when needed as determined by the SEC and instructors of individual courses. Staffwise, an increase in the number of tutors by 2-4 people is needed to cover times and student needs.
    - Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date): normal school year.
    - What Budget Implications Are Involved with this Action? (Please Provide Cost Estimate/Details):  
An increase of 2 tutors would be an additional \$5,760. Increase of 4 tutors, \$11,520
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