

STRATEGIC PLAN

PREFACE

The IEEE Education Society recognizes that this is a period of rapid change in engineering education, especially at the undergraduate level. New responsibilities for engineering education are being discussed and accepted by the profession including: K-12 and continuing education, recruitment and retention of students who represent the diversity of the population (within the United States), incorporation of the history and the social impact of technology into undergraduate engineering courses, and education of the non-engineering population in technological literacy. The Society recognizes that it has a global membership and that the international membership is the fastest growing segment. There is increased recognition of the scope of the IEEE technical areas of interest as exemplified by its leadership in accreditation of programs in bioengineering, and computer science and engineering, as well as electrical and other similarly named programs.

GOALS and OBJECTIVES

The goals of the Society are to advance the theory, practice and accessibility of engineering education and to assist in achieving overall institute goals. Specific objectives can be grouped into three categories: improve service to members, provide service to community and society, and improve communications. Strengthening the society is essential in order to achieve these objectives.

Improve Service to Members

Objective 1.

To provide professional development opportunities for members.

Implementation strategies:

- work with other member societies and EAB to develop modular short courses and faculty enhancement workshops
- sponsor workshops for practicing engineers

Objective 2.

To enhance the Society's publications and to encourage and support the use of technology, e.g., multimedia, or information superhighway, in engineering education.

Implementation strategies:

- evolve newsletter into a magazine
- develop a journal on information technology in engineering and science education
- publish electronically

Objective 3.

To develop the Frontiers in Education Conference into a premier, international conference.

Implementation strategies:

- host at more sites outside the US
- include more workshops and short courses
- increase attendance
- invite NSF PI's to exhibit their projects
- publish proceedings electronically
- use CD-ROM for proceedings

Provide Service to Community and Society

Objective 4.

To develop outreach activities for K-12 and the non-scientific community.

Implementation strategies:

- develop engineering modules for K-12

- encourage members to interact with K-12 teachers
- organize workshops/short courses
- develop curricular plans for teaching engineering principles to non-engineering majors

Improve Communication

Objective 6.

To increase communication and cooperation with other entities to enhance the state of engineering education. Among the possible linkages are:

- academe-industry-government
- IEEE Educational Activities Board
- NEEDHA
- ECE Division of ASEE
- ERM Division of ASEE
- Community College Constituent Committee of ASEE
- National K-12 organizations such as NCTM
- NRC Board on Engineering Education
- National math and science organizations such as AMA, AAPT
- National social science and humanities organizations

Strengthening the Education Society

Objective 7.

To increase the number of members, with particular attention to the participation of international members.

Implementation strategies:

- interact with the Transnational Committee
- commence close ties with Chapters of the Education Society
- ask each member to recruit one new member
- recruit industry members, including adjunct faculty
- recruit community college engineering faculty
- recruit doctoral and post-doctoral students
- invite each member of NEEDHA to join
- invite chairs of Computer Science and Bioengineering Departments to join
- invite education chair of each Society to join
- invite education chair of each Region to join
- invite each EAB member to join
- ask each Chapter to recruit new members