



Newsletter

UNESCO Supported
International Centre
for
Engineering Education

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Monash University

Aims

The UNESCO Supported International Centre for Engineering Education (USICEE) has been established in the Faculty of Engineering at Monash University, Clayton, Melbourne, Australia. The main objectives of the USICEE are to facilitate the exchange of expertise and research on engineering education, and to act as a clearinghouse for information on textbooks, engineering teaching courseware, software and equipment.

The Centre has the specific mission to transfer this information from developed countries to developing countries worldwide. Particular emphasis is placed on Asia and the Pacific region. Its aims are to:

- Conduct research into the methodology of the teaching and learning processes and assess the effectiveness of teaching programs and programs designed for developing technologies;
- Carry out research on equipment, textbooks, courseware and software utilised in engineering education and encourage further research in these areas;
- Collect information on advances in engineering education and develop modern techniques for the dissemination of this knowledge;
- Promote collaboration in the field of engineering education between institutions in developed and developing countries.

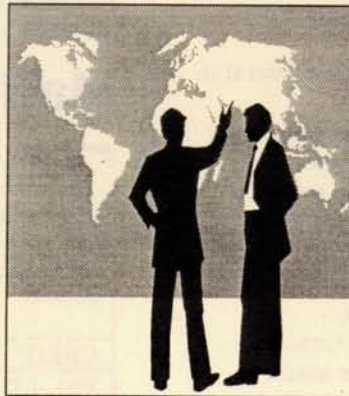
Surveys

The Centre is to serve the world's engineering education community by undertaking research, and by sharing information. Thus the initial task of the Centre is to concentrate on the most urgent problems and most important activities, including the establishment of a system to collect information on the effective use of equipment, courseware and software, in order to examine how the application of appropriate methodologies improves the quality of engineering training.

A survey on Computer-Aided Instruction for engineering students has already been completed. It provides valuable information on the use of computer assisted instruction used in engineering education in the Faculty of Engineering at Monash University. As well, a comprehensive review of engineering teaching in the Faculty with special emphasis on textbooks, courseware, software and original methodologies is nearing completion.

Both these activities were sponsored by the Monash Development Fund.

A proposal for an Australia wide survey of engineering institutions and engineering teaching is in the planning process.



International opportunities

The Asia-Pacific

The Federation of Engineering Institutions of South East Asia and the Pacific (FEISEAP), The Institution of Engineers, Australia, the International Liaison Group for Engineering Education (ILG-EE) and the Association for Engineering Education in South East Asia and the Pacific (AESEAP) and other national and international organisations have expressed their strong desire to co-operate with this international Centre

in Australia, and support the operation of the Centre.

Contacts have already been made with academic institutions in the Philippines, Indonesia, Papua New Guinea, India, The People's Republic of China, Russia, Vietnam, Thailand and Fiji, with visitors from Fiji, Thailand, the Philippines and Vietnam all having spent some time at the Centre. A co-operative agreement has been recently signed between the USICEE and the Centre for Information Technology (CITE), Vietnam.

A contract has also been signed with UNESCO to provide a training course for academic teachers from a number of South-East Asian countries on *The Application of Computer-Assisted Training Programs in Engineering Education*. The course is scheduled for November 1994.

The Centre will endeavour to develop a range of such courses on engineering education which can be offered to countries in the Asia-Pacific region. This

should strengthen the dynamic collaboration between the USICEE and the region.

The USICEE will also expand its database of engineering academics. This database will be used for the dissemination of information on research results and other matters. To improve the quality of engineering training in developing countries, the Centre must establish a mechanism for the efficient flow of information between universities in developed and developing countries. Some electronic mailing lists have already been established (see later), and the UNITWIN program will be a key part of this information transfer.

UNITWIN

UNITWIN is a program facilitated and supported by UNESCO to promote twinning and networking among universities. So far it has focused on the establishment of links between universities on North-South, South-South and East-West axes. It now intends to broaden its base into a network of institutions of higher education for the Asia-Pacific region as a logical extension of this process. The new structure should build on existing links, and has the potential to become UNESCO's major action in support of higher education, particularly in developing countries.

Whereas the majority of present links are bilateral in nature, this new network proposal is for the establishment of a broad multilateral network of higher education institutions in the Asia-Pacific region under the UNESCO-UNITWIN umbrella. It has a focus on key disciplines related to sustainable development. The Australian Vice-Chancellors' Committee has initiated this process of establishing the UNITWIN Network by providing administrative and other support.

The UNESCO Supported International Centre for Engineering Education (USICEE) has been asked to establish an Asia-Pacific UNITWIN sub-network for engineering education to strengthen the exchange and transfer of information on new developments in this field.

With its established international links and its contacts with Australian universities, the USICEE provides the basis of a sub-network. The Centre has access to a body of academics willing to collaborate on engineering education and would encourage new developments in the field and co-ordinate the work done in many universities, to make better use of scarce resources.

This collaboration can also be strengthened through the professional membership of the Australasian Association for Engineering Education based at the USICEE. Particular emphasis is placed on wide participation of Australian industry in this venture, since engineering education cannot be efficient without feedback from industry.

AAEE

The headquarters of the Australasian Association for Engineering Education (AAEE), a leading engineering education association in this part of the world with close to 500 members, have been transferred to the USICEE to strengthen the collaboration between the two organisations. Members of the AAEE assist in the operation of the Centre by providing resources and expertise. The AAEE publications, its *Newsletter* and the *Australasian Journal of Engineering Education*, which is recognised worldwide as a prestigious publication in the field of engineering education, facilitate effective communication of information.

Congress

An important activity at the moment is the organisation of the *1995 International Congress of Engineering Deans and Industry Leaders*, on behalf of UNESCO, at Monash University. It is hoped that this event will bring together top academics and senior industry figures and will create a forum for discussion and exchange of information. All academics are encouraged to contribute papers to this congress.

Mailing Lists

The Centre runs several electronic mailing lists for the benefit of the engineering educational community:

USICEE	The Centre's Newsletter (this one)
AAEE	The Australasian Association for Engineering Education
CBLG	Computer Based Learning Group
PBL-LIST	Problem Based Learning

You may subscribe to any of these by simply sending a one line e-mail message of:

subscribe *listname* *firstname* *lastname*

to LISTSERV@eng.monash.edu.au, where *listname* is one of the list names from above, and *firstname* *lastname* is, of course, your name. Thereafter, send messages to other people on the list by sending to *listname@eng.monash.edu.au*, eg USICEE@eng.monash.edu.au.

Should you wish to unsubscribe yourself at a later date, just send a one line message of:

signoff *listname*

Contact the Centre for more information on these lists or any other relevant activities. It is hoped to keep partners around the world regularly updated via the USICEE mailing list.