

**Committee on Curriculum**  
**March 9, 2016**  
**Meeting Minutes**

**Voting Members present:** Bujanovic, Cohen, Dibble, Reuter, Shannon (for Wheeler), Stavenhagen, Tao, Verostek, Wagner

**Guests and others present:** Bevilacqua, C'Dealva-Lenik, Fortier, Minard, Newman, Nomura, Sanford, Zhang

**Unable to attend:** Batorsky, Donaghy, Rutkowski, Spuches, Wheeler

- 1) **Call to Order.** The meeting was called to order at 12:48 pm.
- 2) **Approval of Minutes from February 3, 2016 meeting.** The minutes from February 3, 2016 were approved unanimously.
- 3) **Announcements**
  - i) **Proposals posted for CoC and faculty review:**
    - SRE 619 Energy Policy Assessment Methodologies (new)
    - SRE 679 Life Cycle Assessment (new)
    - BPE 650 Advanced Catalysis and Surface Reactions (new)
    - BPE 658 Advanced Biocatalysis (new)
    - FOR 404 Ecotourism Abroad (new)Newman explained that these proposals had passed completeness review and were now posted for Faculty, and ultimately Committee, substantive review.
  - ii) **Proposals submitted for CoC completeness review:**
    - BS in Renewable Materials Science (major revision of Paper Science program)
    - BPE 623 Chemistry of Lignocellulosic Biomass (new)
    - RMS 200 Renewable Materials (new)
    - RMS 465 Renewable Materials and Surfaces (new)
    - EFB 438/638 Phytoremediation (new)
    - EFB 326 Plant Evolution, Diversification and Conservation (revision)
    - EFB 696 Special Topics in Environmental and Forest Biology (new)Newman explained that these proposals were currently under completeness review and that they would probably appear on the agenda of the next meeting.
  - iii) **Recent Administrative Approvals**
    - Final step in renaming of ERE classes to EFB 434/634.
    - EFB 202, EFB 337, EFB 342, EFB 345, EFB 384, EFB 388,
    - EFB 484, EFB 496, EFB 500, EFB 523
    - FOR 373/573Newman explained that these proposal revisions had been approved administratively by the Dean and any Committee member interested in their content should refer to the CoC web page.
- 4) **Updates from the Dean.** At this stage in the meeting, the Dean was not yet present, so there were no updates.
- 5) **Old Business:**
  - i) **Guidance document for differentiation between course levels.** Wagner announced no progress on this document.

**ii) Catalog updates – deleting courses.** C'Dealva-Lenik reported that he had not heard from Environmental Science since the last meeting. He still has heard nothing from EFB or FNRM. PBE has not yet addressed all the issues he has raised. Bujanovic indicated that one of the courses in question would appear in the Fall 2016 catalog.

**6) New Business:**

**i) Proposals for action (All)**

**BS in Environmental Science - Renewable Energy Option Area (revision).**

This proposal was left for discussion until the end of the meeting. At that point there was no longer a quorum, so the motion was tabled for discussion at the next meeting of the Committee on April 6.

**BS in Biochemistry (new).** Nomura explained that this was a new BS program in the Chemistry department, largely catalyzed by a review of the department by other outside chemistry programs. Biochemistry is the fastest growing discipline within chemistry; there is a growing demand for it, and there have already been inquiries from students wishing to major in Biochemistry. The current BS in Chemistry is rigid, and the lack of flexibility makes it difficult for students to, say, take courses that may be prerequisites for pre-professional programs. C'Dealva-Lenik noted that the proposal for a new program had been greeted with enthusiasm by the undergraduate students, who see it as a positive first step to increase enrollment in the Chemistry department. However, upon examination they are of the opinion that the major differences between the current Chemistry and proposed Biochemistry programs lie mainly in the removal of some core requirements. Nomura agreed, but also pointed out that as the major grows there will be opportunity for expansion and new courses. He also noted that the added flexibility of the Biochemistry program will enable an easier synchronization with other programs, which will ease the difficulties encountered by current transfer students, and also possible allow an exchange program with, for example, University College Cork in Ireland. This flexibility will also allow students to opportunity to decide whether they want to concentrate on the biological or chemical track of biochemistry. Shannon added that, with the new Biochemistry program, students may be able to graduate from an ACS creditable program. C'Dealva-Lenik asked if students can fulfill biochemistry options by taking courses at Syracuse University. Nomura responded that this is an advising issue. He noted that the new Biochemistry program has 120 credit requirements, which is less than the current Chemistry program with a biochemistry option. Students can therefore more easily fulfil their major and graduate on time. C'Dealva-Lenik asked if the current biochemistry option within the Chemistry program will be phased out, and whether the other options within the Chemistry program will also become stand-alone BS programs. Nomura replied that this new Biochemistry program is a first step to developing other programs that are currently options within the Chemistry program. Biochemistry is being offered as a stand-alone program first because of market forces. The biochemistry option within the Chemistry program will remain for now. The major difference will be in the degree name. The BS in Biochemistry major will result in a degree in Biochemistry, while a student taking the Chemistry major with the biochemistry option will receive a degree in Chemistry. Shannon noted that current students in the biochemistry option will have the opportunity to migrate to the BS in Biochemistry if they wish. Minard, in closing, pointed out that EWP 405 in the proposal should actually be EWP 407. Reuter noted that the Committee had now lost its quorum and proposed a vote via email. This will be accomplished so that the proposal, if approved, will be able to be placed on the agenda for the next meeting of Academic Governance.

**MPS in Chemistry (revision)** Dibble explained that this revision allowed students to specialize according to their interest without having to take courses in all three specializations. He pointed out that it was reasonable to be able to specialize more narrowly at graduate level. The curriculum revision was approved without further discussion.

**APM 730 Advanced Regression Modeling Methods (new).** Zhang, the instructor, has taught the course for three years and is wanting to normalize it. C'Dealva-Lenik questioned the course level, noting that in the past there has not been an APM course at the 7xx level. Zhang explained that his chair has asked him to develop a PhD-level course, although Masters students are also eligible to register. The course will not be open to undergraduates. The course was approved without further discussion.

### **FOR 411 Analytical and Technical Writing for Resource Managers (new).**

Stavenghagen had a problem with the relationship between the learning objectives and the major concepts of this course. In addition, he questioned the lack of examination of genre standards and genre change theory. Wagner asked whether this issue was substantive or merely editorial. To Stavenghagen the issue of genre standards and change is a substantive issue. Bevilacqua noted that the department had approved the course in the form presented in the proposal, and Shannon pointed out that the way the proposal is written there is nothing to prevent the instructor from including these items. Dibble agreed that the department obviously doesn't feel that the omission of these issues is critical. Stavenghagen was directed to consult with the instructor to discuss a possible amendment to the proposal to include examination of these issues. If such an amendment is forthcoming, the instructor will provide this to the Committee within two weeks (i.e., on or before March 23). C'Dealva-Lenik asked whether this class was required for all FNRM students or just those in the SEM program. Bevilacqua responded that it is required only for SEM students. The course was approved unanimously, with a possible amendment due by March 23.

**SRE 225 Physics of Energy (new, Gen Ed).** Dibble asked why the only math prerequisite for this course is the lowest-level math course on campus. How, for example, do you teach reactivity without exponentials? Fortier, the instructor, explained that the students in the course will be exposed to a little calculus, and that the course, and the math prerequisite, is a requirement for the Sustainable Energy Management program. For SEM students, Physics of Energy will be taking the place of EFB's Physics of Life, which also assumes minimal math knowledge. Dibble still expressed some concern that the course would not include enough math for students to be able to grasp the physics. Fortier explained that she has a strong physics background and felt capable of imparting the math needed for students to complete the course.

**SRE 419 Energy Policy Assessment Methodologies (new).** This course was approved without discussion.

**SRE 479 Life Cycle Assessment (new).** C'Dealva-Lenik asked why the statistics prerequisite is not more specific. The SEM requirement of APM 391 is an introductory class which does not include Monte Carlo Analysis, among other tools, that would seem to be required for this course. Fortier, the instructor, explained that Monte Carlo Analysis and any other statistical tools required is covered in the course. She asks only that students enter the class with a basic understanding of probability and measures of central tendency, on which she can build other statistical techniques. Tao mentioned that ERE 405 is a similar class, teaching energy analysis and life cycle analysis. Fortier explained that life cycle analysis is one of the main areas of her research. She presents it in a step-by-step approach because of the lack of math background of the SEM students. The course also has much less of an engineering design application than ERE 405 and does not deal with energy analysis; it takes a systems ecology perspective, and in this way is different from ERE 405.

**SRE 417 Energy Resource Assessment (new).** C'Dealva-Lenik pointed out that Section 3.2.2 of the proposal indicates that enrollment in the class is not restricted. This is inconsistent with other parts of the proposal, which indicate that the course is for SEM majors only. Fortier explained that the class is indeed restricted to SEM students. Newman was directed to make the change to Section 3.2.2 of the proposal, and also to add the credit hours to the catalog description. The course was unanimously approved with amendments.

**SRE 325/525 Energy Systems (revision).** Dibble noted that his request for differences in learning objectives had been addressed. Cohen asked what requirements had to be fulfilled for an undergraduate to be able to take the course at graduate level. Bevilacqua noted that students cannot get credit for both the undergraduate and graduate level of the class. Wagner explained that only undergraduate students with a 3.0 GPA or higher, and with at least junior standing are allowed to take the course at graduate level. Newman was directed to change the wording in the catalog description to read "Students taking SRE 535 will be required to complete additional work and will be held to higher standards than those taking SRE 335." A friendly amendment was offered to change the prerequisites for the course to "Undergraduate courses in introductory physics and introductory chemistry." Newman was directed to make this change. The courses were unanimously approved with an amendment to SRE 525

**SRE 335/535 Renewable Energy (revision).** Dibble brought up some concerns about this course and, as part of the discussion, Wagner and Shannon pointed out that such concerns were not within the purview of the committee; rather, they were a resource issue that had already been decided by the Chair and the Provost. Cohen pointed out that the wording in the Catalog description would be confusing if an undergraduate is taking this course at the 535 level. Newman was directed to change the wording in the catalog description to read "Students taking SRE 535 will be required to complete additional work and will be held to higher standards than those taking SRE 335." Dibble mentioned the lack of differences in learning objectives between the undergraduate and graduate courses, and was assured that these had been addressed by the latest revisions. The courses were unanimously approved with an amendment to SRE 535.

**FNRM - Renewable Energy Minor (revision).** Bevilacqua explained that the Renewable Energy Minor had originally been housed in Environmental Science, but with most of the instructors coming from FNRM. Environmental Science is happy to pass on the administration of the minor to FNRM. There being no questions, the revision to the academic minor was approved unanimously.

**FNRM - SEM Curriculum (revision).** Bevilacqua noted that in response to an investigation as to how the SEM curriculum relates to students' success post-graduation, it was decided to make some minor changes to the program and to make it more flexible. In addition, some courses have been substituted. During earlier discussion Dibble had raised the question of why EFB 120 is no longer a required course. Fortier explained that EFB 120 loses its applicability over time. It is also difficult for transfer students to add to their schedule. It can still be taken as an elective if the student wishes. The curriculum revision was approved without further discussion.

## ii) Other

### **Introduction and promotion of certificate programs (Shannon)**

Shannon gave the Committee a heads-up on the colleges future direction regarding certificate programs. The new SUNY Excels program is setting metrics for SUNY institutions to try to meet guidelines for program completion. The push is for ESF to develop certificate programs so that certificate completions will supplement the overall completion rate. ESF needs to think about what a certificate is and where development of certificates may be of most value to the institution. There are possibilities for advanced undergraduate certificates and also for graduate certificates providing add-on skills to the undergraduate degree. Shannon explained that this was all about marketing and meeting metrics to improve an unacceptable completion rate. Certificates are easier to complete than degrees. Nomura asked if there were currently any certificate programs at ESF, to which Shannon mentioned the Radiation Curing, Environmental Decision-making, and Bioprocessing certificates. As another example, SU has been aggressive in putting together several certificate programs, particularly in the professional schools, where the certificate programs target newly graduated students who wish to sharpen their skill sets. ESF should begin to look at these possibilities/opportunities. Cohen asked how a certificate program differed from an MPS. Shannon replied that an MPS is a 30 hour program, whereas a certificate is generally a 9 to 15 credit hour program. In addition, faculty may be able to identify potential MS or MPS students from those taking certificate programs. Shannon responded to another question by Cohen by saying that a certificate program being taken by a last-semester undergraduate would be a wonderful way to enhance the undergraduate experience.

The meeting was adjourned at 2:03 pm

#### Action items:

- Newman to make minor agreed-upon changes to various proposals before posting
- Stavenhagen to consult with Vonhof regarding possible revisions to FOR 411