



NATIONAL ENDOWMENT FOR THE HUMANITIES

DIVISION OF EDUCATION PROGRAMS

Narrative Section of a Successful Application

The attached document contains the grant narrative and selected portions of a previously-funded grant application. It is not intended to serve as a model, but to give you a sense of how a successful application may be crafted. Every successful application is different, and each applicant is urged to prepare a proposal that reflects its unique project and aspirations. Prospective applicants should consult the current guidelines, which reflect the most recent information and instructions, at <https://www.neh.gov/grants/education/humanities-connections>

Applicants are also strongly encouraged to consult with the NEH Division of Education Programs staff well before a grant deadline.

Note: The attachment only contains the grant narrative and selected portions, not the entire funded application. In addition, certain portions may have been redacted to protect the privacy interests of an individual and/or to protect confidential commercial and financial information and/or to protect copyrighted materials.

Project Title: *Building Lasting Bridges: German and Engineering*

Institution: Auburn University

Project Director: Traci O'Brien, Dean Hendrix, Robert Karcher

Grant Program: Humanities Connections Implementation Grants

Narrative

Intellectual Rationale: Bridge-building is central to our mission at Auburn University (AU), a land-grant institution in the deep south. We foster cross-cultural understanding in the German program via the development of linguistic, literary, and intercultural competencies in our students. In the College of Engineering (CoE), we train our students to build literal bridges, that is, structural pathways that connect locations previously divided. AU's recent approval of a dual degree program in German and Engineering is an important first step in building connections between the humanities and STEM fields. During the two years it took the initial project directors to develop and secure this program's approval, they developed ideas for other modes of collaboration to enhance the interdisciplinary nature of the dual degree program. This collaboration became the foundation for a plan to transform a CoE-wide pre-engineering course, ENGR 1110, while also building upon CoE's previous efforts to recruit and retain students from under-represented groups.

With the help of an NEH Implementation Grant, German and Engineering faculty at AU will develop **five strategic courses** that will expand the impact of its mission of cultural bridge-building. Ultimately, our goal is provide students, who are proficient in technical subjects, with insight into a different cultural background not only as a path to a brighter career but also as a way of learning to transcend other types of cultural boundaries throughout their lives. The world is changing ever more rapidly and students need to learn how to communicate effectively across all kinds of differences in order to participate in our increasingly interconnected global society.

We will use this NEH Implementation Grant to fund: 1) course releases to enable German and Engineering faculty to develop four interdisciplinary German courses and to transform ENGR 1110, a course taken by hundreds of pre-engineering students each year, into a cross-culturally focused experience for pilot in fall 2021; 2) a site visit during fall 2021 to another university with

a dual degree program in German and Engineering; and 3) conference attendance twice at the International Engineering Education Colloquium to present our findings in fall 2021 and 2022.

As a public land-grant institution, AU has traditionally been more focused on the quality of its agriculture and engineering programs, rather than the humanities. For example, in 2010 the CoE reduced its core curriculum by six credit hours. This came at the cost of its students' humanities and social science education. With the recent approval of the dual degree program in German and Engineering, however, AU has now recommitted to the idea of the liberally educated engineer. The dual degree program enables students to complete a B.A. in German and a B.S. in Engineering in five years, and includes a year abroad. Creating this innovative program inspired the project directors to work to integrate cultural learning into the curriculum for all engineering students.

With the support of the NEH Implementation Grant, German and Engineering faculty will develop five courses that integrate humanities and engineering coursework. Four of these courses will help students enrolled in the dual degree program reach its rigorous humanistic and technical learning goals. Because we wanted to extend the impact of intercultural learning to others who have no declared interest in language learning, German and Engineering faculty will also revise the required pre-engineering course, ENGR 1110, to contextualize its team-building activities in an international context. Currently missing from this course is the cross-cultural component necessary for teamwork in today's increasingly multicultural environment. The revised version will be piloted in the Department of Computer Science and Software Engineering (CSSE) and will reach approximately 400 students in the pilot year. This pilot course can then become the model for all CoE departments, reaching approximately 1,100 students per year once implemented.

Planning Process: Rationale for the Dual Degree Program at AU: The Department of Foreign Languages and Literatures (FLL) has an established relationship with CoE. More than one third of

German minors are engineering majors. Recognizing the need for a formal program that included both fields, the directors began the two-year planning process. The intended audience for the dual degree are students who plan to study engineering but who are also interested in a career with an international focus after graduation. This program may attract humanities students to the study of engineering, but we expect that most of the interest will come from engineering students.

Anecdotal evidence had shown that AU's engineering students are attracted to German study because of the opportunity to develop other skills than available in their math and science courses. With the presence in Alabama of first- and second-tier German companies for the automotive and aviation industries, students are aware that a knowledge of German can increase their career prospects. However, while there are many engineers with minors in German, data showed that students were rarely choosing to pursue both majors because engineering curricula are so dense. The difference between a minor and a major is not just a significant number of courses but is also quantified as fluency. While minors typically end with conversation courses, majors engage in the serious study of literature and culture. To make the dual degree more attractive to students, we created a streamlined, five-year dual major program that includes an abroad year in Germany.

The program's abroad year differs vastly from popular trends in terms of its length and focus on language. Students spend the spring/summer semester at a German university, taking German and engineering coursework, and then the fall semester doing a paid internship at a German company. Students return for their final year at AU with advanced-level skills in both fields. With their ability to speak, analyze, problem-solve, and act in cross-cultural situations, students will have learned how to represent their own culture(s) and appreciate the diversity of world cultures. AU dual degree graduates, understanding that engineering is accomplished differently in different parts of the world, will build better bridges, both literally and figuratively.

During the planning process for the dual degree (approved May 2019), the co-directors worked separately with their departments and together very closely with six engineering departments and FLL to develop model curricula. These model curricula assume that students begin at AU with the equivalent of two semesters of college German. However, we do not wish to exclude interested students who have never taken German. Students with AP credits are likely to be able to add first-year German to their curriculum. In conjunction with our study abroad program in Vienna, we can offer those without AP credits, an immersion experience abroad before their first semester at AU. Another solution is an inexpensive eight-week intensive language course preceding the beginning of students' abroad semester. The missed year of German can be made up in this course.

Just prior to the planning stage, CoE had begun to sign exchange agreements with four German universities as part of CoE's strategic internationalization plan. As a result, chairs of engineering departments were interested in meeting with the co-directors to discuss the model curricula. They affirmed the additive value of a formal dual degree option. The co-directors garnered institutional support by meeting with their respective deans/associate deans, as well as with AU's Assistant Provost, and showing the wonderful career opportunities students had after graduation by double majoring in German/Engineering. As one graduate wrote: "Studying a language greatly enhanced my ability to organize my thoughts, to reason, to approach problems with no obvious answer, and to find alternate avenues to make myself understood, all of which absolutely apply directly to engineering. I was aware at the time of the benefits of my German studies, but I have learned that their influence is much more far-reaching and much deeper than I previously believed."

For engineers, the formal addition of a B.A. in German provides exposure to the humanities and restores the core learning eliminated from CoE's requirements. Throughout the 39 credit hours in German required for the major, students develop proficiency via work with authentic texts and

cultural contexts. As students work their way from intermediate-level utterances to higher-level argumentation and speculation, they develop agility of mind and critical thinking skills around a humanistic curriculum. A technical education will teach students *how* we do things whereas a humanities education will teach them *why* we do things. Technical prowess combined with strong communication and critical-thinking skills make for better engineers and better world citizens.

The academic year 2019-2020 was a pilot year to promote the dual degree program and to gather data. Previously, one of the co-directors, Dr. Karcher, had transformed Engineering Student Services with effective programs to recruit and retain students from historically under-represented groups. His expertise guided recruitment efforts for the dual degree program. As part of this pilot, the co-directors visited five Alabama high schools where they spoke to large assemblies and visited German and math classes. We were pleased to note that students from very diverse populations showed substantial interest and enthusiasm. We are committed to recruiting and retaining students from diverse backgrounds. COVID19 measures have meant reconceiving 2020 high school visits but the goal remains the same: to reach students early, particularly those in under-represented groups, to emphasize the importance of connecting STEM and humanities skill sets. Beginning German study in high school will increase their chances of completing the dual degree successfully.

Between fall 2019 and fall 2020, AU's dual degree program saw significant interest from incoming first-year students. Currently, there are six students enrolled in the program. This number is significant when one considers that, over the past ten years, fewer than ten had chosen to double major in German and Engineering. Although we have not yet done a full-scale marketing campaign, more than twenty-five high school students have reached out to the co-directors with strong interest in the program. We anticipated student interest to double from fall 2019 to fall 2020 (which it did) and expect the interest to increase significantly as we increase marketing efforts. However, we

believe the impact of the dual degree will also be seen in the numbers of minors in the German program. Ten students who decided they will likely not pursue a dual degree decided to minor in German instead so that they will be able to prepare for an exchange semester in Germany.

The pilot year also saw the addition of Dean Hendrix, Associate Chair of CSSE, as the third project director. Our collaborative efforts to increase linguistic and intercultural competency on the part of engineering students will transcend a focus on the dual degree itself. Data collected via short surveys from engineering students, both with and without an explicit interest in German, provided information that validated our plan for the five courses outlined in the next section. Because all three directors have a commitment to international bridge building, from the start discussions focused on ways of capitalizing on student interest to realize AU's internationalization mission. To do this, we realized that we needed to reach engineering students early on and ENGR 1110 seemed the perfect choice because it is required of all pre-engineers. Discussions amongst the three directors led to the exciting and innovative idea to add an intercultural component to this course. We then collected data from 305 ENGR 1110 students to ascertain their interest in pairing engineering with an FL. Although the majority (91%) responded that they were not currently enrolled in an FL class, 93% thought learning another language would be beneficial to their careers. Significantly, 22% stated they would be interested in a double major with a language and 61% said they would consider an FL minor. This indicates strong student interest in the kind of connections we would like funding to build and confirms our selection of ENGR 1110 as a potential point of entry for FL learning and an international experience for those not pursuing FL study.

Content and design: All aspects of this project are interdisciplinary and expand the role of the humanities in AU's undergraduate curriculum. In order to strengthen the connection between German and Engineering, the NEH Implementation Grant will fund the development of **five new**

courses. As stated above, four of these courses will be essential components of the dual degree curricula and also provide the basis for transforming the fifth course, ENGR 1110, to utilize methods that achieve interactive, experiential, and intercultural learning for hundreds of students in engineering each year. ENGR 1110 will now foreground intercultural competence (ICC) and teach team-building and project development skills in an international context.

Project Stages: In summer 2021, the working group comprised of faculty from German and Engineering will develop two courses for pilot in fall 2021: 1) a one-credit hour conversation course in technical German for second-year students (FLGR 3200), and 2) ENGR 1110. With our Languages across the Curriculum (LAC) format, we can attach a one-credit course to any parent course in CoE and a likely parent will be one that students of all engineering majors must take, such as ENGR 1110. In addition, since the dual degree curricula assume students are beginning at AU with second-year German, it is likely students will take FLGR 3200 and ENGR 1110 at the same time. Thus, we will work on these two courses together. Nonetheless, since FLGR 3200 also works as a stand-alone course, it will be greatly beneficial to all students regardless of when they take ENGR 1110. We will pilot these two courses in fall 2021. In spring 2022, the working group will develop and submit for approval a course on ICC (FLGR 3000). In summer 2022, we will develop a third-year course in German for Scientific Majors (FLGR 3140) and completely revise a mandatory German literature course (FLGR 3100). In fall 2022, both FLGR 3000 and FLGR 3140 will be piloted. FLGR 3100 will be piloted in spring 2023.

Courses for the Dual Degree: For each of the following four courses, engineering students with a major or minor in German were polled to determine level of interest.

FLGR 3200 is the first of the courses we will develop with NEH funding. Surveys showed that 78% of students polled expressed strong interest and enthusiasm for a second-year conversation

course in technical German. In this one-credit course, the only one of the proposed courses that is not three credit hours, engineering students will begin learning technical and scientific vocabulary early in their German major. The course will also expose non-engineering majors to technical and scientific content. *Impuls Deutsch*, a popular new German textbook by Tracksdorf et al. will provide guidance for themes and topics [1]. At the second year, the content will be comprehensible to non-engineers and we can thus have a diverse group of students while still providing content useful for all. A one-credit-hour course also gives us the flexibility to run it with a small number of students. In addition, this course can have rotating content so that students will be allowed take it more than once. We plan to offer this course 1-2 times per year.

The second course (FLGR 3000) will support the development of ICC among our dual degree students, and 83% of students polled have a strong interest in such a course. This is important because the plethora of English-speaking programs means that U.S. students can go to German-speaking Europe without developing linguistically or interculturally. Research shows that ICC does not happen without intentional, reflective work, even with time spent in a foreign space [2,3]. Scholars, such as Milton Bennett [4], David Livermore [5], and Soon Ang, et al. [6], will provide a practical and theoretical foundation for students. For the final project, students will reflect on their experiences in their own and in the target culture, with reference to specific themes and activities at the university and at the workplace. Students' cultural fluency will thus increase along with their linguistic fluency while abroad. These skills are transferable to other contexts of difference and promote flexibility, tolerance, and understanding. If funded, FLGR 3000 will be offered every fall semester and will be very useful to all German minors and majors.

The third course we will develop with NEH funding is FLGR 3140, German for Scientific Majors. This advanced course will continue to help students deepen their knowledge of more

industry-specific vocabulary, norms, and practices. Given the high percentage of German minors who major in Engineering or other STEM fields, we anticipate this course will find wide resonance. In fact, 78% of students polled indicated strong interest. This course will be divided into modules with specific themes based on the needs and interests of the different student majors in the course. This course will be developed in collaboration with CoE faculty in order to develop the technical focus that will support STEM students in achieving domain-specific proficiency and will be offered every 2-4 semesters. This course will be open to German majors and minors.

The fourth course that we will develop with NEH funding is FLGR 3100, a required German literature course that will connect students' more technical or scientific background to a humanist one. It will be a combination of literary texts with a scientific focus, and scientific texts with a humanist focus, and require students to take a stance within a context of an ethical problem. For example, reading Büchner's *Woyzeck* [7], a drama about a poor man who was abused and exploited by military and medical professionals, alongside a study of Nazi pseudo-scientific experimentation on human beings [8] will provide a paradigm for choosing readings that integrate STEM thinking with humanistic dilemmas. This concept will work well with rotating content (e.g., chemistry, sustainability, alcoholism) and funding will allow us to develop it within a context of different genres and time periods. Already a substantial minority of students polled showed interest in such a course. It will be offered every 2-3 semesters and open to German majors and minors.

ENGR 1110–Building ICC with Pre-Engineers: Cognizant of the importance of being able to work and thrive cross-culturally, the German and Engineering faculty seek to expand their innovative partnership with this project's fifth course. NEH funding will support the transformation of engineering's required project-development course for first-year students (ENGR 1110). This course's overarching purpose as it exists now is to train students to bring an engineering idea from

concept to delivery. This process involves learning how to work in teams successfully. Instead of pitching a project to a U.S. company, however, in the revised version of this course, students will work in teams to research and develop an engineering approach to a specific problem and present their solution to a German company in a culturally appropriate manner.

While U.S. and German culture may look similar, important differences must be recognized in order to make a successful pitch. However, CoE's students do not often receive explicit instruction in ICC. For example, in German "how are you?" ("wie geht es Ihnen?") is an actual question, reserved for friends or good acquaintances, not simply part of a greeting. Posing this question to a potential business associate would seem intrusive. Moreover, this seemingly small difference reveals the divergent ways in which Americans and Germans view friends, acquaintances, and public interactions. Being unaware of such cultural differences can negatively impact a business enterprise, as Walmart discovered when they tried to gain a foothold in Germany [9,10]. A spectacular failure resulted because Walmart executives tried to simply transplant their business model into another cultural context without any changes. Through readings, lectures, and interactive scaffolding, students will learn how cultural norms and values are produced as well as how to identify and overcome differences in order to build bridges of cooperative work. Edward T. Hall [11] and Trompenaars and Hampden-Turner [12] provide a theoretical basis for this work.

Research shows that the acquisition of ICC is more effective when contextualized within a larger imperative of problem-solving [13]. The presentation of a team-project in an international context will provide both the impetus and the standard of measurement to ensure the acquisition of intercultural knowledge. With funding, the German and CSSE faculty will transform ENGR 1110 for piloting in fall 2021 and spring 2022. CSSE offers multiple sections of ENGR 1110, typically totaling 400 students. The pilot project will focus on CSSE, however, if the pilot is funded,

we will move on the second step in our joint plan, namely to integrate the international team-building project across the six engineering majors that offer the dual degree program (typically 1,100 students per year). Ultimately, we intend to integrate this approach with multiple cultural contexts into *all* sections of ENGR 1110 offered in the CoE (typically 1,600 students per year).

Collaborative Team: Project Co-Directors (Auburn University)

Dr. Traci O'Brien, Chair, Foreign Languages and Literatures, has been at Auburn University since 2006, Vienna Study Abroad Director (2006-2018), Undergraduate Director of German since 2015, and Department Chair since 2017. A trained Germanist and specialist in FL pedagogy, she will lead the re-design of the German courses for this project. With expertise in ICC, she will support students in their international experience and collaborate on the re-design of ENGR 1110. Since outreach to incoming students is vital, she will continue to travel with Dr. Karcher to diverse high schools throughout Alabama to promote AU's enhanced German and Engineering programs.

Dr. C. Robert Karcher, Engineering Global Programs, College of Engineering, was Director of Engineering Student Services for ten years before becoming Assistant Dean of Engineering Student Services (2008-2020). During this time, he headed Engineering Global Programs and worked closely with the recruitment and retention initiatives for under-represented students (e.g., scholarships, middle- and high-school engineering programs, a vastly expanded tutoring program). Instrumental in signing SEC-wide partnership agreements with German universities, he continues to be engaged in CoE's international programs. He will travel with Dr. O'Brien to Alabama high schools to recruit a diverse student body to AU's enhanced German and Engineering programs.

Dr. Dean Hendrix, Associate Chair, Computer Science and Software Engineering, has a background which includes the development of new degree programs and directing large multi-institutional and federally funded education research projects. Dr. Hendrix spearheads CSSE's

international initiatives, which include degree program partnerships in Taiwan and Germany, and exchange programs in Europe. Dr. Hendrix will work with German faculty to develop the CSSE pilot in ENGR 1110, oversee its implementation, and coordinate the offering of multiple revised sections for CSSE in fall 2021. He will spearhead its implementation across all sections in CoE.

Other members of the collaborative team

Dr. Anna Gramberg, Professor Emerita of German, Auburn University

Dr. Iulia Pittman, Associate Professor of German, Auburn University

Ms. Anja Werth, Senior Lecturer of German, Auburn University

Dr. Mark Yampolskiy, Associate Professor, Computer Science and Software Engineering

Dr. Bryan Hill, Assistant Dean, Student Recruitment and Diversity, Honors and International Programs, College of Engineering, University of Arkansas

Dr. Kathleen Condray, Associate Professor of German, University of Arkansas

The team is a mix of German faculty (three of whom have won teaching awards), engineering faculty, administrators, and experts in diverse student recruitment and retention. Two AU liaisons to the business community and the AlabamaGermany Partnership will be vital in discovering which kinds of technical knowledge in German are important in the workforce. The German and Engineering faculty will work intensively in two successive summers and throughout the academic years in between to develop the five courses described above. The team will be responsible for assessing learning outcomes in order to make adjustments as needed (more detailed role descriptions are provided in the work plan). The University of Arkansas team members, having recently started a similar dual degree program, will provide invaluable experience and feedback.

Institutional context and resources: AU is a land, sea, and space grant institution originally founded as a small liberal arts institution but has transformed into a large Research I University.

A thriving AU currently enrolls 23,367 undergraduate students, 1,071 professional students, and 3,231 graduate students and employs 1,426 faculty members. For first-year students, the average ACT score is 27.6 and the average high school GPA is 3.9. In the 2019-2020 academic year, AU awarded 7,442 degrees of which 5,551 were undergraduate degrees. Enrollment in AU humanities majors is as follows: Foreign Languages (144), English (163), Anthropology (31), History (174), and Philosophy (42). German enrollments are: German (11), German/International Trade (8), Dual Degree (6). The program's minors are: 51 in German, 3 in German linguistics. The German program consists of two associate professors, one assistant professor, one lecturer, and one part-time instructor (one professor does not teach). As their letters indicate, the Deans of CoE and the Liberal Arts, and the Office of the Provost, strongly support this collaborative project.

Impact and dissemination: With an NEH Implementation Grant, the curricular innovation involved in this project will impact students enrolled in the dual degree program, students minoring in German, as well as large numbers of engineering students in the revised ENGR 1110. As the data we have gathered shows, there is substantial interest among engineering students to pursue language and cultural learning. ENGR 1110 will engage engineering students in experiential, cross-cultural learning and thus expose them to the important connection between the human and the technical. This course will support CoE's mission to increase student diversity and tolerance within CoE itself. Further, we anticipate that the nature of intercultural learning will inspire some ENGR 1110 students to pursue language study and a semester at a German university through AU's exchange agreements. Data gathered from engineering students currently enrolled in German indicate strong interest in the integrative courses described above. In sum, many AU students will gain practical experience in intercultural problem-solving, the insights that the humanities can bring to STEM fields, and increased job opportunities upon graduation.

The dual degree program's enhanced curriculum and the incorporation of intercultural learning goals into ENGR 1110 will effectively integrate two disparate fields. The consensus among German and CoE faculty ensures buy-in and productive collaboration. Continued bridge building to secondary education programs will play a key role in attracting students from under-represented groups and increasing enrollment in the dual degree program. This will have the desired outcome of increasing the diversity of our German language program as well. These outcomes and the clear institutional support will embolden other such collaborations between humanities and STEM fields. Our work will then serve as a model both at AU and similar institutions in the southeastern U.S.

After the planning phase and the pilot year, the three co-directors will present their findings at the Colloquium on International Engineering Education (IEE) in October 2020. If funded, we will present at IEE in 2021 and 2022 on the outcomes of our collaborative project. The AU German faculty also plan to disseminate findings from the planning and implementation stages with an article in the highly regarded *Unterrichtspraxis/Teaching German*. The development of these five courses that integrate humanistic goals with technical knowledge will provide fascinating material for several collaborative publications in both FL and international engineering journals. At the grant period's conclusion, the committee will compose a white paper that will report on our findings, the challenges we faced with development and implementation, and recommendations for others attempting to create a similar interdisciplinary partnership.

Evaluation: In the German program, we will be able to build on assessment paradigms already in place in order to track student learning outcomes (SLOs) for the enhanced curriculum of the dual degree as well as the transformed ENGR 1110. Regarding the dual degree, for more than a decade, the German program has used a nationally recognized rubric for FL assessment [14] to assess SLOs in oral and written expression via a Capstone course required of majors during their final

semester. This Capstone also measures cultural competency. Beginning in 2015, the German program started tracking linguistic proficiency at the third year in order to assess the typical trajectory of German majors vs. minors. A third-year assessment will be particularly important to dual degree students to ensure that they are hitting linguistic and cultural targets before going abroad. We will be able to assess the linguistic and cultural effectiveness of the dual degree program with measures already in place. In order to assess technical SLOs, we will integrate a task into the Capstone whereby student will need to describe a technical process, thus providing us with the means to assess the technical proficiency of dual degree seniors. Regarding the four new German courses, the working group will discuss the outcomes of each pilot after its conclusion and solicit student feedback on course effectiveness in order to make necessary adjustments.

The German program and CoE will continue to track high school student interest and enrollment numbers in the dual degree program. For data on SLOs related to the integration of German and Engineering across the dual degree and ENGR 1110, we will continue to survey current and former students for their perspectives on the value of combining humanities with a STEM field. Further, for data on the value of linguistic and cultural preparation for study abroad, CoE will survey its students, those with and without language study, after the semester exchange in Germany to assess student perceptions of ICC outcomes. For ENGR 1110, we will use the Cultural Intelligence Scale (CQS), a 20-question assessment tool, as a pre- and post-test to assess attitudes towards cultural difference and whether there were changes as a result of the course's material. We will also assess final project data in ENGR 1110 to measure students' success at bridging cultural differences, as well as student reflections on the projects. This will provide feedback for improving the course and assist in piloting it among all engineering departments.

Building Bridges Plan of Work

With existing support		
Spring 2021	Visits to six Alabama High Schools, either in person or via Zoom. Visits to German and math classes.	Dr. O'Brien, Dr. Karcher
May 2021	Oral Proficiency Interviews (OPIs) for all third-year students in German	Dr. O'Brien
Spring 2021	Submit request for IRB approval to gather data on interest in the dual degree program and student learning outcomes from the program and from ENGR 1110	All team members
NEH Award Year 1		
May 15–June 15, 2021	AU Team members review scholarly material on humanities and STEM, foreign language/intercultural learning outcomes for individual courses.	Dr. O'Brien, Dr. Pittman, Ms. Werth, Dr. Karcher, Dr. Hendrix, Dr. Yampolskiy
June 15-June 30, 2021	AU Team members work together intensively to develop FLGR 3200 (1-credit hour conversation course) and ENGR 1110 (project development course).	Dr. O'Brien, Dr. Pittman, Ms. Werth, Dr. Karcher, Dr. Hendrix, Dr. Yampolskiy
Early Fall 2021	OPIs for all third-year students enrolled in German	Dr. O'Brien
Fall 2021	Pilot FLGR 3200 (one section), ENGR 1110 in CSSE (multiple sections). In ENGR 1100, CQS pre-test.	Ms. Werth, Dr. Hendrix, Dr. Yampolskiy
Mid-Fall 2021	Site visit to University of Arkansas (UofA) where a dual degree program in German and Engineering has been implemented; meetings with students, two UofA team members	Dr. O'Brien, Dr. Karcher, Dr. Hendrix, Dr. Hill, Dr. Condray
Mid-Fall 2021	Team members meet on Zoom to discuss pilot and mid-term outcomes. Create student surveys for FLGR 3200 and ENGR 1110.	Dr. O'Brien, Dr. Pittman, Ms. Werth, Dr. Karcher, Dr. Hendrix, Dr. Yampolskiy
October 2021	Attendance at International Engineering Education Colloquium (IEE), and presentation of findings, if accepted.	Dr. O'Brien, Dr. Pittman, Dr. Hendrix
October-November 2021	Visits to Alabama High Schools (6-8) in German and math classes.	Dr. O'Brien and Dr. Karcher
Last Week of Fall 2021	ENGR 1110 student pitches to German companies; evaluation of intercultural abilities; CQS post-test	Dr. O'Brien, Ms. Werth, Dr. Hendrix

November 30, 2021	End-of-semester surveys to FLGR 3200 and ENGR 1110 to collect and review data on student interest and perception of learning outcomes.	Ms. Werth, Dr. Hendrix
Semester Break 2021-2022	Review of scholarly material on intercultural competence and cultural intelligence. Discussion: what worked well in ENGR 1110?	All AU team members.
Early Spring 2022	Develop and submit proposal for FLGR 3000 (course on intercultural competence) for pilot in Fall 2022.	German faculty with assistance from Dr. Karcher and CSSE faculty
Early Spring 2022	Meeting with other chairs in engineering who are participating in Dual Degree Program (ELEC – 2 majors, MECH, INSY) to discuss data gathered and implementation of revised ENGR 1110 for other engineering departments. Review of CQS results.	Dr. Hendrix, Dr. Yampolskiy, Dr. Pittman, Ms. Werth
February/March 2022	OPIs performed on third-year students. First cohort of Dual Degree Program goes abroad on exchange to Germany and are assessed for linguistic competency; advised on strategies to make linguistic and cultural gains. German semester runs from early March-early July.	Dr. O'Brien
NEH Award Year 2		
June 2022	Team members meet to develop FLGR 3140 (German for Scientific Majors) for pilot in fall 2022 and FLGR 3100 (Introduction to Literature) in spring 2023	All AU team members
July 2022	CoE surveys all exchange students from spring 2022 semester in Germany to compare intercultural learning experiences between those with FL and without. Team members meet to gather and review data.	Dr. O'Brien, Dr. Karcher, Dr. Hendrix
Summer 2022	Team members meet to discuss learning outcomes of all new courses taught in first NEH Award Year.	All AU team members
Summer 2022	Workshop with all engineering faculty teaching ENGR 1110 in dual degree departments for implementation of revisions; review of CQS data.	Dr. Hendrix and relevant engineering faculty.

Early Fall 2022	OPIs for all third-year students enrolled in German	Dr. O'Brien
Fall 2022	Pilot of FLGR 3000	Dr. Pittman
Fall 2022	Pilot of ENGR 1110 in other dual degree engineering departments (ELEC – 2 majors, MECH, INSY); CQS pre-test.	Engineering faculty from these departments, Dr. Pittman, Ms. Werth, Dr. Hendrix, Dr. Karcher
October 2022	Attendance at IEE and two presentations (if accepted) on outcomes of ENGR 1110 and outcomes on study abroad and intercultural learning.	Team members from German and Engineering.
October-November 2022	Visits to Alabama High Schools (6-8) to German and math classes	Dr. O'Brien, Dr. Karcher
December 2022	Survey of FLGR 3000 students for perceptions of learning outcomes; ENGR 1110 CQS post-test. Team members gather and review data.	Dr. Pittman, Dr. O'Brien, Dr. Karcher, Dr. Hendrix, Dr. Yampolskiy
Spring 2023	Pilot of FLGR 3100	Dr. O'Brien
February/March 2023	OPIs performed on third-year students. First cohort of Dual Degree Program goes abroad on exchange to Germany and are assessed for linguistic competency; advised on strategies to make linguistic and cultural gains. German semester runs from early March-early July.	Dr. O'Brien
May 2023	Survey of FLGR 3100 students for perception of learning outcomes. Team gathers and reviews data.	Dr. O'Brien, Dr. Pittman, Ms. Werth, Dr. Karcher, Dr. Hendrix
June 2023	Preparation of final project summative evaluation	Dr. O'Brien
June 2023	Team meeting to debrief on project and the plan to continue recruitment and retention; to continue expanding opportunities for intercultural learning in engineering.	All team members

Works Cited in Narrative

- [1] Tracksdorf, Niko, et al. *Impuls Deutsch*. Stuttgart, Ernst Klett, 2020.
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FLGR 3000:
Demystifying Human Difference for Intercultural Competence
DRAFT SYLLABUS



While there are different ways of referring to this interlocking set of abilities (for example, “cultural intelligence”), this course will support students in developing “intercultural competence.” Intercultural competence, or ICC, is defined as the set of skills necessary to approach, analyze, and act appropriately in a cultural context different than one’s own. ICC often begins with becoming aware of cultural “do’s and don’ts,” but it is far more than that, as we want to develop in-depth knowledge about another culture without it devolving into facile stereotypes. An awareness of one’s own cultural preferences, values, and biases develops alongside intercultural competence and is a vital part of it. As ICC experts note, however, there is no absolute knowledge of one’s own or another’s culture. Instead, developing intercultural competence is a life-long endeavor. This course will familiarize you with definitions of culture and intercultural competence and will provide you a framework to think about and analyze your experiences in your own and another culture.

To delve into this topic, we will be reading some theoretical works as well as some practical applications of theoretical knowledge. The course will be divided into three modules as follows:

I. A controversial question: What is C/culture?

Examples of differing definitions:

- Culture as a response to human problems (Hall, Schein)
- Culture as the shared patterns of behaviors and interactions, cognitive constructs, and affective understanding that are learned through a process of socialization. These shared patterns identify the members of a culture group while also distinguishing those of another group. (CARLA)

Hall, E. T. (1973) *The Silent Language*. New York: Anchor Press/Doubleday.
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Schein, E. H. (1985) *Organization Culture and Leadership: A Dynamic View*. San Francisco: Jossey-Bass.
Center for Advanced Research on Language Acquisition (CARLA):
<http://carla.umn.edu/culture/definitions.html>

2. Defining and Measuring Intercultural Competence

Deardorff, D. K. (2012). Intercultural Competence in the 21st Century: Perspectives, Issues, Application. In B. Breniger and T. Kaltenbacher (Eds.), *Creating Cultural Synergies: Multidisciplinary Perspectives on Interculturality and Interreligiosity* (pp. 7-21). Newcastle upon Tyne: Cambridge Scholars.
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3. Application of Theory: Case Studies

Gannon, M. J. (1994). *Understanding Global Cultures: Metaphorical Journeys through 17 Countries*. Thousand Oaks, CA: SAGE.
Hofstede, G.J. et al. (2002). *Exploring Culture: Exercises, Stories and Synthetic Cultures*. Boston, MA: Intercultural Press.
Vennekens-Kelly, E. (2012). *Subtle Differences, Big Faux Pas: Test Your Cultural Competence*. Great Britain: Summertime Publishing.

Final Project [adapted from Davis and Knight, 2018*]: Students must write 1,500 words and pretend that they are applying for an international company (either at home or abroad). The goal of this assignment is to reflect on their experiences over the course of the abroad year and to identify elements of personal growth, key experiences, and the application of these things to their future careers as engineers.

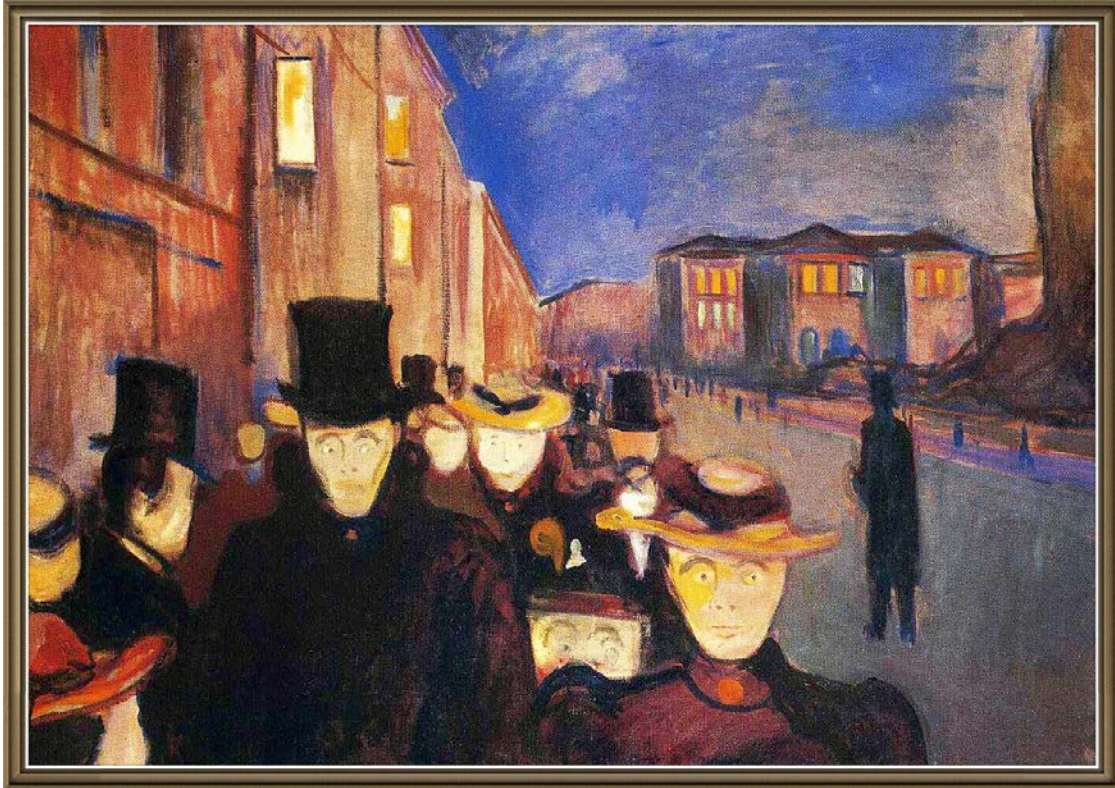
Prompt: "I see that you have been abroad for a year as a part of your dual degree program in German and Engineering. That's very unusual for engineering students and it speaks very highly of your technical and intercultural abilities."

- What new knowledge or skills did you learn or build upon while you were abroad?
- What specific examples from your experience in the German program, especially the class on intercultural competence, helped you develop those skills?
- How can this international experience be a value-add for my company/organization?

[*Not for students use: Kirsten Davis and David B. Knight, "Impact of a Global Engineering Course on Student Cultural Intelligence and Cross-Cultural Communication," in *Journal of International Engineering Education* 1.1, Issue 4 (2018) DOI:10.23860/jiee.2018.01.01.04]

FLGR 3100: Introduction German Literature
Auburn University

DRAFT SYLLABUS: **The Self and Society**



Edvard Munch, *Evening on Karl Johann* (1892)

Course Goals:

Throughout the semester, we will consider the following questions as we read works of German fiction together with scientific prose about the central themes they have in common: What does it mean to be traditional? To be revolutionary? By what criteria does one evaluate or judge social reality and one's place in it? The idea that an individual has "natural rights" (as well as duties and responsibilities) in society is relatively new – and it wasn't immediately applied to all human beings equally. In this course, the "roter Faden" (red thread) throughout all of the readings will connect the potential conflicts between duty and responsibility and the desire for change and growth (social or individual).

Course Materials: Reading Pairs

Johann Wolfgang von Goethe, *Die Wahlverwandschaften* (1809)

+ Eberhard Lämmert, „Die Chemie der Wahlverwandschaften“ (1986); Klaus Mecke,

„Goethes Wahlverwandschaften: Physik und Literatur“ (2017)

[Theme of novel: „chemical reactions“ that happen between people. Scientific reading: essays on the science known in Goethe's time.]

Heinrich von Kleist, „Die Verlobung in Santo Domingo“ (1811)

+ H. Querner, „Zur Geschichte der Anthropologie“ (1986)

[*Novella: set during the Haitian Revolution and the upheaval of racial hierarchies. Scientific reading: essay on the history of anthropology and how human beings have been categorized.*]

Georg Büchner, *Woyzeck* (1837)

+ Excerpts from: A. Mitscherlich and F. Mielke, *Medizin ohne Menschlichkeit* (1960);

Süddeutsche Zeitung: „Menschenversuche: Die Perversion des Heilens“ (2010)

[*Drama: A man from the poorest class kills his wife after being experimented on by a doctor. Scientific readings: Excerpts from research on Nazi experimentation and a newspaper article on the same.*]

Gerhard Hauptmann, *Bahnwärter Thiel* (1888)

+ Excerpts from: H.G. Bronn, *Über die Entstehung der Arten im Thier- und Pflanzen-Reich ...* (1860)

[*Novella: Naturalist story about a working-class man who loses his first wife and marries a second who sexually subjugates him. The story ends with his murder of this wife. Scientific readings: Excerpts from Bronn's translation of Darwin's Origin of Species.*]

Wolfgang Borchert, „Das Holz für morgen“ (1947)

+ K-D Thomann and M. Rauschmann, „Die ‚posttraumatische Belastungsstörung‘ – historische Aspekte einer ‚modernen‘ psychischen Erkrankung im deutschen Sprachraum“ (2003)

[*Short story: soldier with post-traumatic stress disorder after returning from war. Scientific reading: history of post-traumatic stress after wars in the twentieth century.*]

Exams: There will be two major exams given during the semester. The midterm will be on Friday, March 4th, and the final day/time is set by the university (Friday, May 6th, 12.00-2.30pm). The material covered on each will be announced in advance. If you have a conflict, you must get in touch with me in advance in order to arrange an alternate day/time.

Attendance and Participation: You are expected to attend class regularly and participate in all activities, such as in-class discussions, role plays, debates, and oral presentations. Your reading notes will be collected daily for a grade – either on paper or on Canvas. Excessive absences - more than three over the semester - will result in your receiving a lower grade. Missed in-class work will lower your grade. If you are absent, it is your responsibility to be informed about missed work.

Preparation: You will receive reading assignments as well as discussion questions to prepare FOR EACH CLASS SESSION. I will be using Canvas to post your assignments, create discussion boards, as well as to provide you with supplementary information such as audio/visual files. All of these assignments will be in support of the course themes. For that reason, it is essential that you do the assignments in a timely manner. You are expected to have read the assigned material beforehand and prepared discussion questions. In addition, you will be expected to ask questions about difficult passages and/or things not understood. Occasional reading quizzes may be given.

Written Work: In addition to periodic written assignments about the works we are reading, you will be required to write three essays for this class; the third one will be your contribution to the collaborative online project. Essays should be 3-5 pages, typed, double-spaced, using Times New Roman font 12, 1-inch margins. Please single space your name and class information. You will be required to submit a rewrite of each essay. Please **TURN IN** the original essay with the rewrite. The final essay grade will be an average of the two grades. The use of translation programs and outside help (e.g. German-speaking friends or tutors) is **NOT allowed**. The online dictionary <http://dict.leo.org> is very helpful in finding the right idiomatic expressions, check spelling, genders, plurals, etc. Five points will be deducted per class meeting for late essays.

Oral Presentations: Each student will give a 3-5 minute oral presentation in German during the final two course meetings of the semester. These presentations will be done with partners and will reflect knowledge of the works/themes we have discussed throughout the semester. In grading these presentations, I will be looking at your performance holistically, thus, it is important to keep your presentation manageable for your current linguistic ability.

Grading: The grade you earn for the semester will be calculated according to the following percentages.

Midterm Examination	20 %
Final Examination	20 %
Preparation & Participation (includes reading notes)	25 %
Essays	15 %
Oral Presentations	10 %
ePortfolio project	10 %

Other Important Dates: (please note, all dates – except for the final exam – are subject to change at my discretion):

12. Februar	PAPER #1 due PAPER #1 revisions
4. März	MIDTERM
1. April	PAPER #2 due PAPER #2 revisions
22. April	PAPER #3 PAPER #3 revisions
6. Mai	FINAL EXAM

FLGR 3200 – Languages Across the Curriculum
With a Technical and Scientific Focus
DRAFT SYLLABUS



LAC (Language Across the Curriculum) is the name given to a series of curricular models through which students can put into practice their language abilities while studying subjects outside of FLL. It is a multidisciplinary program which counts on the flexibility of the students' abilities and interests and also on the collaboration of language faculty with colleagues of other disciplines, and on their commitment to an education suitable to a multicultural and global society. LAC courses combine languages with different disciplines; the language component constitutes the one-credit enhancement section, with readings and in-class discussions that are complementary to the lecture course in English. This particular class is the “companion” class to ENGR 1110, however, it is not required that you be registered for that course.

Course Description:

This **one-credit hour class** will consist entirely of readings and discussion in German and will teach us more about technical and scientific subjects in German. Students are expected to do the assigned readings prior to class discussions. Students are also expected to write their own personal notes about the readings which will **ONLY** be collected the day of the discussion. Whereas the notes can be composed in English, prompted by the instructor's questions, the class discussions will be led in German.

Course Requirements:

**** PREREQUISITES for this course: FLGR2010 or departmental approval. ****

Due to the nature of the course, attendance is **required**. After four unexcused absences, regardless of the reason for the absence and of academic performance in the class, the student will receive an FA (Failure

due to Excessive Absences). NOTE: One tardy or early departure is counted as half an absence. If students foresee regular conflicts with class attendance due to participation in official university sports activities, they must turn in, at the beginning of the term, a copy of the official calendar of events. Assignments will be posted on BLACKBOARD. Students are expected to be well-prepared and engaged in class discussions; they are expected to turn in their personal notes prior to each discussion. No late submission will be accepted.

Grades: You will earn your grade according to the following percentages:

Reading Notes	40%
Discussion Participation	40%
Final Mini-Presentation	20%

Academy Honesty:

Auburn University expects students to pursue their academic work with honesty and integrity. Violation of the Student Academic Honesty Code and potential sanctions are detailed under Title XII of the SGA Code of Laws, which can be found in the Tiger Cub.

Special Accommodations:

Students who need special accommodations have to make an appointment with the instructor to present the memo received from the Program for Students with Disabilities (PSD) and to discuss their situation confidentially. If students do not have a memo, they should arrange an appointment with the staff of the PSD Office, in 1244 Haley Center (844-2096).

Weekly Readings: Readings will correspond to the following topics.

- Week 1: Sprache im Wandel der Zeit [Language in the changing times]
- Week 2: Roboterwelten [Robot worlds]
- Week 3: Müllverbrennung in Deutschland und Österreich [Garbage incineration in Germany and Austria]
- Week 4: Regenerative und fossile Energieträger [Regenerative and fossil fuel sources]
- Week 5: Technik im Alltag [Technology in daily life]
- Week 6: Das Auto der Zukunft: Wie sieht es aus? [The car of the future: What does it look like?]
- Week 7: Ernährung natürlich [Nutrition naturally]
- Week 8: Wichtige Erfindungen [Important inventions]
- Week 9: Soziale Gruppen und Innovationen [Social groups and innovations]
- Week 10: Herstellungsprozess von Plastik; Studien zu Plastik [Process of creating plastic; studies in plastic]
- Week 11: Neue Medizin, neuer Mensch [New medicine, new human]
- Week 12: Klima im Wandel / Naturschutz [Climate change / Conservation of nature]
- Week 13: Naturkatastrophen [Natural catastrophes]
- Week 14: Artenschutz [Wildlife conservation]
- Week 15: Impfstoffe [Immunizations]

Raw data gathered from engineering students both with and without FL study

I. Data gathered from ENGR 1110 Students: 305 responses.

1. Are you currently learning a foreign language? Yes or No.
278 = NO
27 = YES
2. Do you think you would benefit from learning another language and having increased job opportunities locally and in other parts of the world? Yes or No.
21 = NO
284 = YES
3. Would you consider a double major with engineering and a foreign language? Yes or No
239 = NO
66 = YES
4. Would you consider doing a minor in a foreign language alongside your major in engineering? Yes or No.
120 = NO
185 = YES

II. Data from Engineering Students who are 1) minoring in German or 2) participating in the Dual Degree Program in German and Engineering: 18 responses.

1. [Same question to all students:] We want to create four new German courses that will support engineers in the German learning. Which of the following would you find interesting? Mark all that apply.
 - a. 1-credit hour conversation course in the 2nd year on technical subjects 17 yes
 - b. 3-credit hour 3000-level course on German for Technical Majors 14 yes
 - c. 3-credit hour course on intercultural competence for students going abroad on Germany exchange 15 yes
 - d. 3-credit hour introductory literature course on science in the humanities and humanities in science 4 yes
2. [To dual degree students] Why did you choose a dual degree in German and Engineering?
 - My life's dream has always been to become fluent in German and to some day live in Germany. Engineering is a great field to go into considering all of the German companies that are STEM related.
 - I heard about it from my friends brother, who did the program. I believed it lined up with what I already wanted to do in college.

- I was already doing German [sic] in Highschool [sic] and wanted to be an engineer so I decided to do both.
- I have spoken German since the 7th grade. I decided on mechanical engineering as my major and knew I was going to be taking German as well. I've also always wanted to study abroad so the program seemed like the perfect opportunity for me.
- I chose the dual degree program, because I think that it will give me leg up on engineers, who may not know two languages.
- Engineering is large in Germany. Plus, I already had 4 years of German under my belt from high school.

3. [To dual degree students] How do you think it will help you, personally and professionally?

- There are many jobs in Germany and it allows for me to be set apart from my peers
- Personally, I think that it will help make me a more well-rounded and cultured person, and professionally, it will help me develop more communication skills as well as technical skills
- It will greatly increase my job opportunities.
- I think the double major and study abroad experience will help bolster my resume and make me a more desirable candidate when I apply for jobs. Personally, it will help me experience foreign culture and give me a wider view of the world.
- I think this program will help broaden my resume and experience within my field. I also think it'll enrich my life, with exploring a the German culture and workplace

4. [To engineering students with a German minor] Why did you choose to complete a German minor alongside your engineering degree?

- Do balance my engineering classes with something I enjoy
- I chose a German minor since I wanted my future career to be international. I had already taken 4 years in highschool [sic], and my parents could speak German [sic]. for these reasons I decided to get a German minor
- I found it to be an interesting outlet that is separate [sic] from my engineering courses.
- German companies are prevalent in the engineering world. I also have friends and family that speak German and I have also found that studying a language improves my overall learning experience.
- Visited Germany in high school while [sic] taking German
- I thought it would be useful if I worked at an international company in the future, and I already took German in high school
- I have wanted to travel to several countries in Europe and German would assist me in these travels. There are also several prominent engineering companies that are based in Germany
- I already knew a lot of German and many companies have headquarters in Germany
- I had done and really enjoyed German in Highschool [sic] & I took the German placement test just to see how I did, and actually I did pretty well, so I thought- you know what, it may or not be helpful in the future, but a German minor will be something fun to do and another cool thing to say that I have done (and maybe helpful for resumes/getting hired).

- I want to try to CO-OP in Germany
 - I have connections to Germany through my dad. He grew up there because of his dad being in the military. I've always been intrigued by Germany and hope to spend some time there in the future. It would be nice to be able to speak the language
5. [To engineering students with a German minor] If you had had more time in your curriculum, would you have been interested in pursuing a German major alongside your engineering degree? Why or why not?
- Not necessarily, because I probably wouldn't have graduated in four years and merit-based (ACT) scholarships only cover 4 years
 - Yes! I think it would make it easier getting involved with german [sic] companies and improve my German further.
 - I likely would not, as I will be more focused on the engineering side of things
 - I would as I would want to get my money's worth
 - I would have if I had considered it during my freshmen [sic] year.
 - I would've been interested if I knew there was significant benefit to a major over a minor. If I had a lot of extra room, I may have considered multiple minors instead of dual major (such as computer science, or physics, or another interest).
 - I think my German would have been better if I had a major instead of a minor in German, but I wouldn't have wanted to stay at Auburn longer to complete it or stress myself more trying to juggle two majors.
 - Yes, because I would be able to improve my abilities in German
 - Probably not
 - If I had more time (could still graduate in 4 years) I would definitely pursue a German major too (because I would love to be able to do a study abroad [sic] in Germany over the summer and get credit for both German classes and Engineering classes).
 - No, because I just wanted to learn the language
 - Perhaps. I am already minoring in two things so I can't feasible imagine trying to double major, but maybe in a different life, if I had set my schedule up differently, I would consider it.

III. Data from AU graduates who double majored in German and Engineering prior to approval of Dual Degree Program. Direct quotes in answer to prompt: Please discuss the benefits of studying German and Engineering. [Identifying information omitted.]

Student #1

My fellow structural engineering students, my professors, the German Student Association (which here is comprised mostly of Germans and Austrians pursuing graduate study rather than Americans studying German), and people in general are continually impressed that I managed to achieve a bachelor's in a foreign language in addition to my engineering credentials. The fact that I have studied abroad three times (I certainly count [destination in Canada] as abroad, although that may be contentious) is a constant source of wonderment, and I am extremely well-traveled in a generally well-traveled group. Many of my professors (several of them as Fulbright scholars and a few as postdocs) and a few of my colleagues also spent time at the [university in German-speaking country], and my [German-speaking nationality deleted] professor's work is referenced on a pretty regular basis in my courses.

My professors have thus far been extremely impressed with my ability to communicate, both in writing and presentation, and I am certain that any aptitude I have in these areas has been greatly amplified by my time spent studying a foreign language. Studying a language greatly enhanced my ability to organize my thoughts, to reason, to approach problems with no obvious answer, and to find alternate avenues to make myself understood, all of which absolutely apply directly to engineering. I was aware at the time of the benefits of my German studies, but I have learned that their influence is much more far-reaching and much deeper than I previously believed.

Student #2

I would have to say that the main advantage I have realized in my own work experience of studying German alongside engineering is improved communication skills. Anyone learning new languages knows that there are times you have to get very creative with the small vocabulary you have at the time. This experience forces you to be inventive and think in different ways to get your point across. Sometimes people think that engineers exist in a bubble, but this is very much not the case. All of the various engineering positions I have held have been highly cross functional, requiring a great deal of collaboration between departments. Being able to explain things clearly to a group of people from all backgrounds has been a real strength. As to why German in particular is an ideal pairing with engineering, I would refer to the [prestigious award program]. Although speaking German is not a requirement for acceptance into the program, it shows that the German government recognizes and values the link between these two fields. When applying for jobs after college, I found a staggering number of companies that have branches in German speaking countries. My company has a branch in Sweden and although they do not speak German, I feel confident that my understanding of a second language would give me a leg up when applying for a position abroad.

Student #3

Having graduated from Auburn University in [year] with both German and Mechanical Engineering undergraduate degrees, I feel I can speak directly about how beneficial this course of study can be and why Auburn University should be supporting pursuing such a challenging but rewarding path.

Personally, I entered my freshmen year with the intention of majoring in Mechanical Engineering and only minoring in German. This changed after my sophomore year studying abroad in Stuttgart Germany. After returning with an excess of credits needed for the minor, I was encouraged by the department to pursue a full major, which I did. At the time, I did not anticipate that the level of detail and deep dives into works of literature and culture provided by the German curriculum would be of immediate use in my career, but this would quickly change. My language and cultural skills payed off less than one year into my career when my new employer [German company in Alabama] offered me an opportunity to move to Germany to work on their next generation of [product X]. I quickly learned that although engineering is a profession of numbers and calculations, operations, planning and management in the German language were the keys to my success in in the early part of my career.

Although I feel I was adequately prepared by the German and Mechanical engineering departments separate from one another, there was definitely room for improvement. Having the College of Engineering and the German department work together to offer instruction on technical German, and the culture that surrounds “German Engineering” would have been an extremely practical way of preparing for the challenges I faced in my first years at work.