

# IOWA STATE UNIVERSITY

## College of Engineering

### McHenry County 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; MCC MAT 161) and/or college trigonometry/prep for calculus (MATH 143; MCC MAT 166).
- The College of Engineering requires two years of a single foreign language in high school or the equivalent in college (typically two semesters).

<b>Courses required in all engineering degree programs at ISU</b>				
<b>&gt;&gt; focus on these courses first &lt;&lt;</b>				
<b>Iowa State</b>	<b>Cr</b>	<b>Iowa State Course Name</b>	<b>MCC</b>	<b>Cr</b>
CHEM 177 (or 167)	4	General Chemistry I (for Engineers)	CHM 165	5
ENGL 150	3	Critical Thinking and Communication	ENG 151	3
ENGL 250	3	WOVE Composition	ENG 152	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	MAT 175	5
MATH 166	4	Calculus II	MAT 245	5
PHYS 221* (or 231/231L)	5	Classical Physics I and Lab	PHY 291&292*	(8)*

<b>Additional courses required in specific engineering degree programs at ISU</b>					
<b>Iowa State</b>	<b>Engineering Major(s) Requiring Course</b> (see abbreviation key below)	<b>Cr</b>	<b>Iowa State Course Name</b>	<b>MCC</b>	<b>Cr</b>
AGRON 182	AE(LW,PM)	3	Intro to Soil Science	HRT 105	4
BIOL 211+	AE, CE(Envr)	3	Principles of Biology I	BIO 157	4
BIOL 212+	BSE	3	Principles of Biology II	BIO 158	4
CE 274	All except ChE,CprE,CybE,EE,MatE,SE	3	Engineering Statics	EGR 251	3
CHEM 178/178L	ChE,CE,EnvE,MatE (possibly AE,BSE)	4	General Chemistry II and Lab	CHM 166	5
CHEM 331/333L	ChE (possibly BSE)	5	Organic Chemistry I and Lab	CHM 265	5
CHEM 332/334L	ChE (possibly BSE)	5	Organic Chemistry II and Lab	CHM 266	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 251 or ECO 252	3
EE 201	ConE(EL), CprE, EE	4	Electric Circuits	EGR 260	4
MATH 207	EE	3	Matrices and Linear Algebra	MAT 253	4
MATH 265	Required (or accepted as math elective) in all majors except AE(LW), BSE	4	Calculus III	MAT 255	3
MATH 267 or 266	All	4	Differential Equations	MAT 260	3
MICRO 201/201L	AE(LW), CE(Envr), EnvE	3	Intro to Microbiology and Lab	BIO 255	4
PHYS 232/232L	AerE,ChE,CprE,ConE,EE,IE,MatE,ME	5	Classical Physics II and Lab	PHY 292&293	(8)
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	SPE 151	3

\*When MCC PHY 291, PHY 292 and PHY 293 are all taken the courses will transfer as credit for ISU PHYS 221 (6) and PHYS 232/232L (6)

\*MCC BIO 157 & BIO 158 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 <sup>1</sup>); and three credits of course work categorized as “International Perspective” (indicated below with <sup>2</sup>). 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	MCC	Cr
ANTHRO 201 <sup>2</sup>	3	Intro to Cultural Anthropology	ANT 170	3
ECON 101 or ECON 102	3	Principles of Microeconomics or Macroeconomics	ECO 251 or 252	3
HD FS 240 <sup>1</sup>	3	Literature for Children	ENG 277 or EDU 252	3
HD FS 276 <sup>1</sup>	3	Human Sexuality	PSY 175	3
HIST 201 <sup>2</sup>	3	Intro to Western Civilization I	HIS 131	3
HIST 202 <sup>2</sup>	3	Intro 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 <sup>2</sup>	3	Intro to Music Listening	MUS 151	3
PHIL 201	3	Intro to Philosophy	PHI 151	3
POL S 215	3	Intro to American Government	PLT 151	3
POL S 241 <sup>2</sup>	3	Democracy and Dictatorship: Intro to Comparative Politics	PLT 255	3
POL S 251 <sup>2</sup>	3	Intro to International Politics	PLT 251	3
PSYCH 101	3	Intro to Psychology	PSY 151	3
PSYCH 230	3	Developmental Psychology	PSY 250	3
PSYCH 280	3	Social Psychology	PSY 265	3
RELIG 205 <sup>2</sup>	3	World Religions	PHI 261	3
SOC 134	3	Intro to Sociology	SOC 151	3
SOC 219	3	Sociology of Intimate Relationships	SOC 175	3
SOC 235 <sup>1</sup>	3	Social Problems and American Values	SOC 251	3
WGS 201	3	Intro to Women's and Gender Studies	PHI 158	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](http://www.engineering.iastate.edu/transfer).
- Email questions to [engrapp@iastate.edu](mailto:engrapp@iastate.edu).

## Sample MCC course plan – Year One

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

### SEMESTER 1

<b>MCC Course Number</b>	<b>Credits</b>	<b>Course Name/Topic</b>	<b>Equivalent course at Iowa State</b>
ENG 151	3	English/Composition I	ENGL 150
MAT 175	5	Calculus I	MATH 165
HIS 131	3	Western Civilization	HIST 201 <sup>2</sup>
CHM 165	5	General Chemistry I	CHEM 177 (or CHEM 167)
	= 16 cr		

### SEMESTER 2

<b>MCC Course Number</b>	<b>Credits</b>	<b>Course Name/Topic</b>	<b>Equivalent course at Iowa State</b>
ENG 152	3	English/Composition II	ENGL 250
MAT 245	5	Calculus II	MATH 166
PHY 291*	(4)*	Classical Physics I	PHYS 221 (aka PHYS 231/231L)
ECO 251	3	Microeconomics	ECON 101
	= 15 cr		

### SUMMER 1

<b>MCC Course Number</b>	<b>Credits</b>	<b>Course Name/Topic</b>	<b>Equivalent course at Iowa State</b>
PHY 292*	(4)*	Classical Physics I	PHYS 221 (aka PHYS 231/231L)
	= 4 cr		