

Central Washington University  
Assessment of Student Learning  
Program Report

Academic Year of Report: *2010-2011*

College: *College of Education and Professional Studies*

Department and Program: *IET, Industrial Technology*

This assessment report covers undergraduate degree programs

Our program assessed four outcomes this year. They included:

1. Students will demonstrate effective oral and written communication skills. This assessment is related to CWU goal 1. Maintain and strengthen an outstanding academic and student life. The assessment is also related to the CEPS goal 1: to provide for an outstanding academic and professional growth experience for students at all locations. It is also related to the IET department goal1: to nurture programs in technology related disciplines. This assessment was chosen because we wanted to improve both oral and written communication skills of our students.
2. Students will acquire knowledge of design criteria and demonstrate its application with competence in a tangible application. This assessment is related to CWU goal III: ...strengthen infrastructure to support academic and student programs. This assessment also relates to CEPS goals: provide for an outstanding academic and professional growth experience for students, and goal 5: provide professional, high-quality staffing, facilities, technologies, and appropriate resources to ensure the highest levels of academic development. The assessment also relates to the IET department goal 1: to nurture programs in technology, and engineering technology related disciplines. This assessment was chosen to evaluate the effectiveness for student's application of design parameters in a production environment.
3. Students will demonstrate competence in the application of mathematics in a technology environment. This assessment is related to CWU goal 1,2,3, also CEPS goal 1 and IET goal 1, improve quality of instruction in program. This

assessment was chosen to evaluate and improve student mathematic application proficiency.

4. Students will be committed to personal and professional development with participation in campus club activities and professional memberships. This assessment is related to CWU goal IV: build mutually beneficial partnerships with the public sector, industry, professional groups, institutions, and the communities surrounding campus. This assessment also relates to CEPS goal 4 and IET goal VII: build mutually beneficial partnerships with alumni, industry, professional groups, institutions, and the communities surrounding our campus locations.

The assessment of “students will demonstrate effective written and oral communication skills” was evaluated through assignments in IET 385 Product Design and Development. In this course students submit written essays on specific course assignments that require historical reflections and projections on future technology developments. Written feedback is given for these submittals throughout the course. A cumulative written evaluation is done on a final oral presentation before classmates including a written summary on their chosen project. The evaluation used is a ten category rubric containing four evaluations on presentation skills written and oral. The fall 2011 class of 26 students included 7 from the Chinese cohort, 5 Grad students, and 14 undergraduate students. This class had 78% of the students perform at or above the measured standard.

The assessment of “students will acquire knowledge of design criteria and demonstrate its application with competence in a tangible application” is done by a rubric evaluation on a final project submittal in IET 385 Product Design and Development. This course requires a final design project that is evaluated according to a ten category rubric that contains six evaluations of required design criteria. The fall class of 2011 consisted of 26 students that were evaluated. 81% of the students met or exceeded the application of design parameter application.

The assessment of “students will demonstrate competence in the application of mathematics in a technology environment” is assessed through a written final examination containing ten problems requiring a series of sequential mathematical calculations to arrive at a correct answer. This exam is given in MET 310 Hydraulics/Pneumatics course work. 25 students in a class of 30 correctly completed the calculations during the final exam for an 82% achievement level.

Assessment of “students will be committed to personal and professional development with participation in campus club activities and professional memberships” is done by a

simple number count of students involved in several campus clubs; Foundry Education Foundation student chapter, Skills USA secondary chapter, Battle Bots club, and participation in the Production Technology class distribution of wooden toys to Seattle Children's Hospital. In the fall of 2011 the foundry was not available to students due to the building renovation, 1 student participated in Skills USA, 3 students in Battle Bots, and 20 students delivered toys in Seattle for a total of 35 students participating in community outreach or professional development activities outside of course work.

## CQI

In assessment 1 it is planned to require students submit written work to the writing center for critique and substantiate that before course evaluation can take place.

Assessment 2 will be strengthened by a midcourse rubric evaluation by peers to increase practice and by extension proficiency.

Mathematic application proficiency may be increased by in class group work with application problems and peer evaluation.

The fourth assessment measurement of student participation may be enhanced by closer collaboration with department faculty on mutual class projects.