

The European Committee for Computers in Chemical Engineering Education – EURECHA: Vision and Current Activities

Z. Kravanja

1 Faculty of Chemistry and Chemical Engineering, University of Maribor
P.O. Box 219, Maribor, SI – 2000 Slovenia
Fax: ++ 386 2 25 27 774, e-mail: zdravko.kravanja@uni-mb.si

Secretary of EURECHA

ABSTRACT: The purpose of the presentation is to promote the mission of the European Committee for Computers in Chemical Engineering Education – EURECHA, to strengthen the role of EURECHA and to widen the scope of EURECHA activities at the beginning of the new century with respect to the long-term challenges in chemical engineering education.

EURECHA was established two decades ago as a non-profit body to support the exchange of software for teaching and the methods of computer aided teaching between universities in Europe. By all means this mission has remained the main foundation of EURECHA until today. However, the conditions and the scope of education have changed: in each decade the general knowledge has doubled while at the same time the use of computers in chemical engineering has progressed substantially from the very enthusiastic early stage to the current maturity. On the other hand, the scope of chemical engineering education has grown too: from conventional chemical engineering to product engineering, environmental (sustainable) engineering, biochemical and food engineering. Life sciences are more and more integrated in our study programmes. What should be the appropriate response of EURECHA reflected in its future activities? The answer is that we should redefine the vision of EURECHA more specifically to adapt it to:

- a) the current trends in chemical engineering undergraduate education according to the Bologna processes and
- b) to the more and more profound research work at the PhD graduate education level.

So far EURECHA has focused on the following areas: educational software, tutorial case studies, short courses/workshops, educational sessions at ESCAPE meetings and questionnaires. Members and EURECHA supporters can purchase different software tools at discount prices and some tutorial case studies free of charge (look at web page <http://www.capec.kt.dtu.dk/eurecha/>). EURECHA also funds the development of educational software.

The presentation of the current status and the vision of EURECHA will be followed by highlights about the results of two current projects - educational software and student contest problem:

1. Educational software: This year EURECHA funds the development of the code CostEval by prof. Valentin Plesu and co-workers from the University “Politehnica” of Bucharest, Romania. The code is designed to help students and process engineers to assess chemical unit operations costs. One of the developers will present a short description and the capabilities of the code, the basic cost model and the data that are implemented in the new software prototype.
2. The student contest problem: First, a short review of the problem “Design of a solvent recovery plant”, defined by Prof. Peter Mizsey from The Budapest University of Technology and Economics, Hungary, will be given. The objective of the problem is to recover organic solvents from a four-component waste stream at minimal cost using different separation techniques. The competition has been announced. Some highlights of the best results will be presented and the best solution will be awarded at the end of the Educational session.