

2011-2012 Annual Academic Program Assessment Plan

Program: Engineering

Division: SME

Responsible Person: Thomas Herring

Assessment team members: Thomas Herring

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Program Goal:

The primary goals will be to increase enrollment in the engineering program and provide 4 year institutions with a group of well prepared and interested students that can continue towards BS degrees in engineering and related fields (i.e. physics, math, etc.). Also, the program goals and student learning outcomes should be reviewed and possibly changed to better serve students interested in engineering and to take into account the needs of Nevada industry. Input from the WNC engineering advisory board will be necessary to determine any changes in the program.

Outcome:

The focus of this year's assessment activity will be student learning outcome 3, "Able to solve engineering problems." The outcome will be addressed by presenting students in engineering courses with a common set of problems formulated by the assessment team. This is a continuation of the 2010-2011 assessment project, the results of which showed that a larger data set was needed to properly address the assessment questions.

Assessment Methods and Criteria for Success:

A standard problem set will be formulated by the assessment team and distributed to students in engineering courses at all levels through regular assignments, quizzes, and/or exams. Comparisons in the quality and correctness of answers from students at different levels in the program will be carried out to assess any difference in problem solving ability from beginning students to students near completion. It will be necessary to compare students scores to the number of program courses completed since enrollment in a particular class is not necessarily indicative of their progress in the program.

A successful program would show an overall increase in the problem solving ability of students from beginning to graduating. This assessment method should probably be used over several years to properly assess the effectiveness of the program.

Planned Use of Results:

Results will be published on the WNC website at http://www.wnc.edu/institutional/academic_program_assessment/. The results will also be used to alter the engineering course curricula to address any deficiencies found. These results should also be

discussed with the WNC Engineering Advisory Board to include the voice of local industry in the educational process. Also, some suggestions about other courses in the program may arise (i.e. math or physics) that could help address any student deficiencies.