UEC Charge 2011/12

[Radke (chair), Bell, Tullman-Ercek]

D. Clark charge, Fall 2011

1. The department should consider withdrawal from C96.
2. Professors Radke, Reimer, and Segalman will serve as CalSO faculty advisors starting Su 12.
3. ABET coordinators (Reimer, Ciston) will contact individual faculty on course data.
4. UEC will follow development of new undergraduate course on energy (Bell and Segalman).
5. Installation of an RO membrane desalination unit in CBE 154 should be pursued.
6. UEC will discuss a possible option in economics with Professor Schoofs.
7. The department might consider a remedial maths course on differential equations.

Outline

1. Curriculum changes
2. The bulge
3. Uneven enrollment in CBE 154,160,162
4. CBE 154 improvements
5. Student feedback (aiche, honors)
6. ABET course descriptions & assessments

1: Curriculum Changes

- C96 was eliminated and replaced by CBE 40 which is a 2 credit, non-required introduction to ChE
  (UEC recommends that some orientation and advising be included)
- CBE 180, 274, and C295Z were formalized
- Professors Bell and Segalman were charged to pioneer an undergraduate course on energy for Sp13: CBE 90.
  (UEC recommends eventual transformation of this course to incorporate quantitative analysis of energy processes including possible building into an option on energy including C195A)
- CBE 250 was revamped and CBE 230 eliminated

2: The Bulge

- In F11, CBE 140 started with 175 students. Approx 145 graduated. Currently, we have 135 students continuing into CBE 142 and 150B.

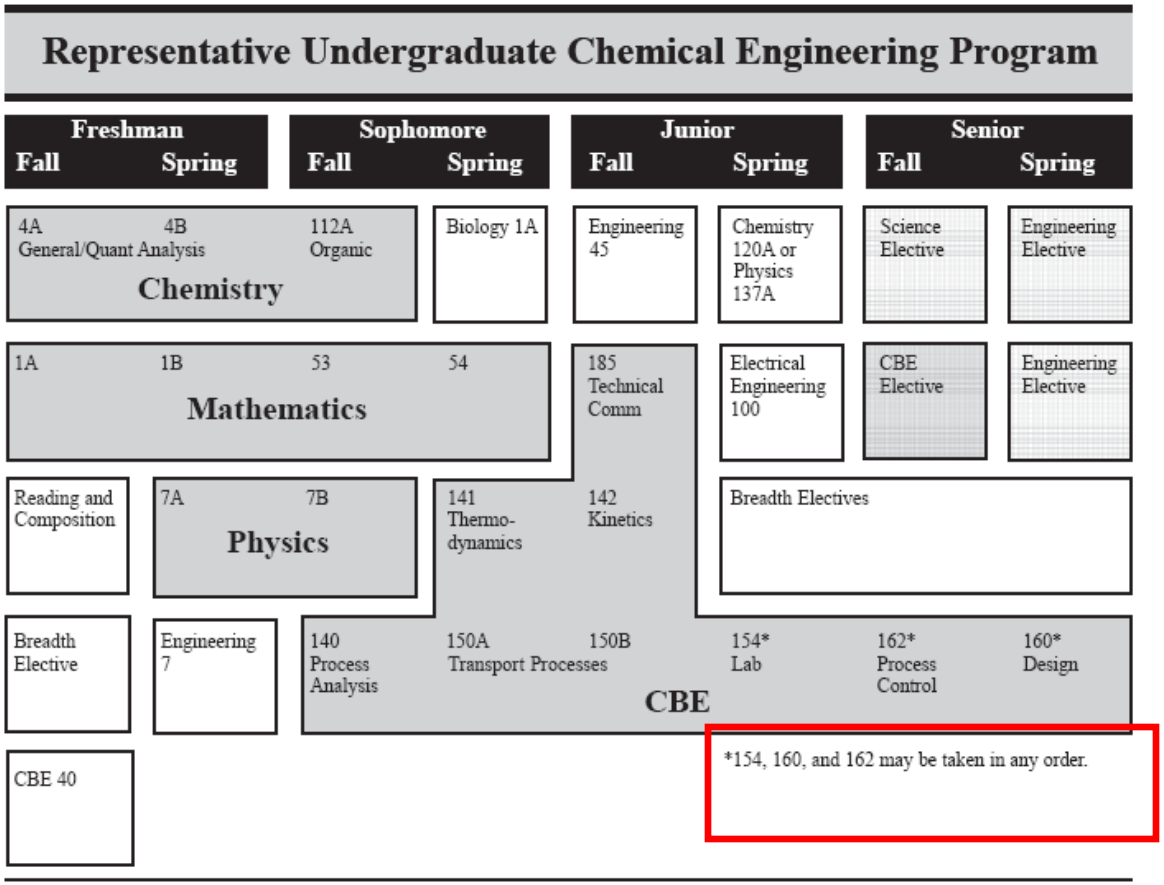
- This fall, CBE 140 has 180 students enrolled. All nonmajors were placed on waitlist, but since we had no stated policy for admission all students have been accepted.

  Majors who entered as freshmen: 80
  Majors who entered as transfers (off-campus): 35
  Majors who transferred from another college on-campus: 12
  Majors who transferred from within CoC: 6
  Non-majors from CoC: 22
  Non-majors from other colleges: 24

- The bulge is re-occurring. Do we wish to control the throughput? If so, how?

3: Uneven Enrollment

- F12 Enrollments: CBE 154 = 20; CBE 160 = 45; CBE 162 = 35
- Even without the bulge, there is a distribution problem



- What procedures should be established to even enrollment among semesters for CBE 154, 160, & 162?

4: CBE 154 Improvements

- Chevron provided funding for a new distillation column. It has been installed for use in F12. UEC decided to keep the same alcohol/water system. However, immediate help is needed in the lab write up.

- The PFR part of the Chevron proposal was not funded.

- No progress was made on a desalination R/O unit. Funding is a bottleneck.

5: Student Feedback

- As part of ABET process, UEC meets with AIChE students every fall semester and honor students every spring semester, and reports to faculty.

AIChE Students (10/28/11)

1. 154 is too difficult. Not sure what is expected. Lack of clarity in grading, Need more guidelines on written reports. Inconsistency of grading and expectations of faculty.
2. Some students get little to no faculty advising.
3. CBE 40 was highly recommended

Honor Students (04/13/12)

1. The design project in 140 should be re-instituted.
2. 154 is helpful. Inconsistency and lack of clarity for grading and expectations
3. 160 is not organized and not enough detail is provided. The struggle with Aspen is waste of time. Wish more economics used in the design project.
4. CBE 185 is much appreciated.
5. CBE 40 was highly recommended.

6: ABET Course Descriptions etc

- New ABET Criterion: The curriculum must include the engineering application of sciences to the design, analysis, and control of chemical, physical, and/or biological processes, **including the hazards** associated with these processes.

- As part of meeting the new ABET requirement, the faculty decided to update all undergraduate course descriptions (02-22-12). All required courses have now been updated, except CBE 154.

- CBE 140, 142,160, 162, & 170AB now include content related to hazard mitigation.

- The faculty need to approve today all new course descriptions. They are posted in your bspace. One hard copy is available.

- The student outcome self-assessment forms have been eliminated as not helpful.

- A better system is needed to collect, track completion of, and store instructor assessment forms. Faculty should provide written comments on these forms.

Faculty Recommendations & Decisions

- New ABET course descriptions and elimination of the student self-assessment outcomes were approved by voice vote.

- A bspace depository will be setup for collection of outcome assessment forms.

- UEC is charged with implementing a departmental online course-evaluation system.

- A "B" average should be uniformly enforced for all on-campus transfers into CBE.

- "A systematic method (ID number, name, etc.) will be used to enroll students in the Sp-2013 ChE 154 course.
- UEC should pursue a means for tutoring in Aspen.

- Safety lectures on each apparatus in CBE 154 should be instituted.

- Funding for a 2nd distillation unit, and also for PFR and RO units in CBE 154 should be sought.