

UGCC Charge 2005/06

(Radke, Maboudian, Wallman)

1. Students (*transfer*) currently in the Biological Processing option cannot complete the program in 2.5 years. The UGCC should look at the course sequence proposed by John Newman and determine whether it will work for students in the bio option. Blanch notes that ChE 150 A,B need to be taken before ChE 170.
2. Should the number of required course be reduced from 9 downwards. One option is to reduce the number of math courses required. In this connection it was recommended that Math 54 B and A be reversed from is what is now recommended. It was also suggested that we consider having students take ChE 157 or ChE 154. Another recommendation was that all students take ChE 157. The students in the chemical processing option would then take ChE 154, whereas those in the biological processing option would take ChE 170L.
3. The teaching of computer usage needs to be redefined in view of the changes proposed in the CoE. Can our students be prepared somehow to handle E 77, without first going through CS 4? The question was also raised about incorporating computer usage into ChE 140.
4. How could demonstrations or visits to the teaching labs be used to enhance the teaching of ChE lecture courses?
5. While not discussed at the retreat, I would also ask that the UGCC to review all of the course descriptions and course outcome questionnaires to be used for the ABET review for appropriateness and consistency.

Alex Bell

October 4, 2005

Student Feedback

AIChE Student Chapter (F);Honor's Tea (Sp);Senior Survey;Advising

Item of Satisfaction

- Ch. E. curriculum is well designed and taught. No courses should be dropped, including the labs. Faculty are committed to good teaching.

Faculty Teaching Effectiveness S06

(weighted by student responses)

Undergraduate		Graduate	
ChE 142	5.9	ChE 200	6.0
ChE 150A	6.0	ChE 246	4.5
ChE 154	3.4	ChE 249	6.3
	6.1		6.0
ChE 157	5.8	ChE 250	5.6
	5.8	ChE 295D	5.8
ChE 160	6.0		
	4.6	Overall	5.6
ChE 162	4.8		
ChE 185	NA		
ChE 170L	5.3		
ChE 171	6.6		
ChE 176	4.2		
ChE 179	5.5		
Overall	5.6		
Overall F04	5.1		

Student Feedback

AIChE Student Chapter (F);Honor's Tea (Sp);Senior Survey;Advising

Items of Dissatisfaction

- Overloaded curriculum
- No co-op support
- Eng 77 is taught too early and is not integrated into the curriculum
- Insufficient training in Aspen and Fluent
- Math 54 is weak on ode's
- MCB 102 is disliked

Charge 1: Completion of Bio-option by Transfer Students

Recommendation of UGCC:

- ChE 170 continues to be taught in fall semester with care to have no time conflict with ChE 150B
- ChE 150B is to be required as concurrent with ChE 170

Professor Newman requests a 4 semester time to completion for transfer students. With the new 120 su curriculum, this appears straightforward with no additional curriculum changes needed (except for the bio-option students).

Charge 2: Reduction in Graduation Requirements

1. Starting Fall 2006, the graduation requirement is 120 su
2. Phys 7C/Chemistry and Adv Tech Elec are dropped
3. Eng 77 moves to spring of sophomore year (required for ChE141 and 150B)
4. Bio 1A replaces MCB 102 except for bio-option majors.

There is no impact on the double-major programs

Academic senate approval is complete, and the 2006/07 College Bulletin has been updated

Transition (H.T. Ford) Plan

Students currently in residence may choose either the new or the current graduation requirements with the restriction that only the Adv Tech Elec and the Physics7C/Chemistry elective may be dropped

Current Program for the Chemical Engineering Major

Math 1A	Math 1B	Math 53	Math 54	ChE 141	ChE elec	ChE 154	Eng elec
English comp	Phys 7A	Phys 7B	Phys 7C or Chem 112B	ChE 185	ChE 157	ChE 162	ChE 160
breadth	E77	ChE 140	ChE 150A	ChE 150B	ChE 142	science elective	Eng elec
Chem 4A	Chem 4B	Chem 112A	MCB 102	E45	breadth	open tech elective	breadth
ChE 98				Chem 120A or Phys 137A	E 100	breadth	
17 units	16 units	17 units	16 units	16 units	17 units	16 units	14 units

ChE(excluding 185) units = $(5 \times 3) + (5 \times 4) = 35$ units
 engr units (excluding E77) = $(3 \times 3) + (1 \times 4) = 13$ units
 breadth units = $(5 \times 4) = 20$ units

Revised Program for the Chemical Engineering Major

Math 1A	Math 1B	Math 53	Math 54	ChE 141	ChE 157	Sci elec	Eng elec
English comp	Phys 7A	Phys 7B	E77	ChE 185	ChE 142	ChE elec	Eng elec
breadth	breadth	ChE 140	ChE 150A	ChE 150B	EECS 100	ChE 154	ChE 160
Chem 4A	Chem 4B	Chem 112A	Bio 1A	Chem 120A or Phys 137A	E45	ChE 162	breadth
ChE 96						breadth	
17 units	16 units	17 units	15 units	13 units	13 units	16 units	14 units

ChE(excluding 185) units = $(5 \times 3) + (5 \times 4) = 35$ units
 engr units (excluding E77) = $(3 \times 3) + (1 \times 4) = 13$ units
 breadth units = $(1 \times 3) + (4 \times 4) = 19$ units

Charge 3: Computation in the Curriculum

- After a full year of confusion by the CoE, it appears that starting Fall 07, CoE freshmen will take Eng 7, a Matlab-based introduction to programming. This course will likely suffer the same complaints we have with the current Eng 77. The fate of Eng 77 remains unknown.
- Because of the continuing CoE confusion, UGCC did not tackle the CS 4/Eng 7/Eng 77 computation issue.
- There remains a major issue of how to integrate computation into the curriculum, specifically Matlab.

UGCC Accomplishments 2005/06

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2. Should the number of required course be reduced from 9 downwards. One option is to reduce the number of math courses required. In this connection it was recommended that Math 54 B and A be reversed from is what is now recommended. It was also suggested that we consider having students take ChE 157 or ChE 154. Another recommendation was that all students take ChE 157. The students in the chemical processing option would then take ChE 154, whereas those in the biological processing option would take ChE 170L. **(COMPLETE)**
3. The teaching of computer usage needs to be redefined in view of the changes proposed in the CoE. Can our students be prepared somehow to handle E 77, without first going through CS 4? The question was also raised about incorporating computer usage into ChE 140. **(MAJOR ISSUE TBA)**
4. How could demonstrations or visits to the teaching labs be used to enhance the teaching of ChE lecture courses? **(NONISSUE)**
5. While not discussed at the retreat, I would also ask that the UGCC to review all of the course descriptions and course outcome questionnaires to be used for the ABET review for appropriateness and consistency. **(UGCC'S 2005/06 ASSIGNED ROLE IN ABET COMPLETED)**

Faculty Feedback to Students

AIChE Student Chapter; April 18, 2006

Item of Satisfaction

- Students are bright, hard working, and a joy to interact with.

Item of Dissatisfaction

- Students are so focused on grades that they can bypass ethical learning standards.

Student Response

- Silence (One student recommended up-to-date and complete descriptions of experiments).