

*Proceedings*  
*Enhancement of the Global Perspective for*  
*Engineering Students by Providing an*  
*International Experience*

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The German Initiative for Students in  
Science and Technology

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DAAD

**THE GERMAN INITIATIVE FOR STUDENTS IN SCIENCE AND  
TECHNOLOGY**

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**The Deutscher Akademischer Austauschdienst (DAAD) is an independent, publicly funded, self-governing organization of higher education institutions in Germany. DAAD promotes international academic relations and cooperation by offering mobility programs primarily for students and faculty, but also for administrators and others in the higher education realm. The New York office, established in 1971, is a resource center for information on German universities, universities of applied sciences (Fachhochschulen), and colleges of fine arts, which also distributes publications on study, research and scholarship opportunities in Germany. DAAD NY is the contact for students and scholars in the United States and Canada who are interested in DAAD programs.**

**DAAD New York develops linkages with US institutions of higher education which will create pathways to allow American students who want to study or do research in Germany to do so and to understand the needs and values of prospective American students or researchers to go abroad.**

**Beside a range of activities for undergraduate students, DAAD identified the field of engineering education and research in Germany as one of the most interesting ones for cooperation and exchange with the US: Engineers play a "key role" in the process of technological innovation, especially in industrialized countries. Engineering education and science in Germany have a very good reputation abroad. Engineering related business between the US and Germany needs as well the mutual understanding in science and academic culture.**

**Despite different frameworks for engineering education in the US and Germany, the challenges faced by the engineering professions and the future of engineering**

**education are similar. In the framework of globalization both countries need engineers with pragmatic and interdisciplinary engineering competencies; these engineers should have an understanding of the economic, social, environmental and international context of professional activities in the engineering field.**

**Since 1996, DAAD Germany — in addition to its established scholarship programs for students and scholars—has supported the establishment of study programs that encompass language competence, interculturalism and interdisciplinarianism in an international context. Bachelors and Masters degree programs<sup>1</sup>, international teaching and research networks, the modularization of study programs and the introduction of a credit point system are a few of the measures that aim to make Germany a more internationally attractive location for study and research. At the same time, the engineers of the future are being prepared through internationally focused team and project oriented work.**

**German institutions of higher education, similarly to their American counterparts, have made diverse efforts to meet the new challenges that engineering education faces. The technically oriented universities in Germany weigh the internationalization of their study programs quite heavily.<sup>2</sup> Cooperation with American engineering schools promises:**

- The creation of a balanced international field of study to attract students from all countries**
- The presence of US students as validation of the German institutions quality and prestige**

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<sup>1</sup> Since the introduction of Bachelors and Masters degree programs conducted partially or entirely in English at German universities, approximately one-third of these new study programs have been introduced in the engineering sciences. (See overview of these degree programs at <http://www.higher-education-compass.de> and [http://www.think-ing.de/html/get/ba\\_master.pdf](http://www.think-ing.de/html/get/ba_master.pdf).)

<sup>2</sup> The attractiveness of studying engineering in Germany is also made clear when considering the above average percentage of foreign students in Germany who are studying engineering: In 2001 the percentage was 13.8% at universities and 43.7% at *Fachhochschulen*. (See “Wissenschaft Weltoffen,” Foreign Students 2001 by field, major and type of university.) (Average across all majors: 10,4% in 2001; see Deutscher Bundestag, Drs. 14/7999 from January 16, 2002.)

- **The expansion of cooperation schemes with American partners through exchange of students, etc.**

**American schools of engineering associate intensified international exchange with the following goals:**

- **The creation and integration of an international dimension in engineering studies**
- **Improved quality of engineering education**

**For the German institutions, the multifaceted, centrally coordinated measures create a cooperative course of action for the integration of international dimensions in engineering education. The DAAD as a central membership organization for all German universities in the field of international academic cooperation plays an important role: Through diverse program initiatives, and also by serving as a clearinghouse for obstacles and impediments that may arise in cooperation with other countries, the DAAD promotes the internationalization of academic relations and exchange.**

#### *Current activities*

**Since 2001, DAAD New York has supported the efforts of higher education institutions in the US and Germany to reform engineering education on both sides of the Atlantic:**

**DAAD New York supports:**

- **Summer Courses for American engineering students at the Technical University Munich that encompass an intensive language component and lectures on entrepreneurial culture and management, current developments in engineering and visits to high-tech and traditional industrial sites in and around Munich**

- **International Engineering Program at the University of Rhode Island as an innovative study abroad program (“edu.de-cooperation prize” winner in 2001)**
- **Introduction of the “edu.de” scholarship program to support undergraduate students to study in Germany**
- **Information visits for deans of engineering of American universities to German institutions of higher education.**

**Overall goal of these programs is to increase the mobility of American engineering students into Germany and to establish networks between German and American persons and institutions for practical and active cooperation in engineering education.**