Chapter 6
Global Impact for your Institution:
International Experiential Education for Technical Students

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ABSTRACT

In the United States, students pursuing degrees in technical fields (engineering and computer science) are the smallest population of students who study abroad other than agriculture (only 1% of agriculture students studied abroad in 2009). According to the Institute of International Education's Open Doors Report in 2009, only 3% of engineering students studied abroad. Only 2% of computer science students studied abroad (Institute of Engineering Education, 2009). Currently the Open Doors Report does not account for students doing international experiential education so the only statistics we have are for study abroad. The world is in high demand of engineers and computer scientists, and with this global need, it is imperative that educational institutions focus on producing globally-minded and culturally competent engineers and scientists.

This chapter describes Georgia Institute of Technology's (Georgia Tech) model for producing globally competent engineers. It details two aspects that Georgia Tech thinks are vital to its success: (1) the need for institutional support and resources and (2) making international experiential education a part of an institution's culture.

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INTRODUCTION

Georgia Tech has a longstanding tradition of applying technical knowledge in a practical fashion, of blending theory with practice. The faculty and students are entrepreneurial and the campus culture promotes this mindset. A great part of that culture comes from the 98 year-old cooperative education program, which is the fourth oldest in the United States and the largest totally optional program of its kind. Among Tier-1 research universities in the country, Georgia Tech has the largest group of students formally participating in experiential education programs. Co-op began at the Institute in 1912, six years after it was started at the University of Cincinnati. It was then, and is still now, considered an academic program, reporting to the Provost, or the chief academic officer. In the beginning years, students alternated between classes and employment every two weeks. This was changed after a few years to a monthly rotation and then finally settled into a quarterly schedule after World War II. It was so popular, that the school changed its semester calendar to accommodate the co-ops and everyone was attending Georgia Tech on the quarter calendar. In 1999, however, the University System of Georgia mandated all public institutions of higher learning adopt a semester calendar. Co-op students still alternate between school and work, but on the semester schedule.

In 2002, after 90 years of continual successful operation, it became apparent that changing economics in the U. S. and different attitudes among students and employers were causing many to seek out internships as opposed to committing to a co-op program of work and study. In order to capture these students and make this a formal experiential learning program as part of Georgia Tech's academic offerings, the Cooperative Division reorganized to promote an official undergraduate internship program. These are mostly students entering their third or fourth year of study, who have not previously worked in the co-op program. The office then became known as the Division of Professional Practice (DOPP). The Co-op Program remains the mainstay of DOPP, but the internship program has grown exponentially since 2002. In the spring of 2004, due to Institute reorganization, the Graduate Co-op Program, for Master and PhD students, was moved from the Graduate Office to the DOPP. The Work Abroad Program started in 2005 as DoPP's fourth program, and as a part of the International Plan (IP) initiative, which is outlined in more details in a later section of this chapter.

WORK ABROAD PROGRAM DETAILS

The Work Abroad Program consists of undergraduate and graduate students within any field of study. Georgia Tech has Colleges of Engineering, Sciences, Architecture, Management, Computing, and Liberal Arts. Approximately 60% of undergraduate students are working toward a degree in engineering. The College of Engineering consists of the schools of: aerospace, biomedical, chemical and biomolecular, civil and environmental, electrical and computer, industrial and systems, materials science and engineering, mechanical, and polymer, textile and fiber engineering.

Typically Georgia Tech students work for one semester. All of the Work Abroad opportunities are full-time internships or co-op jobs outside the United States. The majority of the internships are paid. Students can work during the fall, spring, and/or summer semester. Georgia Tech students are rarely given academic credit as internship credit is not helpful to an engineering curriculum. One service that Georgia Tech gives to its students is enrolling them in a full-time audit course while they are working abroad. This service has numerous benefits. This class allows them to maintain full-time status; it is tuition-free, and non-credit bearing for the student. The class appears on the student's transcript as "International Internship."