Online Journal for Global Engineering Education

Volume 3 | Issue 1 Article 2

May 2008

International Dual Degrees at the Graduate Levels: The University of Rhode Island and the Technische Universität Braunschweig

John M. Grandin
International Engineering Program
University of Rhode Island, grandin@uri.edu

International Dual Degrees at the Graduate Levels: The University of Rhode Island and the Technische Universität Braunschweig

Cover Page Footnote

This article is based on a paper read at the Annual Conference & Expositions of the American Society for Engineering Education (ASEE) in Honolulu, Hawaii held June 24-27, 2007. The original paper was subsequently included in the "Proceedings of the Annual Conference of the American Society for Engineering Education" and is reprinted here with kind permission.

The Online Journal for Global Engineering Education
The Berkeley Electronic Press
ISSN 1933-1703

International Dual Degrees at the Graduate Levels: The University of Rhode Island and the Technische Universität Braunschweig

John M. Grandin
University of Rhode Island

ABSTRACT
While it has now become common for American colleges and universities to develop programs abroad for engineering undergrads in the form of student exchange, internship, special project, short-term study tours, and so forth, there has been little discussion of international exchange or special degree arrangements at the graduate level. Convinced that this must happen if we are to educate American researchers and technologists to have the skills necessary for careers in the global workplace, the University of Rhode Island has forged new dual degree programs at the masters and doctoral levels with its partner university in Germany, the Technische Universität Braunschweig. This paper presents the rational for such programs, as well as the process leading to the agreements between URI and Braunschweig, as well as a discussion of the issues and hurdles which needed to be overcome to satisfy the requirements of both sides and to make the program viable for both faculty and students.

This article is based on a paper read at the Annual Conference & Expositions of the American Society for Engineering Education (ASEE) in Honolulu, Hawaii held June 24-27, 2007. The original paper was subsequently included in the "Proceedings of the Annual Conference of the American Society for Engineering Education" and is reprinted here with kind permission.

The need to prepare engineering students for work in the global arena has ceased to be a matter of debate. While considered a novelty just fifteen or twenty years ago, it is now broadly accepted that cutting-edge technology is no longer the exclusive sphere of a small group of nations such as Japan, the Western European countries, and the United States. It is understood that continued technological and economic success will depend on scientists and engineers able to collaborate with peers from many locations around the world. Engineering educators acknowledge that this era of globalization has extensive implications for the curriculum and are thus experimenting in search of appropriate changes to keep the next generations competitive. Several international program models for engineers are emerging at campuses across the country, with focus on language and culture study, study abroad, student exchange, international professional internships, projects carried out by global student and faculty teams, distance learning partnerships with schools abroad, and so on. Another sign of the increased attention to this matter nationally is the renewed vigor of the International Division of the American Society for Engineering Education, the increasing success of ASEE's Global Colloquium on Engineering Education and the growth and rigor of the Annual Colloquium on International Engineering Education, organized by the University of Rhode Island and now in its eleventh year.[1]

To this point, internationalization of engineering education has focused mainly on undergraduate programs. The question has been how to integrate language and culture study into an already very full bachelor-level curriculum, or how and at what point and in what format one should send students abroad. Should language study be required of engineers, and if so, how much? Given the lack of flexibility in the curriculum and the daunting challenge of learning another language, should we perhaps just send our students to countries like England, Ireland, India, or Australia where the experience will be comfortably in the English language? If study abroad is valued, is it sufficient to organize a summer program or a between-semester experience? Is a professional internship of as much value as study abroad, and, if so, how should internships be defined and organized and what is an appropriate length of time? Such are the questions being debated and guiding faculty to take one step or another to prepare meaningful international experiences for their undergraduate engineering students. And these are the issues which have ultimately led to the creation of viable and

creative programs now accepted by many as valid and replicable models.

But what about internationalization at the graduate level? If the profession has deemed the arguments for international engineering education to be compelling, there is no rationale for restricting this phenomenon to the bachelors level. For if it is true that research, development, innovation, and manufacturing are already organized multilocationally across the globe, depending on wherever the best talent and resources are to be found, then the internationalization of engineering education at the graduate level will be at least as important as at the undergraduate level, and perhaps even more so. One could argue that the engineering undergrad has a greater chance of finding work with a strictly local focus than the masters or doctoral-level engineer. The grad-level degrees will be far more likely to lead to research and development positions, which, in today's world, are understood to take place in the global arena.

The National Science Foundation has spoken clearly on this matter, especially through its Office of International Science and Engineering (OISE). Acting Director Kathleen Sullivan stresses that we must "develop a new cadre of globally engaged scientists and engineers" by enabling our students to "build strong, long-lasting international research collaborations." The NSF Program in International Research and Education (PIRE), now in its second funding cycle, clearly defines the importance of this matter for NSF in its program announcement:

"Scientific and engineering discovery is a worldwide phenomenon. Increasingly, centers of research excellence are emerging across the globe and new ideas and research are resulting from the intellectual interactions of people with diverse backgrounds. Consequently, U.S. scientists and engineers and their institutions must be globally engaged and able to operate effectively in teams comprised of partners from different nations and cultural backgrounds. International partnerships are, and will be, increasingly indispensable in addressing many critical science and engineering problems."[2]

The University of Rhode Island has taken the message to heart that the internationalization of engineering education must be viewed as a comprehensive phenomenon, with implications for the curriculum from day one of the freshman year through the post-doctoral level. URI takes pride in the fact that 20% of its undergraduate engineering students complete a Bachelor of Arts degree in German, French, Spanish or Chinese along with their BS engineering degree. Its distinctive International Engineering Program (IEP) is characterized not only by the two degrees, but also by the fact that each IEP student spends the fourth year of the five-year curriculum abroad, completing a semester of study at a partner university and a six-month internship with affiliated global companies. Over 250 undergraduates have completed the undergraduate IEP curriculum, which is now well institutionalized in the culture of the University of Rhode Island. The program has been strongly endorsed by the marketplace, as its students have all found good positions. It has likewise been widely praised, recognized, and supported by governmental and higher education leadership organizations.[3]

The more recent challenge for the IEP has been to find ways to integrate cross-cultural education into the masters and doctoral levels. As a first, but hardly insignificant step, IEP faculty have expanded the program to the graduate level through implementation of a Dual Degree Masters Program with the Technical University of Braunschweig in Germany, leading simultaneously to the MS from the University of Rhode Island and the *Diplom*[4] from the Technical University of Braunschweig. Building on the Dual Degree Masters Program, URI faculty are now also creating an International Dual Doctoral Program in partnership with Braunschweig and with support of the National Science Foundation. Given the complexity of these developments, the relative novelty of such undertakings, and the paucity of information on the opportunities, methodologies, and pitfalls when negotiating such programs, the remaining pages of this paper will be devoted to an explanation of these graduate-level dual degree agreements between URI and Braunschweig and a discussion of the challenges and issues associated with them.

The starting point for any such program is, of course, basic student and faculty exchange with an appropriate partner university abroad. URI's International Engineering Program has developed collaborations for this purpose with universities in France, Germany, Mexico, Quebec, Spain, and now also with China. The initial goal of the agreements with these schools abroad has been the straight-forward exchange of undergraduate students on a one-to-one basis for a one or two-semester experience. In this format, students are selected annually by the home institution, any tuition and fees are paid at the home university, and the students are exchanged, each

taking the "paid" place of the other. Students pay their own transportation costs as well as room and board at the host institution, unless able to secure scholarship assistance from sources such as the German Academic Exchange Service. Both universities provide organizational support and assistance for the students' transitions, with faculty and/or staff members assigned for that purpose on each side. URI students participating in this basic exchange enroll in language and culture courses as well as engineering courses appropriate to their majors, for which the credits are fully transferable to URI upon successful completion. Linguistically, the IEP undergraduates are prepared by taking a minimum of six semesters of German, French, Spanish or Chinese before going abroad. URI's German and French partners provide an additional four-week intensive language course for incoming URI students immediately before the start of the regular fall semester. Braunschweig also gives the URI engineering undergrad the option of an optional project experience in one of the many research institutes, thus gaining hands-on experience and closer exposure to the heart of German engineering education at a technical university. In the case of the Chinese IEP, we expect the students to spend the first semester abroad doing exclusively intensive language work, in preparation for their professional internship.

Numbers of Students Exchanged with Braunschweig:

	URI to TU-BS	TU-BS to URI
1995-1996	5	5
1996-1997	9	9
1997-1998	13	12
1998-1999	14	12
1999-2000	15	16
2000-2001	13	13
2001-2002	20	25
2002-2003	15	15
2003-2004	21	16
2004-2005	21	16
2005-2006	12	14
2006-2007	24	14
2007 -2008	22	13
2008-2009	25	25
Total:	229	204
Total # of Students Exchanged: 433		

URI's most active exchange partner is the Technical University of Braunschweig in Germany, with whom over 400 students have been exchanged for a full semester or full year experience. Though the program was established with undergraduates in mind, it became clear after just a few years that the Braunschweig students tended to participate in the exchange toward the latter part of their home degree program (leading to the *Diplom*), which ends with the equivalency of an American masters degree. It thus did not take long for these students and their instructors to realize that they were ready for advanced undergraduate engineering courses at a minimum and, in most cases, for graduate-level courses in Rhode Island. It also did not take long for one of these highly motivated and excellent students to enter this author's office and ask why he could not transfer some of his Braunschweig credits to URI, combine them with the URI graduate credits, write a thesis (*Diplomarbeit*) and earn an MS from URI.

Though this very reasonable request did lead to the creation of a Dual Degree Masters Program, through which students can simultaneously complete all requirements for both the German *Diplom* and the American MS degree, several hurdles had to be crossed to make this a reality. The first step was to convince the URI faculty and graduate school that the Braunschweig students were indeed graduate students, even though they technically did not have a bachelors degree. Because the classic German *Diplom-Ingenieur* never passes through the bachelors level, but completes his or her study with the *Diplom* as the first degree, it was necessary to determine when or if such a student has completed the equivalent of the BS, thereby qualifying himself/herself as a candidate for an American MS program. This is now done routinely on a case-by-case basis, which became a comfortable procedure after a delegation of URI engineering faculty visited Braunschweig and sat down with their subject-area peers to compare and thus understand how the curriculum of a German technical university is structured. This visit, which was matched by a group visit of Braunschweig faculty to URI, convinced all that the German *Diplom* equates with the American MS in the engineering disciplines and that a German *Diplom* candidate in his/her final year with a good academic record is fully qualified to apply for admission to a U.S. masters program in engineering.

Other systemic issues leading to potential mis-understanding at the negotiation stages were our differing definitions of credits and grades. European Union universities have now settled on a common

credit system known as the ECTS, or European Credit Transfer System. Though the word may be the same, it took some time to realize that ECTS credits are not necessarily our credits. Experience has taught us that ECTS credits generally relate to American credits at a ratio of 2:1, that is, a typical three-credit URI engineering course will equate, in most but not all cases, to six ECTS credits, and vice versa. In terms of grades, Germany uses a numerical scale of 1-5, 1 being the best. But, contrary to straight forward logic, a simple translation from a numerical to an alphabetical scale is insufficient, primarily due to the fact that the German grading system is more rigorous, especially at the top end. URI noted rapidly that the early applicants to the Dual Degree Masters/Diplom Program were often submitting academic records with smatterings of 3's, leading some of our faculty to conclude that Braunschweig was recommending "C" or possibly even weak students. Once on site, however, these same "C" students were generally performing at a very high level, thus confirming that the grading culture in Braunschweig was different, and that our partners were being very cautious to select only students who had the background and ability to succeed in this transatlantic endeavor.

Since reaching agreement and ironing out the fundamental issues, almost 50 Braunschweig students have completed the MS at URI. Each has gone through the normal admissions procedure, and each has spent at least a full year at URI, completing graduate-level courses and a thesis. While URI accepts six of the necessary 24 course credits from Braunschweig as transfer credits, Braunschweig in turn allows its students to transfer the URI credits back home, and both institutions accept and recognize the thesis, which is written in English. In most cases, therefore, the result of the year in Rhode Island for Braunschweig students is the simultaneous completion of both degrees.

The Dual Degree Masters Program was intended to create a two-way flow of graduate students by making it equally attractive for URI students to complete the German *Diplom* with the URI MS degree. The plan calls for URI students to complete their required MS coursework at URI in year one and then to spend the second year in Braunschweig, doing an additional semester of coursework, a research project (*Studienarbeit*) and the thesis (*Diplom*), the latter being coordinated by faculty on both sides. As attractive as this option sounds, however, very basic and fundamental structural hurdles have made it extremely difficult to attract American graduate students to this program, the most significant being financial. To date, just five URI students have become Braunschweig *Diplom-Ingenieure*, with five more currently in process.

While it is relatively easy to send undergraduates to non-degree experiences abroad, arranging actual graduate work, related research experiences and degree candidacy at a partner school is a far more complex matter. *Diplom* candidacy for Rhode Islanders in Braunschweig requires very strong German language skills, i.e., the ability to take graduate level courses in German, prior successful completion of the Rhode Island coursework at the masters level, conducting research and writing a thesis acceptable to the faculty of both institutions, and the ability to pay the costs. URI has found this program to be dependent first and foremost upon genuine and active collaboration among faculty of the two partner institutions. In the absence of such relationships, which are indeed not the norm, U.S. graduate faculty will not support and encourage graduate students wanting to leave the country for a partner school abroad after one year. The precious resources available to faculty to fund graduate students at American institutions are used to support their own projects and not unrelated work in another laboratory 3000 miles away. Such a program is of interest to American faculty, therefore, only if the graduate student can go abroad and continue project work begun at home in the laboratory of a collaborator abroad, thus making the departure a "win" for all persons involved. In this way, faculty can benefit from each other's expertise and complementary facilities, as can the student. The time in Germany under such circumstances can become a rich international experience with the potential for joint publications, and laying the groundwork for future funding and collaboration as well as support for the next graduate students.

With a grant from the German Ministry of Economics and Technology[5] supporting the development of this unique Dual Degree Program in conjunction with the Technische Universität Braunschweig, URI has been able to move delegations of faculty between the two institutions and thus lay the groundwork for research and teaching collaboration and the ambitious goals laid out in this program. It has likewise been able to bridge the critical funding gap for students by providing scholarship funds, enabling the two schools to gain important first-step experience in this critical venture. As a result a URI mechanical engineering student was able to complete the program in Germany

in 2006, writing a thesis in cooperation with faculty at both schools and the BMW Corporation. A second student completed her program with a focus on finite element analysis and a thesis at one of Braunschweig's aeronautics institutes, while the third and fourth theses were written at the Institute for Microtechnology and dealt with fuel cell technology at the microscale level. The fifth student completed his program in conjunction with the Braunschweig Institute for Automotive Technology

URI has three more students in Braunschweig for the second year of their program during the 2007-2008 academic year, all completing a research project, an additional semester of coursework and a thesis. Two additional students are doing their first year at URI and planning together with advisors from both URI and Braunschweig to go abroad for additional coursework and the thesis next year. We also are able to support the first efforts of faculty from both schools to offer short-term specialized courses at their respective partner institutions. And faculty from the two institutions are now working together as transnational teams in addressing common scientific issues, learning to take advantage of the strengths and wisdom of partners approaching problems in different cultural settings and from different cultural perspectives.

The effort to build and strengthen the Dual Degree Masters Program was given a considerable boost as the result of a successful bid for $2.4 million dollars of support from the National Science Foundation, through its Program in International Research and Education (PIRE).[6] The PIRE project, now in its third year, has promised development of a comprehensive model (undergraduate through Ph.D.) for the international exchange of science and engineering students and faculty, based on a rigorous research program in collaboration with the Technical University of Braunschweig. The research focuses on microfluidics and lab-on-chip technology and their applications for both the detection of disease biomarkers and our understanding of soil conditions triggering landslide tsunamis. In awarding this grant, NSF has made it abundantly clear to URI faculty that this project is equally weighted in terms of science and education. In short, NSF is expecting results in our scientific collaboration, but also in terms of an improved infrastructure for the effective exchange of students at the graduate levels.

A specific example may be presented in the case of Andrew Marchesseault, a graduate of the URI undergraduate International Engineering Program with degrees in Mechanical Engineering and German, who opted to join the microfluidics project as a candidate for the Dual Degree Masters Program with Braunschweig. Andrew spent the 2005-2006 academic year and two summers in Rhode Island, taking grad-level courses and working with his advisor as a research assistant on behalf of the microfluidics project. He spent the second year of the program in Braunschweig, where he took additional courses and continued his research at that school's Institute for Microtechnology, under the tutelage of collaborating professors from URI and Braunschweig. Because this work is in the interest of both faculty, who have each visited each other's laboratories, and the overall NSF project, his stay in Germany could be partially supported by NSF. Andrew completed and successfully defended his thesis in the fall of 2007, thereby earning both the MS and *Diplom*. His hard work led to an offer of a salaried assistantship in the Braunschweig Institute for Microtechnology, where he will stay for his doctorate.

Another avenue of potential support for graduate students in such programs is private industry, which will ultimately be the benefactors of students bringing such high-level international qualifications to the workplace. As a result, one of our dual degree students in Braunschweig this year is being supported by one of Germany's major suppliers to the automotive industry, ZF Friedrichshafen AG. ZF interviewed the student during his first year in the masters program at URI and was sufficiently impressed with him and his unusual graduate undertaking to offer him early entry into their Management Trainee Program upon completion of the two degrees and to support his final preparatory year in Germany in anticipation of that. ZF also helped this process by offering him the opportunity to coordinate his thesis work with the company and Braunschweig's Institute for Automotive Technology, with whom he has just completed his thesis. Clearly it is of great advantage for this student to enter the Management Trainee Program of this German-based global corporation with the American bachelors and masters degrees, and as a German *Diplom-Ingenieur*.

Apart from the financial hurdle and the question of making such an experience beneficial to faculty at both institutions, the issue of linguistic preparation looms as a fundamental challenge. Although work in a high-level laboratory at a German university can often be conducted in English, lectures, exams, and daily life in Germany require solid preparation in German. The URI/Braunschweig Dual Degree Masters Program, therefore, accepts only students who are proficient in

German or who have clear plans to become so. In practice this has meant graduates of our undergraduate International Engineering Program, and, in three cases, students graduating from other American universities who had learned German on their own initiative and were eager to have an in-depth study experience in Germany. URI is able to support such students with its regular course offerings in German during the academic year and also through its annual summer immersion program in German, the German Summer School of the Atlantic.[7] Other options for students not fully linguistically prepared would be immersion programs in Germany, such as at one of the many Goethe Institutes, or additional coursework on site at the Technical University of Braunschweig. Language has not been an issue for the German students coming to Rhode Island, mainly because of pre-screening, but also because of the German university-preparatory school system, which requires a minimum of nine years of English.

Given the experience gained through the evolution and successes of the Dual Degree Masters Program, URI and Braunschweig have decided to develop a parallel program at the doctoral level. The Dual Degree Doctoral Program is based upon a clear understanding of the differences between the German doctoral degree (*Dr.-Ing*. or *Doktor der Ingenieurwissenschaften*) and the American Ph.D. and the conviction that today's doctoral candidates can benefit from significant exposure to both systems. While the American Ph.D. is driven by a combination of prescribed and guided coursework and research (at URI, 24 credits of courses beyond the masters), the German *Dr.-Ing*. is comprised of extensive independent research, with no further courses required beyond completion of the *Diplom*. The challenge in creating a Dual Doctorate, therefore, is the merging of these two systems, so that all requirements of both systems are met, i.e., candidates must register sufficient course credits to fulfill the American curriculum and, at the same time, demonstrate sufficient depth in research to meet the German standards. Upon completion of this program, students receive both the Ph.D. degree from the University of Rhode Island and the *Dr.-Ing*. from the Technische Universität Braunschweig.

To be eligible to participate in this program, URI Ph.D. candidates must first hold the masters degree; Braunschweig doctoral candidates must hold the *Diplom,* Masters*,* or an equivalent degree. In all cases, doctoral candidates are first accepted by the home institution, where initial work is completed before formal faculty approval is given for participation in the Dual Doctorate. When deemed ready, students are expected to complete at least one and one-half years of full-time study and/or research at the partner institution and meet all requirements and regulations of the respective doctoral programs. Candidates applying from universities other than URI or the TU Braunschweig must choose one of the latter as their home university and fulfill its admission requirements before entering the program.

Because the work done abroad will be accepted simultaneously by the home institution, participation in this program depends upon the availability and willingness of faculty in the respective departments of both institutions to support, co-ordinate, evaluate, and approve the doctoral studies and research of the candidate in concert with each other and the requirements of each university.
Dual Degree Doctoral candidates will complete a single doctoral dissertation to the satisfaction of faculty at both institutions, with a major advisor and a doctoral committee at each institution and with representation of the two major advisors on both committees. The thesis defense will take place at the university where the major amount of the research is completed, with both committees participating in the defense by means of videoconference technology.

Faculty at both schools have agreed that students in this dual doctoral program may carry out their course of study or research in the English language. Since no formal class work is required in Germany, URI Ph.D. candidates are not expected to be fluent in German. They must, however, complete at least one year of German, or equivalent, at URI and commit to further language coursework in Braunschweig in order to reach the B1 level of the Common European Framework of Reference for Languages (CEF) in order to be admitted to the final doctoral examination. For Braunschweig candidates the same level of proficiency in English is required as is expected for participants in the Masters/*Diplom* Dual Degree Program.

German candidates coming from Braunschweig to Rhode Island will be able to transfer half of the required 24 credits of Rhode Island Ph.D.-level coursework in the form of independent research projects completed in Braunschweig, each to be evaluated on a case-by-case basis. They will then adapt to the American system by completing the other required 12 credits of courses at URI. URI candidates, on the other hand, will complete the first 12 credits of coursework in Rhode Island, followed by an additional

12 credits in Braunschweig in the form of directed or guided research, all prior to and in addition to the research expected for the dissertation. Both universities will, of course, design an individual co-operation and learning agreement for every doctoral candidate participating in the program.

As is the case with the Dual Degree Masters Program, financing students in the Dual Degree Doctoral Program is both necessary and complex. Some students will be supported by faculty research grants, such as the NSF PIRE project described above. Given the increasing level of faculty collaboration between Braunschweig and Rhode Island, and the growing numbers of multinational funding opportunities through agencies such as NSF, DFG (German Research Foundation), DAAD (German Academic Exchange Service) and so forth, we expect this to be increasingly the case. It is necessary to stress the fact once again, however, that the international exchange of graduate students will only flourish when it is in the direct interest of the faculty who support them.

Braunschweig and Rhode Island have agreed to endorse and support this program by including it as one additional appendix or component of the comprehensive exchange agreement between the two schools. This means that the existing financial mechanisms initially put into place for the basic exchange will apply at the graduate level as well. Students will be obliged to pay any relevant tuition and fees at the home institution and then to be exchanged "one-to-one." All of the Rhode Islanders exchanging with Braunschweig are placed financially into a single pool, whether undergrad or grad, with sufficient flexibility to allow outgoing undergrads, for example, to create spots for incoming graduate students. Any "extra" students coming to Rhode Island with the intention of financing themselves independently are granted a special tuition status considerably less than the high outstate tuition rate. Though still not inexpensive, these arrangements allow for Americans to study in Braunschweig at approximately the same cost of staying at home. Braunschweig students have it considerably easier, since the bulk of their tuition is paid by the German taxpayer. And those who come independently can study at URI for a cost considerably less than that of the typical outstate student.

In an effort to touch upon some of the subtleties and complexities associated with the actual implementation of dual degree programs, it is hoped that this paper will not discourage, but rather encourage others to follow in similar paths. The challenges are considerable, but the rewards are great in knowing that young people are actually meeting these challenges and deriving benefit from doing so. In closing, this author would like to pay tribute to the courageous students who have actually opted to make their way through the challenges of two countries, two systems, two faculties, and two bureaucracies. Some of the details can be most daunting and frustrating for the student determined to complete such a program. But they have persisted and benefited by graduating as highly competent young engineers, bilingual, cross-culturally sophisticated, mobile and flexible, with the recognition and respect of the world's best educational systems. Surely they will represent us well in the future and make significant contributions technically, entrepreneurially and personally.

References

[1] For information on the Annual Colloquium on International Engineering Education, see: http://www.uri.edu/iep/colloquia/index.html

[2] For information on the National Science Foundation Office of International Science and Engineering and the Program in International Research and Education, see: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12819&org=OISE&sel_org=OISE&from=fund

[3] For more information on the URI International Engineering Program at the undergraduate level, see: Grandin, John, "Preparing Engineers for the Global Workplace; the University of Rhode Island," Conference Proceedings, 2006 ASEE Annual Conference and Exposition.

[4] Historically, the first degree granted by technical universities in Germany is the *Diplom*. However, all universities in the European Union are now transitioning to the Bachelor and Masters degrees. This will mean that the Rhode Island-Braunschweig exchange will soon be known as a Dual Masters Program.

[5] The project was kindly supported by the Transatlantic Program of the Federal Republic of Germany with funds of the European Recovery Program of the Federal Ministry of Economics and Technology (BMWi).

[6] See: http://www.uri.edu/iep/info/pire.htm

[7] For information on the German Summer School of the Atlantic, see: http://www.uri.edu/iep/dssa