Faculty Assessment Day I – December 16, 2008

The first professional day had an ambitious agenda, with two purposes. The first goal was to address outcomes of non SCBA general education student learning. The College was tasked by SUNY with generating a triennial report that would address (a) any changes to the plan of assessment approved by faculty and submitted to the SUNY Provost’s office, and (b) changes to the teaching and learning resulting from the assessment process and how the data is used as a source of information in the decision-making process.

The following general education student learning outcomes were reviewed and reported on at the conclusion of FAD 1:

Information Management: Each component of the outcome, information literacy and computer operations, analyzed 2 cycles of data, supplemented with the current term’s data.

- Comments on the information literacy outcome included a recommendation to measure the effectiveness of library instruction on student learning outcomes using pre-test and post-test data. Additional recommendations were proposed after reviewing the assessment data. First, for a more complete information literacy assessment (especially in the measurement of students’ ability to synthesize information well) more direct collaboration with teaching faculty is needed for feedback on library research assignment grades. Second, there is a need for computers with appropriate software in the library’s classroom to enhance hands-on student learning.

- All of the instructors for the computer operations classes are teaching from a common course of study which describes the major topics in the course. Instructors are encouraged to be creative in their presentations as long as the major topics are covered. They all use the same textbooks; they all administer four quizzes and two exams. At the end of the semester a common course diary is created for the course. The diary and the course supervisor are key components for course consistency. However, inconsistencies were noted in the reporting of the “Exceeds” the outcome. A recommendation was made to implementing a uniform grading policy.

Natural Sciences: The four individual disciplines had breakout sessions in the morning and in the afternoon a summary document for the natural sciences general education assessment was generated.

- Biology, Meteorology, and Physics retained current assessment protocols for next cycle.
- Chemistry will change assessment methodology for objective number 2. An exam question focusing on limiting reagents will be used to assess learning outcome 2 in place of the current lab assignment. A pre-lab laboratory assignment will be implemented beginning in spring 2009 in an attempt to enhance student preparation for laboratory experiments.
• Meteorology, due to the special nature of this class being a certified Coast Guard approved course all students at least met expectations.
• Physics: For Objective 1 there was a significant increase in the number of students not meeting the goals and a decrease in the number of students excelling in meeting the goals. This objective is met through a lab assignment. It was noted that students need better math skills are needed for students to successfully learn from the lab. The students need more lab practice therefore we recommend that each physics course have a 12 experiment laboratory associated with it, sufficient equipment be available to maintain 2 students per table. For Objective 2 there has been a decrease in the number of students not meeting the goals and an increase in the number of students meeting the standards, but not in the number excelling. There was a decrease in actual physics class sizes between the two cycles and it is recommended decreased class sizes be maintained.

Basic Communication: The plan is working and the overall goals and specific learning outcomes desired were redefined over an entire semester's department meetings.

American History: The plan is working because workshops are held at the beginning of each term to attain consensus on learning outcomes of the courses involved, leading to more consistent inter-rater reliability.

Western Civilizations: Instructors have begun presenting a timeline of Western culture, to address deficiencies revealed by the existing pre- and post-tests.

Other World Civilizations: The department's presentation of "other world civilizations" has broadened to include East Asian cultures, and the anthologies used in class present a broader view of "non-Western" civilization.

The Arts & Humanities: Because electives are discrete courses developed and taught by specific faculty consistency in assessing student achievement remains difficult to achieve. As the electives are often very different from one another in both content and pedagogical approach, it is extremely difficult to draw solid conclusions from the current assessment process.
• The department is currently discussing possible improvements to that process, such as combining the assessment of the arts and humanities electives into a single overall process

The second goal of Faculty Assessment Day relates to the major-degree programs. In October, academic chairs were charged by the Provost to articulate student learning objectives, in terms of what a graduate of a specific program should be capable of doing upon completion of a program is a specific major. Using an ABET assessment ‘course by outcome matrix’ technique; major-specific courses within a program were ranked [0 to 4] as to how strongly they
contributed to each learning goal. The program-related tasks of Faculty Assessment Day were (a) to convey how the student learning outcomes support the College’s mission, (b) to finalize the student learning outcomes for publication on the College’s website link to undergraduate programs, and (c) to select one or more learning outcome and determine how to assess the outcome.

Engineering: This is the 3rd assessment retreat for the engineering department in preparation for their ABET visit.

- The following changes were recommended: *Calculus II* (MATH102) as a co-requisite instead of MATH101 as a pre-requisite for *Statics* (ENGR 242). *Engineering Analysis* (ENGR343 - 3 cr.) will be dropped and replaced with an applied statistics course (3 cr.) and an Introduction to Analysis course focused on engineering software (2 cr.) *Introduction to Engineering* (ENGR102) will also be eliminated.
- Other recommendations include:
  - Boost rigor in pre-requisite courses. Need for collegial communication.
  - Require a minimum *Physics I* (PHYS102) grade of C- for advancement to *Statics* (ENGR242).
  - Also, require a minimum grade of C in *Calculus I* (MATH101) to advance to *Physics I* (PHYS102).
  - Students should be given a written list of vital pre-requisite knowledge when starting a course.
  - Continue to administer pre-requisite review exams as an assessment tool

Marine Environmental Science:

- Established learning outcomes for students who complete a Bachelor of Science degree in MES.
- Linked the student learning outcomes to the College’s Mission.
- Set up an action item for the Spring 2009 term to measure our learning outcome number 4, “collect, analyze, interpret and evaluate scientific data.” Using a capstone course, BIO 416, *Fisheries Science*, the learning objective will be measured directly through exams, homework assignments, and through a major fisheries project.

Professional Education and Training:

- Established learning outcomes for students who complete an Associate Degree in Applied Science in Marine Technology, Small Vessel Operations with Limited Deck or Engine License.
- Linked the student learning outcomes to the College’s Mission.
- Set up an action item for the Spring 2009 term to measure outcome 1, “help the student develop a goal-setting and task—accomplishing mindset and with the assistance of the professor, set specific target and goals to be attained, establishing timeframes for accomplishing them and developing criteria for evaluating performance.”
- The department will track and measure student success rate on USCG license exam.
Benchmark success rate with other maritime academies

Global Business and Transportation: In an attempt to create a matrix aligned with learning outcomes, the following observations / recommendations were noted. Initially there were 10 qualitative and quantitative learning objectives for each course.

- Differences in rankings of objectives between different sections of the same course.
- Some courses need more specific objectives.
- Link achievement of objectives with intent
- Expand course hours or limit objectives

Action Items:
- Differences in rankings of objectives between different sections of the same course
- Prioritize course objectives
  - Important for core courses and especially those that are pre-requisites
  - Objectives that are level “4” should be consistent between course sections
  - Faculty of upper & lower division linked courses coordinate priority of objectives
- Some courses need more specific objectives:
  - Course content should be reviewed
    - Upper & lower division faculty of linked courses coordinate required content
    - Establish target levels for objectives of core courses, ideally with independent assessor.
- Link achievement of objectives with intent
  - Examine bottom line of compiled matrix:
    - Has the coursework of a graduating student covered each departmental objective
    - Do the objectives meet the needs of future employers
    - Consider developing pre & post diagnostic assessment
- Expand course hours or limit objectives:
  - Re-assess objectives for specialized courses

Humanities: The department spent the day addressing their major programs. Work on general education assessment was completed early February 2009.

- Established learning outcomes for students who complete a Bachelor of Science degree in Maritime Studies.
- Established learning outcomes for students who complete a Bachelor of Science degree in Marine Business and Commerce.
- Linked the learning objectives to the College’s Mission.
- Action Items: Measure objective 2, “Prepare a written report organized in a coherent manner arguing a substantive point” using existing rubrics. Department will insist on a standard format for written communication and offer specialized help within the ‘expanded’ Learning Center. The department will begin to collect data on reading comprehension.

Marine Transportation
- Established learning outcomes for students who complete a Bachelor of Science degree in Marine Transportation.
- Linked the learning objectives to the College’s Mission.
- Action Item – Assess Outcome 1, “Pass the US Coast Guard Third Mate, unlimited, license.”
FAD I Executive Summary

- Collect the pass – rate data from each of the specific 7 license exams.
- Correlate success / failure to the specific individual outcome, per student.

The Office of Student Life presented their Assessment Plan:
- Prepared a Vision Statement for the Office.
- Defined Student Life Values from The Council for the Standards and Advancement in Higher Education
- Established student learning outcomes in the areas of: self-knowledge, leadership and communication, social responsibility, and life skills application.

Respectfully submitted,

Linda Sturges