

# GERMAN IEP – CHEMICAL ENGINEERING

**For students entering Fall 2011 (Class of 2016)**

*The academic plan below is a sample to demonstrate one way the dual degree program may be completed in 10 semesters. It is not meant to be a replacement for academic advising. Be sure to touch base with both your language and engineering advisor regularly.*

		FALL		SPRING		
<b>Year One</b>	✓	<b>Course</b>	<b>Cr</b>	✓	<b>Course</b>	<b>Cr</b>
		CHM 101 General Chemistry I Lecture	3		CHM 112 General Chemistry II Lecture	3
		CHM 102 General Chemistry I Lab	1		CHM 114 General Chemistry II Lab	1
		EGR 105 Foundations of Engineering I	1		EGR 106 Foundations of Engineering II	2
		GER 101 German for Engineers I	3		GER 102 German for Engineers II	3
		MTH 141 Intro Calculus w/ Analytic Geometry	4		MTH 142 Intermediate Calculus w/ Analytic Geometry	4
		PHY 203 Elementary Physics I Lecture	3		PHY 204 Elementary Physics II	3
		PHY 273 Elementary Physics I Lab	1		PHY 274 Elementary Physics II Lab	1
	<b>Semester Credits</b>	<b>16</b>		<b>Semester Credits</b>	<b>17</b>	
		FALL		SPRING		
<b>Year Two</b>	✓	<b>Course</b>	<b>Cr</b>	✓	<b>Course</b>	<b>Cr</b>
		CHE 212 Chemical Process Calculations	3		CHE 272 Intro to CHE Calculations	3
		CHM 227 Organic Chemistry I	3		CHE 313 CHE Thermodynamics I	3
		ECN 201 Principles of Microeconomics (S)	3		CHE 332 Physical Metallurgy	3
		General Education Requirement (ECw)	3		CHM 228* Organic Chem II	3
		GER 103 Intermediate German I	3		GER 104 Intermediate German II	3
		MTH 243 Calculus for Functions of Several Variables	3		MTH 244 or 362 Differential Eqns or Adv EGR Math I	3
		<b>Semester Credits</b>	<b>18</b>		<b>Semester Credits</b>	<b>18</b>
		FALL		SPRING		
<b>Year Three</b>	✓	<b>Course</b>	<b>Cr</b>	✓	<b>Course</b>	<b>Cr</b>
		CHE 314 CHE Thermodynamics II	3		CHE 348 Transfer Operations II	3
		CHE 347 Transfer Operations I	3		CHE 464 Industrial Reaction Kinetics	3
		CHM 335 Physical Chemistry I Lab	2		CHM 432** Physical Chemistry II	3
		CHM 431 Physical Chemistry I	3		General Education Requirement	3
		General Education Requirement	3		GER 206 Conversation & Composition II	3
		GER 205 Conversation & Composition I	3			
	<b>Semester Credits</b>	<b>17</b>		<b>Semester Credits</b>	<b>15</b>	
		Suggested Semester Abroad		International Internship Semester		
<b>Year Four</b>	✓	<b>Course</b>	<b>Cr</b>	✓	<b>Course</b>	<b>Cr</b>
		Approved Math Elective***	3			
		Approved Professional Elective	3		Internship in German-Speaking Country	
		EGR/GER 411 (Professional Elective)	3		GER 315-316	3 to 6
		General Education Requirement	3 to 6			
		GER 3xx	4			
	<b>Semester Credits</b>	<b>16 to 19</b>		<b>Semester Credits</b>	<b>3 to 6</b>	
		FALL		SPRING		
<b>Year Five</b>	✓	<b>Course</b>	<b>Cr</b>	✓	<b>Course</b>	<b>Cr</b>
		CHE 328 Industrial Plants	1		Approved Professional Elective	3
		CHE 345 Chemical Engineering Lab I	2		Approved Professional Elective	3
		CHE 349 Transfer Operations III	2		CHE 346 Chemical Engineering Lab II	2
		CHE 351 Plant Design and Economics I	3		CHE 352 Plant Design and Economics II	3
		CHE 425 Process Dynamics and Control	3		General Education Requirement (if needed)	3
		General Education Requirement	3		GER 4xx German Literature (A)	3
		GER 4xx	3			
	<b>Semester Credits</b>	<b>17</b>		<b>Semester Credits</b>	<b>14 to 17</b>	

\* Or approved advanced CHM course

\*\* Or approved Department Elective

\*\*\* Mathematics Elective is MTH 215 or any 300-500 level MTH course EXCEPT MTH 381

**GEN ED TALLY** (See special notes about General Education Requirements on the reverse and consult with the university catalog and your major advisors.)

EC: \_\_\_\_\_

S: \_\_\_\_\_

ECw: \_\_\_\_\_

S (use ECN 201): \_\_\_\_\_

L (reserve one for TUBS): \_\_\_\_\_  A (400-level German Lit.): \_\_\_\_\_  
 L: \_\_\_\_\_  A (fine art): \_\_\_\_\_

### **BASIC LIBERAL STUDIES (GEN ED) REQUIREMENTS** (See course catalog for more detail.)

**English Communications (EC):** 6 credits, one of which must be a writing course (ECw.)

**Social Science (S):** 6 credits, one of which is fulfilled by ECN 201, which is already required for CHE majors. Consider opting for a second course with a global focus, or a focus on Germany or Europe.

**Letters (L):** 6 credits. "Landeskunde" (LET 151) in Braunschweig will fulfill one of your two general education Letters requirements. Consider taking a German History class (HIS 327 at URI or in Braunschweig) to fulfill the other.

#### **Fine Arts and Literature (A):**

1. **3 credits of literature:** As an IEP student the 400-level German literature course fulfills the literature portion of the Fine Arts & Literature requirement. (NOTE: This is a special exemption. If you later drop the program but keep your language major you might need to take an additional literature course.)
2. **3 credits of fine arts:** You must choose from music, theater, arts selections as indicated in catalog, or seek prior-approval for a comparable course abroad.

**Note:** There are additional General Education Requirements in *Mathematical and Quantitative Reasoning*, *Natural Sciences*, and *Foreign Language/Cross-Cultural Competence*, which are fulfilled automatically through your progress toward your two degrees (B.S. in Engineering and B.A. in a Language).

### **REQUIREMENTS FOR CHEMICAL ENGINEERING MAJOR** (See course catalog and department website for more detail.)

CHE 212, 272, 313, 332, 314, 347, 348, 464, 328, 345, 349, 351, 425, 346, 352; CHM 101, 102, 112, 114, 227, 228 or approved advanced chemistry course, 335, 431, 432 or approved advanced chemistry course; ECN 201; EGR 105, 106; MTH 141, 142, 243, 244 or 362, and an approved math elective; PHY 203, 204, 273, 274; 3 approved professional electives (one may be fulfilled by GER/EGR 411 with prior approval)

### **REQUIREMENTS FOR IEP GERMAN MAJOR** (See course catalog for more detail.)

At least 30 credits in German, not including GER 101, 102, or 392. You must complete six credits in literature, at least three of which must be taken at the 400-level; and EGR/GER 411.

### **SPECIAL NOTES FOR STUDENTS IN THE INTERNATIONAL ENGINEERING PROGRAM**

- As a dual degree IEP student, **you are a student of both the College and Arts & Sciences and the College of Engineering.** Be sure to file for graduation (and any other paperwork such as a leave of absence, etc.) with the dean's office of each college.
- You have two academic advisors – one for your language major and one for your engineering major. The German advisor for all IEP students is Walter von Reinhart (waltaire@uri.edu.) You can check with your engineering department to find out who has been assigned as your engineering advisor.
- **Your general education requirements are determined by the College of Arts & Sciences Basic Liberal Studies Program for the Bachelor of Arts (not B.S.).** Consult the course catalog for details and verify any general education questions with your language advisor.
- As an IEP student, **you are exempt from the one-course-per-discipline rule** for the Letters, Natural Sciences, and Social Sciences Basic Liberal Studies Requirements of the College of Arts & Sciences. This is important to know in the event that you drop the program but still want to pursue your German major as a non-IEP student.
- You are required to complete a six-month professional internship abroad to be considered an IEP student.
- **It is highly recommended that you precede your semester internship with a semester of study abroad through an IEP exchange.** General education requirements, language major courses, engineering professional electives and free electives (if you have any) tend to be the easiest courses to find equivalents for overseas, so you might want to "hold" them for a semester abroad. Consult with your advisors and plan your semesters accordingly.
- **It is YOUR responsibility to stay in contact with your engineering major advisor AND your language major advisor to make sure that you are fulfilling all requirements for both majors and your general education requirements!**