

Dual Degree Program

Mechanical Engineering Sample Curriculum

| | WU Course | Fall | Spring |
|--|--------------------|--------------------------|-----------|
| Home Institution (3-4 years) | | | |
| 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 (MATLAB preferred) | CSE 200* | | 3 |
| Physical or life science | | | 3 |
| English Composition | ECMP 100 | | 3 |
| Humanities and social science electives | | 9 | 9 |
| Additional home institution degree requirements | | varies | varies |
| | Subtotal | 60+ to transfer | |
| First Year of Dual Degree Curriculum at WU | | | |
| Computer Aided Design | MEMS 202 | 3 | |
| Mechanics I | MEMS 253 | 3 | |
| Mechanics II | MEMS 255 | | 3 |
| Thermodynamics | MEMS 301 | 3 | |
| Machine Elements | MEMS 311 | | 4 |
| Fluid Mechanics | MEMS 3410 | 3 | |
| Heat Transfer | MEMS 342 | | 4 |
| Materials Science | MEMS 361 | | 4 |
| Engineering Math A | ESE 318 | 3 | |
| Engineering Math B | ESE 319 | 3 | |
| Technical Writing | ENGR 310 | | 3 |
| | Subtotal | 18 | 18 |
| Second (Final) Year of Dual Degree Curriculum at WU | | | |
| Fluid Mechanics Laboratory | MEMS 3411 | | 1 |
| Mechanics III | MEMS 350 | 3 | |
| Mechanical Engineering Design | MEMS 411 | 3 | |
| Design of Thermal Systems | MEMS 412 | | 3 |
| Modeling Simulation and Control | MEMS 4301 | | 3 |
| Structural Dynamics and Vibration | MEMS 431 | 4 | |
| Intro to Circuits | ESE 230 | | 4 |
| Engineering Ethics and Sustainability | ENGR 4501 | 1 | |
| Engineering Leadership and Team Building | ENGR 4502 | 1 | |
| Conflict Management and Problem Solving in Eng. | ENGR 4503 | 1 | |
| Engineering Probability and Statistics | ESE 326 | | 3 |
| MEMS electives (some transfer courses may apply) | | 6 | 3 |
| | Subtotal | 19 | 17 |
| 60 units or more must be taken at Washington Univ. | Total | 60+ for WU degree | |

*can substitute CSE 131 or equivalent and ESE 101 or equivalent