

IOWA STATE UNIVERSITY

College of Engineering

Joliet Junior College Transfer Plan

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 (MATH 140; Joliet MATH 131 or 138) and/or college trigonometry/prep for calculus (MATH 143; Joliet MATH 139 or 141).
- The College of Engineering requires two years of a single foreign language in high school or the equivalent in college (typically two semesters).

Courses required in all engineering degree programs at ISU				
>> focus on these courses first <<				
Iowa State	Cr	Iowa State Course Name	Joliet	Cr
CHEM 177 (or 167)	4	General Chemistry I (for Engineers)	CHEM 101	5
ENGL 150	3	Critical Thinking and Communication	ENG 101	3
ENGL 250	3	WOVE Composition	ENG 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	MATH 170	5
MATH 166	4	Calculus II	MATH 171	4
PHYS 221 (or 231/231L)	5	Classical Physics I and Lab	PHYS 201	5

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	Joliet	Cr
AGRON 181	AE(LW)	3	Intro to Crop Science	AGRI 105	4
AGRON 182	AE(LW,PM)	3	Intro to Soil Science	AGRI 126	4
BIOL 211 ⁺	AE, CE(Envr)	3	Principles of Biology I	BIO 151	5
BIOL 212 ⁺	BSE	3	Principles of Biology II	BIO 152	5
CE 274	All except ChE,CprE,CybE,EE,MatE,SE	3	Engineering Statics	EGR 201	3
CHEM 178/178L	ChE,CE,EnvE,MatE (possibly AE,BSE)	4	General Chemistry II and Lab	CHEM 102	5
CHEM 231/231L	BSE, CE(Envr), EnvE	4	Elementary Organic Chemistry and Lab	CHEM 108	4
CHEM 331/333L	ChE (possibly BSE)	5	Organic Chemistry I and Lab	CHEM 209	5
CHEM 332/334L	ChE (possibly BSE)	5	Organic Chemistry II and Lab	CHEM 210	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)	ECON 104 or ECON 103	3
MATH 265	Required (or accepted as math elective) in all majors except AE(LW), BSE	4	Calculus III	MATH 172	4
MATH 267 or 266	All	4	Differential Equations	MATH 220	3
ME 345	AerE, AE(PM), CE, ME	3	Engineering Dynamics	EGR 202	3
PHYS 232/232L	AerE,ChE,CprE,ConE,EE,IE,MatE,ME	5	Classical Physics II and Lab	PHYS 202	5
SP CM 212	CE,EnvE,IE,SE (also accepted as an elective by AE,BSE,ChE,CprE,CybE,EE,MatE,ME)	3	Fundamentals of Public Speaking	COMM 101	3

*JJC BIO 151 & BIO 152 must both be completed in order to transfer as credit for ISU BIOL 211 and BIOL 212

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>BE; FE; BR; Op</i>	Biological Systems Engineering Bioenvironmental option; Food Engineering option; Biorenewable Resource 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	Joliet	Cr
ANTHRO 201 ²	3	Intro to Cultural Anthropology	ANTH 275	3
ECON 101 or ECON 102	3	Principles of Microeconomics or Macroeconomics	ECON 104 or 103	3
HD FS 240 ¹	3	Literature for Children	ENG 109	3
HD FS 276 ¹	3	Human Sexuality	SOC 293	3
HIST 201 ²	3	Intro to Western Civilization I	HIST 105 or 107	3
HIST 202 ²	3	Intro to Western Civilization II	HIST 106 or 108	3
HIST 221	3	Survey of U.S. History I	HIST 103	3
HIST 222	3	Survey of U.S. History II	HIST 104	3
PHIL 201	3	Intro to Philosophy	PHIL 101	3
POL S 215	3	Intro to American Government	PSCI 101	3
POL S 241 ²	3	Democracy and Dictatorship: Intro to Comparative Politics	PSCI 103	3
PSYCH 101	3	Intro to Psychology	PSYC 101	3
PSYCH 230	3	Developmental Psychology	PSYC 215	3
PSYCH 280	3	Social Psychology	PSYC 208	3
RELIG 205 ²	3	World Religions	SOC 240	3
SOC 134	3	Intro to Sociology	SOC 101	3
SOC 235 ¹	3	Social Problems and American Values	SOC 280	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.
- Email questions to engrapp@iastate.edu.

Sample Joliet Junior College course plan – Year One

(Shown as an example only – please personalize when working with your academic advisor.)

SEMESTER 1

Joliet Course Number	Credits	Course Name/Topic	Equivalent course at Iowa State
ENG 101	3	English/Composition I	ENGL 150
MATH 170	5	Calculus I	MATH 165
HIST 105	3	Western Civilization I	HIST 201 ²
CHEM 101	5	General Chemistry I	CHEM 177 (or CHEM 167)
	= 16 cr		

SEMESTER 2

Joliet Course Number	Credits	Course Name/Topic	Equivalent course at Iowa State
ENG 102	3	English/Composition II	ENGL 250
MATH 171	4	Calculus II	MATH 166
PHYS 201	5	Classical Physics I	PHYS 221 (aka PHYS 231/231L)
ECON 104	3	Microeconomics	ECON 101
	= 15 cr		