

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 credits into the College of Engineering.
- All engineering students must successfully complete **BASIC PROGRAM** courses (listed below) before progressing to upper level engineering program course work.
- Students not adequately prepared for success in Calculus I may need to take courses in addition to those listed in the Basic Program. Some students may first need to successfully complete college algebra (Math 140; MCC MAT 161) and/or college trigonometry/prep for calculus (Math 143; MCC MAT 165).
- The College of Engineering requires two years of a single foreign language in high school – OR – an equivalent in college (typically two semesters).

BASIC PROGRAM courses: required in all engineering degree programs at ISU

ISU Course	Cr	MCC Course	Cr
CHEM 177 or 167	4	General Chemistry for Engineers	5
ENGL 150	3	Critical Thinking and Communication	3
ENGL 250	3	WOVE Composition	3
ENGR 101	R	Engineering Orientation	
ENGR 160	3	Engineering Problems	
LIB 160	1	Information Literacy	1
MATH 165	4	Calculus I	5
MATH 166	4	Calculus II	5
PHYS 221	5	Classical Physics I	6 [^]

Additional courses required in *specific* engineering degree programs (majors) at ISU
(see abbreviation on page 2)

ISU Course	Engineering Major Requiring	Cr	MCC Course	Cr
AGRON 182	AE(LW,PM)	3	Soil Science	4
BIOL 211 ⁺	AE, CE(Envr)	3	Principles of Biology I	4
BIOL 212 ⁺	BSE	3	Principles of Biology II	4
MICRO 201/201L	CE(Envr), AE(LW)	4	Microbiology	4
CHEM 178/178L	ChE,CE,MatE (& AE,BSE if 177 completed)	4	General Chemistry II & Lab II	5
CHEM 331/333L	BSE(BR,Pre), ChE	5	Organic Chemistry I	5
CHEM 332/334L	BSE(BR,Pre), ChE	5	Organic Chemistry II	5
ECON 101 or 102	ConE, ME (also accepted as an elective by all engineering majors)	3	Intro to Microeconomics (101) or Intro to Macroeconomics (102)	3
EE 201	CprE, ConE(Elec), EE	4	Electrical Circuits	4
EM 274	All <i>except</i> ChE, CprE, EE, SE	3	Engineering Statics	3
MATH 207	EE	3	Linear Algebra	4
MATH 265	All <i>except</i> AE, BSE, SE	4	Calculus III	3
MATH 267	ALL	4	Elem. Diff. Eq's & Laplace Trans.	3
PHYS 222	All <i>except</i> AE, BSE, CE(Envr), SE	5	Classical Physics II	6 [^]
SP CM 212	CE, IE, SE (also accepted as an elective by AE, BSE, ChE, CprE, EE, MatE, ME)	3	Fundamentals of Public Speaking	3

⁺MCC BIO 157 & BIO 158 must both be completed in order to transfer as credit for ISU Biol 211 and Biol 212

[^]Completion of MCC PHY 291, 292 and 293 transfers in as ISU PHYS 221 (6 cr) and PHYS 222 (6 cr)

Abbreviation key:

Abbreviation	Major	Abbreviation	Major
AerE	Aerospace Engineering	CprE	Computer Engineering
AE	Agricultural Engineering	ConE	Construction Engineering
LW; AP; PM	Land&Water Resources option; Animal Production Systems option; Power & Machinery option	ELE	Electrical emphasis
BSE	Biological Systems Engineering	EE	Electrical Engineering
BE; FE	Bioenvironmental option; Food Engineering option;	IE	Industrial Engineering
BR; Op	Biorenewable Resources option; Open option	MatE	Materials Engineering
ChE	Chemical Engineering	ME	Mechanical Engineering
CE	Civil Engineering	SE	Software Engineering
Envr	Environmental option		

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

- Engineering degree programs require between 12 and 15 credits in social sciences/humanities/general education (SS/H). The list below offers course options that are accepted by all ISU engineering departments; however, each program has unique requirements—please confirm choices on an individual basis if you know your intended engineering program.
- Iowa State University requires each student to complete three credits of course work categorized as “US Diversity” (indicated below with ¹); and 3 credits of course work categorized as “International Perspective” (indicated below with ²). These can be included within the 12-15 credits of SS/H requirements.

**Social science/humanities/general education (SS/H) courses accepted
in all ISU engineering degree programs**

ISU Course	Cr		MCC Course	Cr
ANTHR 201 ²	3	Introduction to Cultural Anthropology	ANT 170	3
ECON 101	3	Principles of Microeconomics	ECO 251	3
ECON 102	3	Principles of Macroeconomics	ECO 252	3
ENGL 201	3	Introduction to Literature	ENG 251	3
HD FS 240 ¹	3	Literature for Children	EDU 252 or ENG 277	3
HIST 201 ²	3	Introduction To Western Civilization I	HIS 131	3
HIST 202 ²	3	Introduction To Western Civilization II	HIS 132	3
HIST 221	3	Survey of U.S History I	HIS 170	3
HIST 222	3	Survey of U.S History II	HIS 172	3
MUSIC 102 ²	3	Introduction to Music Listening	MUS 151	3
PHIL 201	3	Introduction to Philosophy	PHI 151	3
WS 201	3	Women’s Studies	PHI 158	3
POL S 215	3	Introduction to American Government	PLT 151	3
POL S 241 ²	3	Comparative Governments and Politics	PLT 255	3
POL S 251 ²	3	Introduction to International Politics	PLT 251	3
PSYCH 101	3	Introduction to Psychology	PSY 151	3
PSYCH 230	3	Developmental Psychology	PSY 250	3
PSYCH 280	3	Social Psychology	PSY 265	3
HD FS 276 ¹	3	Human Sexuality	PSY 175	3
RELIG 205 ²	3	Introduction to World Religions	PHI 261	3
SOC 134	3	Introduction to Sociology	SOC 151	3
SOC 219	3	Sociology of Intimate Relationships	SOC 175	3
SOC 235 ¹	3	Social Problems and American Values	SOC 251	3

More information and resources

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