

Assessment Update 2006

CHBE assessment activities during AY 2005-06 and 2006-07 included the following:

- Course Reviews: CHBE 215, 411, 442, 328, 438, 443, 100, 327, 424, 216, 321, 323
- FE Exam Results
- Graduating Senior Survey Results
- Alumni Survey Results
- Student Portfolio: Unit Operations Laboratory Report
- Student Portfolio: Transport Project
- DAC review of faculty proposals
 - Curriculum changes (AY 2005-06)
 - Curriculum changes (AY 2006-07)
 - Focus Area changes (AY 2006-07)
- DAC involvement in rewriting Program Objective (AY 2006-07)

Department Advisory Committee (DAC) Input

The [2005-06] DAC's conclusions (additional information on file):

- The curriculum changes proposed by the faculty are an effective and appropriate modification that is targeted at addressing weaknesses identified by the FE exam scores, student surveys, and alumni surveys.
- The wording change proposed in the Program Educational Objectives and Outcomes is endorsed.
- Felt that individual course reviews were the prerogative of faculty.
- Unit Operations Laboratory Reports showed a mixed level of performance, but program outcomes b and g generally met at a moderate or better level of performance.

The [2006-07] DAC's conclusions:

- Approved the Program Objectives developed with students and proposed to faculty.
- Approved the Focus Area proposal.
- Nothing new gleaned from survey (alumni, graduating senior) and FE Exam results; approve using multi-year accumulated results to try to get better data.
- Transport project demonstrated student proficiency in program outcomes a and e.

Curriculum and Other Changes in Response to Assessment

AY 2006-07 Proposals currently being implemented

- CHBE 307 (4 cr) [CHBE Thermodynamics] was broken into CHBE 307 (3 cr) [CHBE Thermo I] and CHBE 407 (2 cr) [CHBE Thermo II]. Assessment of the success of this change must wait until CHBE 407 has been taught (Fall 2007).
- CHBE 322 (4 cr) [Fluid Mechanics and Heat Transfer] was split into CHBE 321 (3 cr) and CHBE 322 (3 cr). Partial assessment of the success of this change is possible now (students are comfortable with the change). The impact of the change on the heat transfer portion of the FE Exam must wait until the students take the FE Exam (Sp 2008).
- CHBE 310 (3 cr) [Introduction to Chemical Process Design] moved from spring of the junior year to fall of the senior year, and renamed CHBE 410. CHBE 410 will be offered for the first time Fall 2007.
- CHBE 400 [Professionalism in Chemical and Biological Engineering] content will be incorporated into CHBE 410; CHBE 400 eliminated. This change will be effective Fall 2007.
- CHBE 411 (2 cr) [Chemical and Biological Engineering Design I] – scale back the team projects (design through the process flow diagram stage but not detailed design of individual pieces of equipment.) Instead, students will be tasked with researching and incorporating health and safety, environmental, political, and social issues into their fall semester design report and presentation. An introduction to process simulation will be included in CHBE 411. Effective Fall 2007.
- CHBE 412 (3 cr) [Chemical and Biological Engineering Design I] – credits increased from 2 to 3 to account for greater emphasis on team projects in this course. Effective Spring 2008.

AY 2006-07 Proposal to be implemented

- Focus Areas (targeted technical electives) will continue to be presented to students, but will no longer be graduation requirements. The only graduation requirement will be the total number of technical elective credits. Effective Fall 2007.

Program Objectives Rewritten

As detailed above, the CHBE Program Objectives were rewritten in AY 2006-07. The proposed program objectives were developed by the DAC and student representatives, and adopted by the faculty on 2/16/2007.