

Chemical and Biological Engineering
Summary of Actions
2017-18

Concern	Recommendation	Action	Follow-up
1. While reviewing courses and assessing whether courses have the necessary content to make the successful students likely to achieve certain outcomes, some concerns associated with Outcome 1 were raised for unit operations lab and design.	Faculty recommending changing Outcome 1 (An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.) to a secondary outcome for ECHM/EBIO 442, 443, and 412.	The faculty recommendations were applied to the Outcomes matrix.	Follow-up is unlikely to be necessary unless Outcome is not adequately achieved in other courses, which seems unlikely considering it is a primary outcome for most other courses.
2. As more courses are offered both semesters each academic year, there is a growing design from students wanting to take ECHM/EBIO 412 before taking ECHM/EBIO 411.	The content of both courses was reviewed, and faculty recommending that we no longer require ECHM/EBIO 411 as a prerequisite for ECHM/EBIO 412 thus allowing students to take ECHM/EBIO 412 first.	A request was submitted to change the prerequisites for ECHM/EBIO 412 in the catalog.	The performance of students taking ECHM/EBIO 412 before ECHM/EBIO 411 will be carefully monitored for the next two years to ensure that students can achieve all learning outcomes even if they take ECHM/EBIO 412 first.
3. For the past two years, some lectures in ECHM 412 and EBIO 412 have been co-convened. Faculty have discussed extending and potentially expanding this practice to other lectures that are largely the same between these two classes.	Faculty recommended extending and expanding the number of co-convened lectures between ECHM 412 and EBIO 412.	The instructors were directed to continue and to expand the co-convened lectures.	The performance of students in ECHM 412 and EBIO 412 will be monitored through the final design report and FE exam performance for the next few years to determine if the co-convened lectures might inhibit student learning.

4. Faculty were concerned about the quantity of industrial exposure of our current students.	Faculty recommended that additional tours be either required or encouraged throughout the curriculum.	A tour of a local microbrewery was added to EBIO 438.	The tour was very popular and initial student feedback was positive. Student feedback will continue to be collected to assess the effectiveness of the tour.
5. The department's advisory committee was concerned about the quantity of industrial exposure of our current students.	The DAC recommended hiring additional faculty with industrial experience.	In addition to Phil Russell (hired in May, 2017 with 30 years of industrial experience), the department also hired Trent Browne (30 years of industrial experience, retired in Bozeman) and Logan Shultz (4 years of experience as a consulting engineering).	The initial feedback from the DAC was very positive, and feedback from the students will continue to be gathered. Student performance on the FE exam will continue to be monitored.
6. The department advisory committee expressed concerns about the limited amount of space available to Chemical and Biological Engineering students for study and group work.	Both the DAC and faculty were supportive of renovating COBL 326, the student computer lab, to make it a more effective and efficient space for groups of students.	A proposal was submitted (and later approved) to the provost to renovate and update COBL 326. Students were also surveyed before the renovation to obtain their 'wish list' for the space.	The renovations are scheduled for the summer of 2018. Student responses will be collected in the Fall of 2018.