HISTORICAL COMPARISON OF CHEMISTRY AND CHEMICAL ENGINEERING EDUCATION IN TURKEY

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In Turkey, unfortunately, there is a tendency among those not directly involved in this field to confuse 'chemists' and 'chemical engineers,' assuming that both fields are more or less the same.

In fact they are far different from each other, particularly in terms of the different educational preparation each requires.

This misunderstanding stems, historically, from the chemistry and chemical engineering education in Istanbul University which was the only institution granting degrees to chemists and chemical engineers up until 1950. The first formal chemistry education started in Istanbul University in 1917. Graduates of this institution were called chemists until the 1933 University Reform. After that year students were accepted to a chemical engineering department which had some courses such as *Industrial Chemistry, Unit Operations and Unit Processes* and a couple of elective courses added to the existing chemistry program. Needless to say the resulting program was heavily oriented towards chemistry courses and laboratories. As a consequence, there were minor differences between chemistry and chemical engineering programs at that time. The laboratories were almost the same in both chemistry and chemical engineering programs. Later on when programs were opened in Ankara University they were again similar to those of Istanbul University. Thus it is apparent that the confusion mentioned above is really based on the education in these two universities, a confusion which continues to the present day. By way of contrast, the chemical engineering education later introduced in METU and Boğaziçi Universities were very similar to those in American universities.

After the establishment of the Supreme Higher Education (YÖK) in 1981, separate curricula which distinguish between chemistry and chemical engineering education were clearly defined. Today there is a modern chemical engineering education in our universities in which courses appropriate to chemical engineering are taught. In these departments, both the number of credit hours of chemistry and chemistry labs are reduced. Instead, courses such as *engineering mathematics, mathematical modeling, process dynamics and control, simulation, optimization, chemical engineering thermodynamics, plant design and economics, separation processes, transport phenomena, chemical reaction engineering* and other core courses are added which are designed to be taken solely by chemical engineering students.

In this study, some programs of chemistry and chemical engineering departments from Turkish universities and from abroad will be discussed with the consideration of ABET criteria for chemical engineering curricula.