Preparing Students for Global Job Markets Through International Academic Linkages: A Case Study

With the globalization of the economy, it is becoming increasingly important for engineering and engineering technology graduates to have international and cultural opportunities and experiences as a part of their undergraduate curricula. These graduates must be prepared to work in multicultural teams in multinational corporations. Some of the academic preparation they need will come from international collaborative experiences that develop abilities and familiarity with information technology, teamwork and engineering design methodologies in a global environment. This paper describes the efforts undertaken by the Altoona College of the Pennsylvania State University (Penn State Altoona) to create an early educational awareness of the global implications of engineering education through international collaborations with other educational institutions in the world. These partnerships embrace use of international collaborative student teams and projects, development of common curriculum modules, faculty exchanges, and jointly conducted seminars. Developmental stages of these academic partnerships are as follows:

1. Familiarization with Institution.
   This is a time period to exchange administrators, faculty, and key individuals associated with the anticipated development of the exchange program. The purpose of the exchange is to become familiar with the partner institution, its goals and mission, institutional facilities, and level of commitment to the international partnership. The first friendships are also established.

2. Identification of Common Interests.
   This is a period of more in-depth exchanges with specific focus on instruction and/or research activities where commonality exits and an interested faculty has been identified. Additional familiarization activities may take place simultaneously.

   This is a period during which previously identified projects and activities are conducted and evaluated. Additional activities may be identified as a result, or, conversely, activities may be modified or cancelled.

4. Instruction of Common Courses.
   This is a period involving the instruction or exchange of selected courses, modules of courses, or common classroom sessions, seminars or workshops.

5. Institutionalization
   This is a period during which successful projects and activities are institutionalized within the home institution. The goal of which is the sustainability of these projects and activities.

6. Cooperative or Common Degree Programs.
   This is a culmination period resulting in the development of common curricula and degree programs. In the most developed state this could result in a common or dual degree for the participating students.

The learning experiences gained from the above mentioned international academic linkages are discussed in this paper. The obstacles encountered by the partner institutions in carrying out the collaborative activities are also listed in the paper.