**Assessment Reporting Improvements**

Department: Physics Division: Math & Physical Science Academic Year: 2014-2015

Report for: Survey Physical Science (PH1125) and Intro Physics (PH1104)

1. What action (improvement, change, etc.) was taken in the program/class indicated?

**Survey Physical Science (PH1125)** and **Intro Physics (PH1104)** For both of these courses, the department added an assessment tool, the Force Concept Inventory (FCI), which measures student understanding of the motion of everyday objects and the relation between force and motion. Also, more data was collected in addition to the success and retention rates, including enrollment and fail and withdraw rates, which were analyzed for several years rather than just one.

1. Why was this action taken? (Provide report, link, other, that led to the action in (1.))

**Survey Physical Science (PH1125)** and **Intro Physics (PH1104)** both lacked any method of assessment beyond student grades. An external assessment method was required which could be reliably used to compare from one year to another, or with an external benchmark. This allows the department to improve student success rates by identifying and correcting weak areas in student conceptual understanding.

1. Describe the results/impact/change based on the action.

**Survey Physical Science (PH1125)** The improvement in student conceptual understanding as indicated by scores on the FCI has increased from 8% to 17% in the three semesters since the tool was implemented, due to focus on understanding concepts and using those concepts to solve problems.

**Intro Physics (PH1104)** In the two semesters since implementing the FCI assessment tool in Intro Physics, student improvement has held constant around 10%, but there may be too few students to draw a solid conclusion. Data should become more meaningful as the FCI continues to be used in this course.

1. Provide any supporting evidence or information.

**Survey Physical Science (PH1125)** The success rate for Survey has increased from 70% in AY 12/13, before implementation of the FCI assessment tool, to 88% in the 14/15 academic year.

**Intro Physics (PH1104)** The success rate for Intro Physics has increased from 58% in AY 13/14, the first year of implementation of the FCI assessment tool, to 69% in the 14/15 academic year.