

the extent of his information requirements, so that the on-line systems can be used efficiently as an interactive system adapting the search strategy to the given information. This need for teamwork between the information specialist and the engineer is ground enough for the undergraduate engineer to be made aware of the principles of information retrieval.

## TEACHING EXPERIENCE

### Experience in the Swiss Federal Institute of Technology (E.T.H.)

In common with many other universities, the time-table structure at E.T.H. makes it virtually impossible to introduce new courses, so modern methods of information and documentation have to be squeezed into two hours borrowed from another course, with practical exercises carried out as part of a semester project. The introduction to the semester project enables an additional two-lecture-hours on manual searching to be given. Because the particular semester project is concerned with literature retrieval (four days), the students get ample practical experience on manual searching. The total of four lecture hours (which includes a computer search demonstration) is not really adequate to properly cover the material—six to eight hours would be better. The four-day manual search project is more than necessary for the normal chemical engineering student. However, in the Technical Chemistry Department at E.T.H. there is a strong emphasis on chemistry, which is consistent with extended information retrieval exercises.

The subject would be given more status if it were a short course in its own right, and not simply squeezed into odd hours. This could conveniently be taught together with odd hours given on communication (report writing, specification writing, drawing standards, speaking and lecturing) to provide sufficient material for an independent course on communication.

Undergraduates do not carry out computer searches, but postgraduates are allowed to carry out some of the searches by computer in collaboration with an information specialist.

### Experience at the Instituto Quimico de Sarria

Since 1979 the Higher Technical Education Centre for the formation of engineers has provided a course on Scientific and Technical Documentation for the fifth-year students (the last

## ChE conferences

### DESIGN CONFERENCE AT VPI

The ChE Department at Virginia Tech wishes to invite ChE educators to attend the Frank Vilbrandt Memorial Conference on Chemical Process and Plant Design. The Conference is scheduled in celebration of the 50th anniversary of the founding of the ChE Department at Virginia Tech and will be held on October 10 and 11, 1985. Further information can be obtained from Y. A. Liu, ChE Dept., Virginia Tech, Blacksburg, VA 24061.

year of the chemical engineering curriculum). It is compulsory for those students who opt for the research course, at the end of which a *Trabajo de Fin de Carrera* (final report on conclusion of studies) has to be submitted before the degree (in chemical engineering) can be awarded. It is, however, optional for those students who do not go for this research course and who will consequently not complete their studies with this degree.

The course is run for one week with two hours every day, giving a total of ten hours for the presentation of the various topics. The exercises are done on an individual basis outside the regular course time, which means an average extra time requirement of three hours for the practical exercises. In the presentation of the material, emphasis is put on practical application, the importance of one-line systems demonstrated, and extensive use of visual material like slides and transparencies is made. The course contents are remarkably similar to Table 1, which is the proposed curriculum we are recommending.

The experience with this course during the last five years has been highly positive. The students have learned or improved their ability to handle basic documentary sources (like *Chemical Abstracts*, *Beilstein*, *Science Citation Index*). They know the possible ways of using information media in their search for information, how to access them, and finally, and this is very important, they realize the complexity of the process for searching for information and are aware of the assistance available from the specialist in information and documentation.

### COURSE CONTENTS

The European Federation of Chemical Engineering has had a Working Party on Information

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