

### Electrical Engineering Sample Curriculum

|   | WashU Course       | Fall                     | Spring    |
|---|--------------------|--------------------------|-----------|
| <b>Home Institution (3-4 years)</b>                   |                    |                          |           |
| Calculus II, III                                      | Math 132, 233      | 3                        | 3         |
| Differential Equations                                | Math 217           | 3                        |           |
| General Physics I, II                                 | Physics 117A, 118A | 4                        | 4         |
| General Chemistry I                                   | Chem 111A          | 3                        |           |
| General Chemistry Laboratory I                        | Chem 151           | 2                        |           |
| Computer Science Elective                             | CSE 131            |                          | 3         |
| English Composition                                   | CWP 100            |                          | 3         |
| Engineering & Science breadth elective                |                    |                          | 3         |
| Humanities and social science electives               |                    | 9                        | 9         |
| Additional home institution degree requirements       |                    | varies                   | varies    |
| 90 units or more of transferable college credit       | <b>Subtotal</b>    | <b>90+ to transfer</b>   |           |
| <b>First Year of Dual Degree Curriculum at WashU</b>  |                    |                          |           |
| Introduction to Electrical and Electronic Circuits    | ESE 230            | 4                        |           |
| Introduction to Electronic Circuits                   | ESE 232            |                          | 3         |
| Introduction to Digital Logic and Computer Design     | ESE 260            |                          | 3         |
| Engineering Mathematics A                             | ESE 318            | 3                        |           |
| Engineering Mathematics B                             | ESE 319            |                          | 3         |
| Probability and Statistics for Engineering            | ESE 326            | 3                        |           |
| Engineering Electromagnetics Fundamentals             | ESE 330            |                          | 3         |
| Signals and Systems                                   | ESE 351            | 3                        |           |
| Electrical Engineering electives with topics units    | ESE XXX            |                          | 3         |
| Engineering Professional Practice*                    | ENGR 4502 & 4503   | 2                        |           |
| Computer Science elective from the approved list      | CSE 132 or CSE 247 |                          | 3         |
|   | <b>Subtotal</b>    | <b>15</b>                | <b>18</b> |
| <b>Second Year of Dual Degree Curriculum at WashU</b> |                    |                          |           |
| Electrical Engineering electives with topics units    | ESE XXX            | 6                        | 6         |
| Electrical Engineering laboratory                     | ESE XXX            | 3                        | 3         |
| Electrical Engineering Capstone Design Projects       | ESE 498            |                          | 3         |
| Engineering & Science breadth elective                |                    | 3                        | 3         |
| Engineering Ethics and Sustainability                 | ENGR 4501          | 1                        |           |
| Technical Writing                                     | ENGR 310           | 3                        |           |
|   | <b>Subtotal</b>    | <b>16</b>                | <b>15</b> |
| 60 units or more must be taken at Washington Univ.    | <b>Total</b>       | <b>60+ for WU degree</b> |           |

In selecting elective courses, make sure to select enough courses with engineering topics units so that the total engineering topics units exceeds 45.

\*Engineering Professional Practice suggested to fulfill degree requirement if student did not complete a social science course at the 300-400 or junior/senior level at their home institution.

Master's degree candidates should consult with their faculty advisor regarding graduate courses taken third year.

Note some graduate courses may be necessary second year. 84 minimum WashU residency units are required for the Master's degree.