

MACELAC, Beloit, 1958

Report of Discussion Group 2 (Meeting Friday Afternoon Only)

Topic: Should We Request that the ACS Minimum Standards Used as Criteria in Evaluating Professional Training in Chemistry be revised in the light of new developments in undergraduate curricula?

Members of Discussion Group:

Pullmer, DeLauw, Chairman
Walhout, Rockford, Secretary
Diester, Beloit
DeVries, Calvin
Fless, Wheaton
Gier, Jarks
Haenisch, Wabash (member of ACS minimum standards committee)
Chawyer, Monmouth
Smith, Valparaiso

Brief Summary:

The following points were discussed in some detail: 1) Benefits of ACS approval, 2) Proper use of ACS approval, 3) Trends in undergraduate curricula, and 4) Suggestions to the ACS committee. In spite of several suggestions in part 4), the general feeling seemed to be satisfaction with present minimum standards, as long as they are flexible in applications of the standards to specific situations. The member of the minimum standards committee present expressed the view that undergraduate curricula are changing so rapidly at present, that the committee does not wish to revise the minimum standards at this time.

Full Report:

The discussion on the minimum standards of the ACS included many general subjects. These will be summarized into subject headings rather than reported in the order in which they were discussed.

1) Proper Use of ACS Approval:

The question was raised whether ACS approval degree was not originally intended for students going right into industry,

rather than for students going on into graduate schools. Some felt that the 40 hours required to meet these standards was too high and that a student could be deficient in other liberal arts subjects. General opinion seemed to be that proper training for graduate school, as well as for industry, could best be attained by meeting the ACS standards. It was mentioned that the superior student in this program usually had more than the required hours to graduate, and in this way did not slight other subjects.

C) Benefits of ACS Approval to a College:

In answer to a question raised by Hurdlock as to whether ACS approval was worth working for in small colleges, the following benefits were listed:

- a. It gives ~~more~~^{more} to a department in much the same way as a chapter of Phi Kappa Theta gives this to a college.
- b. Graduate school, however, does not have admission or ACS approval and graduate schools. This should not happen, however and such schools have been complained by the committee, according to Dr. Hurdlock.
- c. It gives preference to chemistry as a subject that is often lacking in other fields.
- d. It stimulates students to take more courses in their major field.
- e. It attracts potential chemistry majors to a college.
- f. It is effective in keeping teaching loads in the chemistry department down, and, at Salvia, this worked to the advantage of other departments in the college also.

D) Trends in Undergraduate Curriculum:

In the course of the discussion several trends in chemistry education were pointed out. They are enumerated below:

- a. General chemistry is changing from 4-6 hrs. a week of laboratory to 5 hours a week.
- b. Qualitative analysis is going rapidly into the first year instead of being a separate course.
- c. Sections of general chemistry based on no V.C. chem. are disappearing.
- d. There is pressure to cut the option of electing the advanced courses, to electing one and requiring a course in advanced inorganic chemistry. Some felt this course could be better taught in graduate school, however.

1. Organic is being used up at an extraordinary rate, and in some cases, even this first year.
2. Physical chemistry courses (at least in other places) are being taught by people who have not had a first year course in this subject. This is particularly true of the first year course. This could be done by making the first year course a two-semester course and making the second year course a one-semester course.
3. There is a general feeling that the existing courses are not of high quality. There is a feeling that the first year course is not of high quality. The second year course is also not of high quality. The third year course is also not of high quality. The fourth year course is also not of high quality. The fifth year course is also not of high quality. The sixth year course is also not of high quality. The seventh year course is also not of high quality. The eighth year course is also not of high quality. The ninth year course is also not of high quality. The tenth year course is also not of high quality. The eleventh year course is also not of high quality. The twelfth year course is also not of high quality. The thirteenth year course is also not of high quality. The fourteenth year course is also not of high quality. The fifteenth year course is also not of high quality. The sixteenth year course is also not of high quality. 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4. In chemistry is being omitted from many classes, usually in favor of qualitative organic.
5. Suggestions to the ACS Committee on Minimum Standards:
 - A. That points of flexibility in the publication of minimum standards.
 - B. Allow chemistry departments that are close to each other to teach advanced classes jointly.
 - C. Put organic last in the first year course. However, it is pointed out that this was a little bit of a problem. Organic (incl. lab time) could be substituted for organic I & II, with lectures still counting as a separate course.
 - D. Publicize the existing standards.
 - E. Recognize physics courses (e.g. atomic physics) or advanced courses in chemistry. (Research stated that professional standards cannot be unilaterally approved by the committee.)

Conclusions:

From the viewpoint of the minimum standards committee: Things are changing so rapidly in undergraduate education that the committee does not wish to tackle the problem of revision of minimum standards at this time.

Of the participants in the discussion: It was concluded with the minimum standards committee, are a good thing, and a good thing.

Justine Simon 20 Feb 67, 1968