

Courses used in all engineering degree programs at ISU
>> If offered at your school, focus on these courses first <<

| Iowa State | Cr | Iowa State Course Name | NICC | Cr |
|---------------------|----|-------------------------------------|-------------|-----|
| CHEM 1770 (or 1670) | 4 | General Chemistry I (for Engineers) | CHM 160/161 | 4.5 |
| ENGL 1500 | 3 | Critical Thinking and Communication | ENG 105 | 3 |
| ENGL 2500 | 3 | WOVE Composition | ENG 106 | 3 |
| ENGR 1010 | R | Engineering Orientation | Not Offered | |
| ENGR 1600 | 3 | Engineering Problems | Not Offered | |
| LIB 1600 | 1 | Information Literacy | Not Offered | |
| MATH 1650 | 4 | Calculus I | MAT 210 | 4 |
| MATH 1660 | 4 | Calculus II | MAT 216 | 4 |
| PHYS 2310/2310L | 5 | Classical Physics I and Lab | Not Offered | |

The College of Engineering only accepts grades of "C" or higher for transfer courses

Additional courses used in specific engineering degree programs at ISU

| Iowa State | Engineering Major(s) Requiring Course (see abbreviation key below) | Cr | Iowa State Course Name | NICC | Cr |
|------------------------|---|----|--|--------------------|-----|
| AGRON 1810 | AE(LW) | 3 | Intro to Crop Science | AGA 114 | 3 |
| AGRON 1820 | AE(LW,VS) | 3 | Intro to Soil Science | AGA 154 | 3 |
| BIOL 2110 ⁺ | AE, BME | 3 | Principles of Biology I | BIO 112 | 4 |
| BIOL 2120 ⁺ | BSE, BME | 3 | Principles of Biology II | BIO 113 | 4 |
| CHEM 1780+Lab | AE, BSE, BME, ChE, CE, EnvE, MatE | 4 | General Chemistry II and Lab | CHM 170/171 | 4.5 |
| CHEM 3310+Lab | ChE (possibly BSE) | 5 | Organic Chemistry I and Lab | CHM 261 | 4 |
| CHEM 3320+Lab | ChE (possibly BSE) | 5 | Organic Chemistry II and Lab | CHM 271 | 4 |
| ECON 1010 or ECON 1020 | ME, SE (also accepted as an elective by all other engineering majors) | 3 | Principles of Microeconomics (1010) or Principles of Macroeconomics (1020) | ECN 130 or ECN 120 | 3 |
| MATH 2650 | Required (or accepted as math elective) in all majors except AE(LW), BSE | 4 | Calculus III | MAT 219 | 4 |
| MATH 2670 | All | 4 | Differential Equations | MAT 227 | 4 |
| MICRO 2010+Lab | AE(LW), CE(Envr), EnvE | 3 | Intro to Microbiology and Lab | BIO 186 | 4 |
| SP CM 2120 | AE,BSE,CE,EnvE,IE,ME, SE (or an elective by AerE,BME,ChE,CprE,CybE,EE,MatE) | 3 | Fundamentals of Public Speaking | SPC 112 | 3 |

*NICC Name BIO 112 & BIO 113 must both be completed in order to transfer as credit for ISU BIOL 2110 and BIOL 2120

Abbreviation key for majors listed above

| Abbreviation | Major | Abbreviation | Major |
|--------------|---|-----------------|--|
| AerE | Aerospace Engineering | ConE | Construction Engineering |
| AE | Agricultural Engineering | BE; EL; HH; MCH | Building Emphasis; Electrical Emphasis; Heavy/Highway; Mechanical Emphasis |
| LW;AP; VS | Land&Water Resources option; Animal Production Systems option; Vehicle Systems option | CybE | Cyber Security Engineering |
| BSE | Biological Systems Engineering | EE | Electrical Engineering |
| BME | Biomedical Engineering | EnvE | Environmental Engineering |
| ChE | Chemical Engineering | IE | Industrial Engineering |
| CE | Civil Engineering | MatE | Materials Engineering |
| Envr | Environmental Specialization | ME | Mechanical Engineering |
| CprE | Computer 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 “U.S. Cultures and Communities” (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 | NICC | Cr |
| ANTHRO 2010 ² | 3 | Intro to Cultural Anthropology | SOC 208 | 3 |
| ECON 1010 / ECON 1020 | 3 | Principles of Microeconomics / Macroeconomics | ECN 130 or 120 | 3 |
| HD FS 2400 ¹ | 3 | Literature for Children | EDU 235 | 3 |
| HD FS 2760 ¹ | 3 | Human Sexuality | PSY 261 | 3 |
| HIST 2010 ² | 3 | Intro to Western Civilization I | HIS 131 | 3 |
| HIST 2020 ² | 3 | Intro to Western Civilization II | HIS 132 | 3 |
| HIST 2210 | 3 | Survey of U.S. History I | HIS 151 | 3 |
| HIST 2220 | 3 | Survey of U.S. History II | HIS 152 | 3 |
| MUSIC 1020 ² | 3 | Intro to Music Listening | MUS 100 | 3 |
| PHIL 2010 | 3 | Intro to Philosophy | PHI 101 | 3 |
| POL S 1110 | 3 | Intro to American Government | POL 111 | 3 |
| PSYCH 1010 | 3 | Intro to Psychology | PSY 111 | 3 |
| PSYCH 2300 | 3 | Developmental Psychology | PSY 121 | 3 |
| PSYCH 2800 | 3 | Social Psychology | PSY 251 | 3 |
| RELIG 2050 ² | 3 | World Religions | REL 105 | 3 |
| SOC 1340 | 3 | Intro to Sociology | SOC 110 | 3 |
| SOC 2190 | 3 | Sociology of Intimate Relationships | SOC 120 | 3 |
| SOC 2350 ¹ | 3 | Social Problems and American Values | SOC 115 | 3 |
| SOC 2410 | 3 | Youth and Crime | CRJ 201 | 3 |

More information and resources

- Pre-engineering students are encouraged to join Iowa State's free Admissions Partnership Program: www.admissions.iastate.edu.
- Please use this transfer plan as a guide as you confirm course choices with an academic advisor in your major of interest.
- Email questions to engineering@iastate.edu. Additional resources are available at www.engineering.iastate.edu/transfer-students.

Sample NICC course plan – Year One

SEMESTER 1

| NICC Course Number | Credits | Course Name/Topic | Equivalent course at Iowa State |
|--------------------|-----------|---|---|
| ENG 105 | 3 | English/Composition I | ENGL 1500 |
| MAT 210 | 4 | Calculus I | MATH 1650 |
| CHM 160/161 | 4.5 | General Chemistry I | CHEM 1770 (or CHEM 1670) |
| MUS 102 or SOC 208 | 3 | SS/H (meets International Perspective) (or choose another SS/H Elective) | MUSIC 1020 ² or ANTHRO 2010 ² |
| | = 14.5 cr | | |

SEMESTER 2

| NICC Course Number | Credits | Course Name/Topic | Equivalent course at Iowa State |
|--------------------|-----------|---------------------------|---|
| ENG 106 | 3 | English/Composition II | ENGL 2500 |
| MAT 216 | 4 | Calculus II | MATH 1660 |
| CHM 170/171 | 4.5 | General Chemistry II | CHEM 1780/1780L (not required in every engineering major) |
| ECN 130 or 120 | 3 | Microeconomics (or Macro) | ECN 1010 or 1020 |
| | = 14.5 cr | | |