

Research and Engineering Education at the University of Illinois at U/C- Department of Mechanical and Industrial Engineering.

Abstract

As a State University, the task of educating undergraduate and graduate students, (including those who pursue research on the doctoral and post - doctoral level) is supplemented by the obligation to conduct research in support of Industry and to have also a leading role in pure research at the state, national and international level.

A guided evolution under successive departmental administrations - utilizing the strong research credentials of individual faculty members - has transformed an originally teaching oriented department into one of the leading research centers in the USA.

Research Centers have been established to support these activities at all required levels. After identifying named research centers at the University level, special attention is given to those located within, or supporting research and educational efforts, in the Department of Mechanical and Industrial Engineering. Research activities can extend across departmental, college of engineering, institutional and national boundaries.

Since the cost of operating research centers generally exceeds the limitation of state funding, financial support through federal grants, industrial sponsors, consulting agreements – and to a large extent through generous endowments by loyal alumni are essential. Indeed, these types of support are also sought by individual staff members on the basis of their personal reputation, without affiliation with named research centers.

The impact of such research activities on the educational programs of the department, including the levels and sources of funding are illustrated by recent examples of scheduled projects. Detailed references to Internet Sites, Publications and Internal Reports are presented.

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By Dr. Helmut H. Korst, Professor of Mechanical Engineering, Emeritus, Honorary Member and Life Fellow, ASME-International. www.mie.uiuc.edu
Also h-korst@uiuc.edu for direct communication.