

## MACTLAC discussion on Industrial Chemistry

This group suffered from a deficiency of experienced teachers of industrial chemistry. Of the schools represented, St. Olaf has had the course for two years, (as an independent study, individually arranged) and Elmhurst will have it for the first time this year. Both teachers had attended courses taught by Harold Wittcoff of the University of Minnesota.

Problems faced by those wanting to teach industrial chemistry or include it in other courses:

Most faculty members have had no experience in industry.

The recent trends in courses have stressed theory rather than industrial processes (or descriptive material of any kind).

The students don't feel any "need to know" this material. Without much chemistry background, they may not be ready to understand the subtle points that can be made.

Problems with course proliferation in general--do we really want another specialty course in the curriculum?

Some suggestions for possible incorporation of industrial topics:

Include some literature research in organic labs. One possibility is to do some work on process design, investigating different paths to the product and their relative costs and difficulties.

Try to point out to students different ways to get the same product and possible reasons for choosing one over another.

Other needs:

A broad overview is needed to be sure the students get a realistic idea of the possibilities open to them for careers.

Contacts with industry. This will take some work. A British program of partial support of graduate students was mentioned as a good example. The industry agrees to employ the student for 3 - 4 months and then supply some support for the graduate research in return for first crack at the compounds and information from the project.

Sources for information:

Kirk-Othmer, Encyclopedia of Chemical Technology

Riegels, Handbook of Industrial Chemistry

Plastics Handbook (yearly editions)

C + E News articles and summary pages on processes and products

Some special assignments that can be used:

Analysis of a company, emphasizing one chemical. This requires direct contact with the company as well as library work.

Cost calculation of a chemical process, using the patent literature and current cost information on raw materials.

Oral presentation, as if the speaker were trying to persuade a group of managers to use a particular polymer (or other product), with both technical and economic data.

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