

## **School of Engineering State of Assessment Report**

### **2013-2014 Assessment Period**

#### **Overview:**

The School of Engineering has five academic departments. (Starting in Fall of 2014, the Department of Chemical and Nuclear Engineering was split to form a new Department of Chemical and Biological Engineering and a new department of Nuclear Engineering.) SoE offers nine BS degrees (all externally accredited), eleven Masters degrees, and two PhD degrees. In addition, the School participates in two interdisciplinary MS programs and two interdisciplinary PhD programs jointly administered by SoE and the College of Arts and Sciences. The School of Engineering has a very well developed culture of assessment and continuous improvement for all of our undergraduate programs as evidenced by our accreditation by ABET (engineering and computer science) and ACCE (construction management). Since our external accreditation is at the undergrad level only, the culture of assessment is far less developed at the graduate level. The school has begun to strengthen this culture by charging the SoE Academic Council with the role of the CARC, overseeing the further development and improvement of assessment at all levels.

#### **Academic Program Maturity Rubric Scoring and Evaluation**

Overall, assessment programs at the undergraduate level in the School of Engineering are mature and function well. All BS programs have student learning outcomes for each program based on the outcomes required by ABET (for engineering and computer science) or ACCE (for construction management). These outcomes are linked to program objectives (ABET does not use the term “goal,” preferring the term “objective”). These outcomes and goals are aligned with the mission and vision of UNM as a whole. Outcomes and objectives are published in the UNM catalog and on departmental websites. All BS programs have assessment plans calling for a) periodic assessment of all outcomes; b) review of assessment results at meetings of faculty and meetings of program constituents; c) curricular changes made as a result of these discussions as appropriate. Although the assessment plans have evolved over the years, our undergraduate programs have been using a model of assessment and continuous improvement since the late 1990s. Due to many factors such as turnover of faculty responsible for assessment, changes in department leadership, etc., the assessment programs in each department are not always carried out exactly as stated in the plan every year. However, overall, the culture of assessment and continuous improvement is strong and the assessment program works quite well for our BS programs.

At the graduate level, the assessment programs are less well developed. Because our accreditation is at the undergraduate level only, previously there was no culture of assessment for any of our graduate programs. Starting with the preparation for the last UNM accreditation review by the HLC of the NorthCentral Association of Schools, SoE began to put assessment programs in place for graduate programs. The graduate assessment program includes Student Learning Outcomes for each of our programs aligned with the UNM vision and mission, a plan for assessing these outcomes, and plans for discussion of the outcomes in the departments. Although a college-wide graduate assessment program was put in place, administration of the graduate level assessments was left up to each department to implement; as a result, the level of rigor in graduate assessment varied among the SoE departments, and there were virtually no discussions of graduate assessment data within any of the departments.

Starting in the 2013-14 academic year, the SoE Academic Council took over the role of the CARC in SoE and started to discuss ways to create a stronger culture of assessment at the graduate level similar to that at the undergrad level. During AY 13-14, all of the rubrics used for assessment at the graduate level were updated and improved by the CARC, and assessment plans were updated and strengthened. This includes strong leadership and supervision of the assessment process by the CARC, and discussion of results for the School as a whole in meetings of the CARC. The target for use of the new rubrics and implementation of the new plan are for AY 14-15. The CARC will monitor progress towards improving the assessment culture at the graduate level during the current academic year and make recommendations for strengthening this in the future.