

GERMAN IEP – BIOMEDICAL ENGINEERING

For students entering Fall 2009 (IEP Class 2014)

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 | |
|----------------------------------|-------------------------|---|-------------------------|---|--------|
| Year One | ✓ Course | Cr | ✓ Course | Cr | |
| | | CHM 101 General Chemistry I Lecture | 3 | BME 181 Biomedical Engineering Seminar I | 1 |
| | | CHM 102 General Chemistry I Lab | 1 | CHM 124 Intro to Organic Chemistry | 3 |
| | | 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 Intermed Calculus w/ Analytic Geo | 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 |
| | Semester Credits | 16 | Semester Credits | 17 | |
| Year Two | ✓ Course | Cr | ✓ Course | Cr | |
| | | BIO 121 Human Anatomy | 4 | BIO 242 Introductory Human Physiology | 3 |
| | | BME 281 Biomedical Engineering Seminar II | 1 | BIO 244 Introductory Human Physiology Lab | 1 |
| | | ELE 201 Digital Circuit Design | 3 | BME 207 Intro to Biomedical Engineering | 3 |
| | | ELE 202 Digital Circuit Design Lab | 1 | ELE 212 Linear Circuit Theory | 3 |
| | | General Education Requirement (ECw) | 3 | ELE 215 Linear Circuits Lab | 2 |
| | | GER 103 Intermediate German I | 3 | GER 104 Intermediate German II | 3 |
| | | MTH 362 Advanced Engineering Mathematics I | 3 | MTH 243 Multivariable Calculus | 3 |
| | Semester Credits | 18 | Semester Credits | 18 | |
| Year Three | ✓ Course | Cr | ✓ Course | Cr | |
| | | BIO 341 Principles of Cell Biology | 3 | BME 360 Biomeasurement Systems | 3 |
| | | BME 307 Bioelectricity | 1 | BME 361 Biomeasurement Lab | 1 |
| | | ECN 201 Principles of Microeconomics (S) | 3 | ELE 314 Linear Systems and Signals | 3 |
| | | ELE 313 Linear Systems | 3 | General Education Requirement | 3 |
| | | ELE 338 Electronics I | 3 | GER 206 Conversation & Composition II | 3 |
| | | ELE 339 Electronics I Lab | 1 | STA 409 Statistics Methods in Research | 3 |
| | | GER 205 Conversation & Composition I | 3 | | |
| | Semester Credits | 17 | Semester Credits | 16 | |
| Suggested Semester Abroad | | International Internship Semester | | | |
| Year Four | ✓ Course | Cr | ✓ Course | Cr | |
| | | EGR/GER 411 (Engineering Elective)* | 3 | | |
| | | General Education Requirement | 3 | Internship in German-Speaking Country | |
| | | General Education Requirement | 3 | GER 315-316 | 3 to 6 |
| | | GER 3xx | 4 to 7 | | |
| | Semester Credits | 16 to 19 | Semester Credits | 3 to 6 | |
| Year Five | ✓ Course | Cr | ✓ Course | Cr | |
| | | BME 461 Physiological Modeling & Control | 3 | BME 464 Medical Imaging | 3 |
| | | BME 462 Biomedical Instrumentation | 1 | BME 465 Medical Processing Lab | 1 |
| | | BME 484 BME Capstone Design I | 3 | BME 468 Neuroengineering | 3 |
| | | ELE 400 Intro to Professional Practice | 1 | BME 485 BME Capstone Design II | 2 |
| | | General Education Requirement | 3 | General Education Requirement | 3 |
| | | General Education Requirement | 3 | GER 4xx German Literature (A) | 3 |
| | | GER 4xx | 3 | | |
| | Semester Credits | 17 | Semester Credits | 15 to 16 | |

* Choose from the following: CHE 333, 347, 574; CSC 522; ELE 332, 343/344, 435/436, 437, 438, 444/445, 447/448, 458/459, 501, 506; ISE 404, 412; MCE 341, 354, 372; MTH 363, 442, 444, 451, 461, 462, 464, 471, 472; EGR/GER 411 with prior approval if available.

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

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|--|---|
| <input type="checkbox"/> EC: _____ | <input type="checkbox"/> S: _____ |
| <input type="checkbox"/> ECw: _____ | <input type="checkbox"/> S (use ECN 201): _____ |
| <input type="checkbox"/> L (reserve one for TUBS): _____ | <input type="checkbox"/> A (400-level German Lit.): _____ |
| <input type="checkbox"/> L: _____ | <input type="checkbox"/> 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 BME majors. Consider opting for a second course with a global focus, or a focus on Germany or Europe.

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

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 BIOMEDICAL ENGINEERING MAJOR (See course catalog and department website for more detail.)

BIO 121, 242, 244, 341; BME 181, 281, 207, 307, 360, 361, 461, 462, 464, 465, 468, 484, 485; CHM 101, 102, 124; ECN 201; EGR 105, 106; ELE 201, 202, 212, 215, 313, 314, 338, 339, 400; MTH 141, 142, 243, 362; PHY 203, 204, 273, 274; STA 409; one engineering elective from the following: CHE 333, 347, 574; CSC 522; ELE 332, 343/344, 435/436, 437, 438, 444/445, 447/448, 458/459, 501, 506; ISE 404, 412; MCE 341, 354, 372; MTH 363, 442, 444, 451, 461, 462, 464, 471, 472; EGR/GER 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, free electives and engineering professional electives 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!**