The University of Texas-Pan American
Division of Academic Affairs
College: Science and Engineering
Degree Program /Major: B.S. in Physics Summary Report

Table 1: Results of Student Learning Outcomes Assessment for Spring 2005, Fall 2005, Spring 2006, and Fall 2006.

Student Learning Outcomes	Spring 2005	Fall 2005	Spring 2006	Fall 2006
Students will have the ability to use the knowledge of mathematics and the basic physical laws of nature to solve physics problems.	A decision was made to: 1. Introduce a mechanism to get all physics majors to take the Pre- and Post-tests. 2. Modify exams to assess other SLOs for physics majors 3. Integrate a Capstone course with project into degree plan*	1. All syllabi for majors included major specific SLOs and students encouraged to prepare for graduate school and GRE subject test. Sample set was expanded using modified exam including option not exposed to material. This test is a more accurate assessment of student's pre-course knowledge.	1. Recommended making post-test more course embedded to maintain accuracy and efficiency of assessment. Revised test questions will be embedded into Upper division courses.	1. Using results from Post test Spring 2005 and exit student surveys performed Fall 2006, A request to change the major degree plan has been made to include an additional course of Quantum/Modern physics. 2. We have begun to collect GRE physics subject test scores from our previous majors and to include this as a future method of assessment. 3. All PHYS courses have course embedded questions.
Students will have the ability to design and conduct experiments and interpret the results.	1. The means of assessment is based on new upper level labs in the degree plan. Students will engage in the courses beginning summer 2005	1. We recommended remaining junior students not engaged in research to do so. 2. Recommended encouraging all students to apply for at least 1 REU during	1. Recommended encouraging remaining junior students not engaged in research to do so. 2. Recommended encouraging all students to apply for	No changes needed at this time.

		the summer.	at least 1 REU during the summer.	
The ability to communicate ideas effectively in graphical, oral and written media.	A decision was made to: 1. Introduce a mechanism to give all physics majors the opportunity to give talks either in seminar or at conferences 2. Rotate TA positions so that all majors have an opportunity to be lab assistants/instructors.	Recommended encouraging physics majors to present undergraduate research project at state or national conferences..	All graduating students have research experience	No changes needed at this time.
The ability to use state of the art computational hardware and software for problem solving, documentation, and presentation of experimental results.	1. The means of assessment is based on the generation of new upper level labs in the degree plan. Students will engage in the courses beginning summer 2005	1. Labs developed for PHYS courses that integrate PASCO technology	1. Additional Labs developed for PHYS courses that integrate PASCO technology	1. All students are receiving exposure to academic software and technology

The ability to take complex problems and decompose them into simpler, solvable components.	1. Although all majors scored “C” or better, students were not clearly notified of the assessment goal. A decision was made to develop the techniques to emphasize assessment. This information will now be included on all syllabi.	No changes needed at this time. Students are more prepared for assessment and overall quality of students is improving..	1. 100% of our majors are receiving C or better in all required major courses. .	No changes needed at this time.