2004 Annual Academic Assessment for Engineering

Schreiner University

1. State the educational purpose of the assessment program:

The 3-2 Engineering Degree Program is a dual–degree option offered in conjunction with universities that provide baccalaureate study in engineering. Under the 3-2 plan a student spends three years at Schreiner and two years at a senior engineering university to earn two degrees - the Bachelor of General Studies from Schreiner and a bachelor's degree in an engineering specialty from the engineering institution. Thirty upper-division hours are transferred back to Schreiner for the BGS degree. Coursework at Schreiner provides general background for a variety of majors in engineering and engineering technology. One specific course, ENGR 1310 Technical Graphics, is used to track beginning engineering majors. Assessment of this course, along with regular discussion and meetings with students, is the focus of the pre-engineering assessment at Schreiner University.

2. Educational goals, assessment for each goal, performance standards, and findings:

Upon completion of the Schreiner portion of the 3-2 Engineering Program, a student will be able to:

Goal 1: Exhibit correct techniques in technical lettering, sketching and drawing; interpret and sketch readable and neat isometric, multiview and auxiliary drawings. Satisfactory performance (final grade of C or better) in the engineering technical graphics course demonstrates attainment of this goal.

2001-2002
13 of 14 students (93%) showed satisfactory performance in the combined class of ENGR/IS 1310. One student failed the course.

2002-2003
8 of 8 students (100%) showed satisfactory performance in ENGR 1310.

2003-2004
11 of 12 students (92%) showed satisfactory performance in ENGR 1310. One student withdrew from the course.

Curriculum: Completion of this goal is fundamental for students going into engineering or other technical fields.

Faculty Development: Faculty should introduce practical real-life examples of paper-and-pencil sketches.

Out-of class Experience: Students should practice making neat sketches for their work in other courses such as physics and calculus.

Goal 2: Complete accurate multiview, isometric and auxiliary drawings using the computer and AutoCAD commands. Satisfactory performance (C or better) in the computer-drawing portion of the technical graphics course demonstrates attainment of this goal.

2001-2002
13 of 14 students (93%) showed satisfactory performance in the computer-drawing portion of the technical graphics course.

2002-2003
8 of 8 students (100%) showed satisfactory performance in the computer-drawing portion of the technical graphics course.

2003-2004
11 of 12 students (92%) showed satisfactory performance in the computer-drawing portion of the technical graphics course.

Curriculum: Completion of this goal is essential for pre-engineering majors, since the use of computer-aided drawing is nearly universal in engineering firms and in many other companies.

Faculty Development: Faculty should introduce real-life examples of computer-aided drawings to students, although there is not enough time in the course for students to complete large working drawings.

Out-of-class Experience: A field trip might be scheduled to visit a local company that uses CAD on a regular basis.

Goal 3: Meet once or twice each year with the engineering advisor to discuss individual student goals. Satisfactory performance is judged by recording meetings with students that involve pre-engineering coursework and planning for the future.

2001-2002
84% of the engineering majors met the expected outcome during this school year.

2002-2003
92% of the engineering majors met the expected outcome during this school year. This is an improvement over recent years because the majority of engineering majors are now being assigned to the engineering advisor for regular academic advising.

2003-2004
90% of the engineering majors met the expected outcome during this school year.

Curriculum: Course options and degree plans are discussed during regular times for academic advising, as well as during the annual Majors Day event in October. Discussion during the technical graphics class can help students set their own goals regarding courses that are needed.

Faculty Development: Faculty should stay informed about degree plans in senior institutions that offer engineering and engineering technology programs.

Out-of-class Experience: An internship or summer job in an engineering firm can provide a student valuable work experience and information about career options.