

ACADEMIC ADVISORY COMMITTEE ON CHEMISTRY

Minutes of the annual meeting held on March 12, 2004
Middle Georgia College

The meeting was called to order at 2:45 P.M. by Dr. Bill Wysochansky, Chair.

A list of those present is attached to these minutes.

1. Introductions

Dr. Wysochansky mentioned that the chair-elect, Vicki Guarisco, was not present and someone needed to take the minutes. Christopher Wozny, a visitor to the committee from Waycross College and last year's committee chair, agreed to act as secretary for the meeting. Those present introduced themselves and their school affiliations.

2. Area F: Area of Concentration for Chemistry

The first order of business was introduced by Dorothy Zinsmeister concerning the chemistry Area of Concentration. She noted that the two key issues with respect to the Area of Concentration were first, are all institutions in compliance with the choice of courses voted on by the Committee in 1998; and second, is a Chemistry major able to graduate with a chemistry degree with no more than 120 semester hours (with the possible addition of four more semester hours in physical education)?

Dr. Zinsmeister read the list of courses acceptable for the current Area F:

- Calculus I, II, III, and IV
- Physics I and II
- General Chemistry I and II
- Organic Chemistry I and II
- General Biology I and II
- Quantitative Analysis
- Computer Science

Dr. Wozny pointed out that there is no Calculus IV. In the final resolution, the reference to Calculus IV was eliminated.

Larry Bottomley, the representative from the Georgia Institute of Technology, noted that Georgia Tech was not in compliance since it had only one general chemistry course. Dr. Bottomley expressed his general concern with the number of exceptions and inconsistencies of the Georgia Tech program compared to the other USG institutions.

Dr. Wozny raised the issue of students transferring from a two-year school to a four-year institution. He pointed out that a chemistry major may complete a degree with just one year of general chemistry, or with one year of general chemistry and one year of organic chemistry at a 2000 level, whereas most four-year schools have organic chemistry at a 3000 or junior level.

Andrea Wallace stated that four-year institutions will generally give credit for organic chemistry as if it were the 3000-level course if it is taken at a two-year school. Dr. Zinsmeister added that there are no longer two different organic chemistry sequences since semester conversion.

Discussions ensued of different scenarios of students completing an Associate's degree with various combinations of courses listed in Area F. Dr. Zinsmeister pointed out that the choice of classes taken by a student in Areas A - E cannot be prescribed, and therefore we cannot ensure that Calculus I or a physics sequence (an issue raised by Farook Khan) will be taken by a student in Area D. Committee members re-affirmed that for this reason it is important that chemistry majors are well-advised at their institutions. However, the consensus of committee representatives was that a student could complete a Bachelor's degree with 120 semester hours of study with any combination of 18 semester hours of course work from Area F by using some classes taken as electives, if necessary. Committee members also affirmed that they would be able to work with transfer students from two-year institutions to complete upper-level course work in a timely fashion and without significant disadvantages compared to students beginning their studies at the home institution.

The Committee also discussed the requirements of the ACS-certified Bachelor's degree, and noted that a calculus-based physics sequence is recommended but not required, and that physical chemistry should be a pre-requisite for 'some' courses. The text of the ASC-certified degree requirements was read verbatim by James Baxter.

The issue of program review was also discussed by the committee. Paul Franklin asked how many chemistry departments were triggered for program review. Someone noted that fewer than ten students in a program (both B.S. and B.A. degrees) will result in an automatic program review. Richard Wallace wondered about the number of chemistry graduates in the state, and what was the average number of chemistry majors in the state's institutions.

The Committee determined, with the exception of the elimination of Calculus IV, that there was no need to change the Area F / Area of Concentration course list.

3) Chemistry Learning Outcomes

Dr. Wysochansky pointed out that the Committee never voted on the chemistry learning outcomes developed last year. Two typographical errors were noted in learning outcomes # 15 and #23. New wording was agreed up for Content-Based Learning Outcome # 3, reading '100 different elements'. The committee discussed the addition of nuclear chemistry, electrochemistry, and solids in the learning outcomes, but reverted back to the condition that all institutions must teach the content during the academic year in order to be truly 'common' learning outcomes, and that not all schools taught each of these topics during a general chemistry sequence. Dr. Zinsmeister brought up the issue of specifying which semester different content was taught, but committee members gave examples showing that identifying particular content by the first or second course of the sequence was not possible.

Dr. Bottomley pointed out that the format for the content objectives in the middle section of the document were not stated in such a way that made them measurable. He suggested changing the language so that the objectives could be directly assessed. A discussion ensued concerning

assessment of both programs and courses, and acceptable forms or methods of assessment. The committee agreed it would be a good idea to improve the wording of the document so that all objectives were measurable if a volunteer could be found to do that.

Larry Bottomley made a motion to accept the learning outcomes with the corrections as noted, Ron Delorenzo seconded. The motion passed unanimously.

4) Georgia Performance Standards

The Committee discussed the draft version of the Georgia Performance Standards for the high school chemistry course. Dr. Wysochansky voiced the general opinion of the committee based on email discussion that the performance standards were good but that the major concern of committee members was if high school teachers will follow them. Dr. Zinsmeister assured that committee that comments were being taken seriously by those who put forth the draft version and that Standards were truly in 'draft' form. She suggested that the committee chair submit the Committee's comments through the DOE web site as well as through System Office, and that a copy of the Chemistry Learning Outcomes just approved by the committee be attached as well.

5) New Business

Dr. Wozny raised the issue of combining low enrollments in Organic Chemistry at the smaller two-year institutions by offering the lecture portion using distance learning / GSAMS and retaining a laboratory section at each institution. He asked for the advice and opinions of committee members present on the viability of such an approach. The consensus of the committee was that the academic officers at each institution need to support the courses which are vital to the degree programs offered, and that such an approach would not be a good idea for laboratory science courses.

Louise Wrensford passed out surveys to distribute to students at four-year and two-year institutions in organic chemistry courses and at a higher level concerning a Master's of Environmental Science degree program at Albany State University.

6) Elections

Dr. James Mack, the representative from Fort Valley State University, agreed to be the chair-elect for the Committee for 2004-2005 academic year.

The meeting adjourned at 5:10 P.M.

Respectfully submitted,

Dr. Christopher Wozny