

IOWA STATE UNIVERSITY

College of Engineering

Transfer Planning with Moraine Valley Community College Courses

Iowa State University College of Engineering Requirements

- Courses must be completed with a grade of "C" or better in order to be considered for transfer credit into the College of Engineering.
- Students not adequately prepared for success in Calculus I may need to take courses in addition to those listed below. Some students may first need to successfully complete college algebra and/or college trigonometry/prep for calculus.
- The College of Engineering requires two years of a single foreign language in high school or the equivalent in college.
- Beginning Fall 2023, ISU is offering a new degree program, Biomedical Engineering. This program requires a separate application and certain first-year course requirements. If you have interest in this degree, please consult with engineering@iastate.edu

| Courses required in all engineering degree programs at ISU >> focus on these courses first << | | | | |
|---|----|-------------------------------------|----------------------------|----------------|
| Iowa State | Cr | Iowa State Course Name | MVCC | Cr |
| CHEM 177 (or 167) | 4 | General Chemistry I (for Engineers) | CHM 131 | 4 |
| ENGL 150 | 3 | Critical Thinking and Communication | COM 101 | 3 |
| ENGL 250 | 3 | WOVE Composition | COM 102 | 3 |
| ENGR 101 | R | Engineering Orientation | n/a | |
| ENGR 160* | 3 | Engineering Problems | n/a | |
| LIB 160 | 1 | Information Literacy | n/a | |
| MATH 165 | 4 | Calculus I | MTH 150 | 5 |
| MATH 166 | 4 | Calculus II | MTH 151 | 5 |
| PHYS 231/231L | 5 | Classical Physics I and Lab | PHY 203 & 204 [^] | 6 [^] |

| Additional courses required in specific engineering degree programs at ISU | | | | | |
|---|---|----|---|--------------------------|----------------|
| Iowa State | Engineering Major(s) Requiring Course (see abbreviation key below) | Cr | Iowa State Course Name | MVCC | Cr |
| BIOL 211 ⁺ | AE | 3 | Principles of Biology I | BIO 111 [*] | 4 |
| BIOL 212 ⁺ | BSE | 3 | Principles of Biology II | BIO 112 [*] | 4 |
| CE 274 | All except ChE, CprE, CybE, EE, MatE, SE | 3 | Engineering Statics | EGN 201 | 3 |
| CHEM 178/178L | ChE, CE, EnvE, MatE (possibly AE, BSE) | 4 | General Chemistry II and Lab | CHM 132 | 4 |
| CHEM 231/231L | BSE, CE(Envr), EnvE | 4 | Elementary Organic Chemistry and Lab | CHM 200 | 5 |
| CHEM 331/333L | ChE (possibly BSE) | 5 | Organic Chemistry I and Lab | CHM 203 | 5 |
| CHEM 332/334L | ChE (possibly BSE) | 5 | Organic Chemistry II and Lab | CHM 204 | 5 |
| ECON 101 or ECON 102 | ME, SE (also accepted as an elective by all other engineering majors) | 3 | Principles of Microeconomics (101) or Principles of Macroeconomics (102) | ECO 102 or ECO 101 | 3 |
| MATH 265 | Required (or accepted as math elective) in all majors except AE(LW), BSE | 4 | Calculus III | MTH 152 | 4 |
| MATH 267 or 266 | All | 4 | Differential Equations | MTH 201 | 3 |
| PHYS 232/232L | AerE, ChE, ConE, EE, IE, MatE, ME | 5 | Classical Physics II and Lab | PHY 204&205 [^] | 6 [^] |
| SP CM 212 | AE, BSE, CE, EnvE, IE, ME, SE (also accepted as an elective by ChE, CprE, CybE, EE, MatE) | 3 | Fundamentals of Public Speaking | COM 103 | 3 |

*MVCC BIO 111 and BIO 112 must both be completed in order to transfer as credit for ISU BIOL 211 and BIOL 212
[^]When MVCC PHY 203, 204 and 205 are all completed credit will transfer to ISU as PHYS 221 (6 cr) and PHYS 232/232L (6 cr)

| Abbreviation key | | | |
|------------------------------|--|------------------------------------|---|
| Abbreviation | Major | Abbreviation | Major |
| AerE | Aerospace Engineering | CprE | Computer Engineering |
| AE <i>LW;AP; PM</i> | Agricultural Engineering Land&Water Resources option; Animal Production Systems option; Power&Machinery option | ConE <i>BE; EL; HH; MCH</i> | Construction Engineering Building Emphasis; Electrical Emphasis; Heavy/Highway; Mechanical Emphasis |
| BSE <i>EC; FB; OP</i> | Biological Systems Engineering Ecological option; Food & Process option; Open option | CybE | Cyber Security Engineering |
| ChE | Chemical Engineering | EE | Electrical Engineering |
| CE | Civil Engineering | EnvE | Environmental Engineering |
| <i>Envr</i> | Environmental Specialization | IE | Industrial Engineering |
| | | MatE | Materials Engineering |
| | | ME | Mechanical Engineering |
| | | SE | Software Engineering |

General Education: Social Science/Humanities (SS/H) Requirements

- Engineering degree programs require between 9 and 15 general education credits in social sciences and humanities (SS/H). The list below offers course options that are widely accepted by ISU engineering majors; however, each program has unique requirements—please confirm choices on an individual basis if you know your intended engineering major.
- Iowa State University requires each student to complete three credits of course work categorized as “US Diversity” (indicated below with ¹); and three credits of course work categorized as “International Perspective” (indicated below with ²). These can be included within the SS/H requirements.

| Social science/humanities (SS/H) courses widely accepted in ISU engineering degree programs | | | | |
|---|----|---|-----------------------|----|
| Iowa State | Cr | Iowa State Course Name | MVCC | Cr |
| ANTHRO 201 ² | 3 | Intro to Cultural Anthropology | ANT 202 | 3 |
| ECON 101 or ECON 102 | 3 | Principles of Microeconomics or Macroeconomics | ECO 102 or ECO 101 | 3 |
| HD FS 276 ¹ | 3 | Human Sexuality | PSY 211 | 3 |
| HIST 201 ² | 3 | Intro to Western Civilization I | HIS 101 | 3 |
| HIST 202 ² | 3 | Intro to Western Civilization II | HIS 102 | 3 |
| HIST 221 | 3 | Survey of U.S. History I | HIS 201 | 3 |
| HIST 222 | 3 | Survey of U.S. History II | HIS 202 | 3 |
| MUSIC 102 ² | 3 | Intro to Music Listening | MUS 107 | 3 |
| PHIL 201 | 3 | Intro to Philosophy | PHI 101 | 3 |
| POL S 111 | 3 | Intro to American Government | SC 110 | 3 |
| POL S 121 ² | 3 | Intro to International Politics | PSC 210 | 3 |
| PSYCH 101 | 3 | Intro to Psychology | PSY 101 | 3 |
| PSYCH 230 | 3 | Developmental Psychology | PSY 104 | 3 |
| PSYCH 280 | 3 | Social Psychology | PSY 202 | 3 |
| RELIG 205 ² | 3 | World Religions | PHI 120 | 3 |
| SOC 134 | 3 | Intro to Sociology | SOC 101 | 3 |
| SOC 219 | 3 | Sociology of Intimate Relationships | SOC 102 | 3 |
| SOC 235 ¹ | 3 | Social Problems and American Values | SOC 204 | 3 |

More information and resources

- Please use this transfer plan as a guide as you confirm course choices with an academic advisor in your major of interest.
- Additional transfer student resources are available at www.engineering.iastate.edu/transfer-students.
- Email questions to engineering@iastate.edu.