

# IOWA STATE UNIVERSITY

## College of Engineering

### Normandale Community 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; Normandale MATH 1118) and/or college trigonometry/prep for calculus (MATH 143; Normandale MATH 1127).
- 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> <i>&gt;&gt; focus on these courses first &lt;&lt;</i>				
<b>Iowa State</b>	<b>Cr</b>	<b>Iowa State Course Name</b>	<b>Normandale</b>	<b>Cr</b>
CHEM 177 (or 167)	4	General Chemistry I (for Engineers)	CHEM 1061	5
ENGL 150	3	Critical Thinking and Communication	ENGC 1101	4
ENGL 250	3	WOVE Composition	n/a	
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 1510	5
MATH 166	4	Calculus II	MATH 1520	5
PHYS 221 (or 231/231L)	5	Classical Physics I and Lab	PHYS 1121	5

<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>Normandale</b>	<b>Cr</b>
BIOL 211+	AE, CE ( <i>Envr</i> )	3	Principles of Biology I	BIOL 1501	5
BIOL 212+	BSE	3	Principles of Biology II	BIOL 1502	4
CE 274	<b>All</b> except ChE, CprE, CybE, EE, MatE, SE	3	Engineering Statics	ENGR 2235	3
CHEM 178/178L	ChE, CE, EnvE, MatE (possibly AE, BSE)	4	General Chemistry II and Lab	CHEM 1062	5
CHEM 331/333L	ChE (possibly BSE)	5	Organic Chemistry I and Lab	CHEM 2061	5
CHEM 332/334L	ChE (possibly BSE)	5	Organic Chemistry II and Lab	CHEM 2062	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 2201 or 2202	3
MATH 265	Required (or accepted as math elective) in all majors except AE ( <i>LW</i> ), BSE	4	Calculus III	MATH 2510	5
MATH 267 or 266	<b>All</b>	4	Differential Equations	MATH 2520	5
ME 345	AerE, AE ( <i>PM</i> ), CE, ME	3	Engineering Dynamics	ENGR 2236	3
MICRO 201/201L	AE ( <i>LW</i> ), CE ( <i>Envr</i> ), EnvE	3	Intro to Microbiology and Lab	BIOL 2043	4
PHYS 232/232L	AerE, ChE, CprE, ConE, EE, IE, MatE, ME	5	Classical Physics II and Lab	PHYS 1122	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 1101	3

\*Normandale BIOL 1501 and BIOL 1502 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	Normandale	Cr
ANTHRO 201 <sup>2</sup>	3	Intro to Cultural Anthropology	ANTH 1127	3
ECON 101 or ECON 102	3	Principles of Microeconomics or Macroeconomics	ECON 2201 or 2202	3
HD FS 276 <sup>1</sup>	3	Human Sexuality	PSYC 1120	3
HIST 201 <sup>2</sup>	3	Intro to Western Civilization I	HIST 1101 and 1102	(6)*
HIST 202 <sup>2</sup>	3	Intro to Western Civilization II	HIST 1102 and 1103	(6)*
HIST 221	3	Survey of U.S. History I	HIST 1111	4
HIST 222	3	Survey of U.S. History II	HIST 1112	4
MUSIC 102 <sup>2</sup>	3	Intro to Music Listening	MUSC 1122	3
PHIL 201	3	Intro to Philosophy	PHIL 1101	3
POL S 215	3	Intro to American Government	POLS 1130	3
POL S 241 <sup>2</sup>	3	Democracy and Dictatorship: Intro to Comparative Politics	POLS 1132	3
PSYCH 101	3	Intro to Psychology	PSYC 1110	4
PSYCH 230	3	Developmental Psychology	PSYC 2210	4
PSYCH 280	3	Social Psychology	PSYC 2600 or SOC 2108	3
RELIG 205 <sup>2</sup>	3	World Religions	PHIL 1150	3
SOC 134	3	Intro to Sociology	SOC 1104	3
SOC 219	3	Sociology of Intimate Relationships	SOC 1102	3
SOC 235 <sup>1</sup>	3	Social Problems and American Values	SOC 1106	3
SOC 241	3	Youth and Crime	SOC 2131	3
WGS 201 <sup>1</sup>	3	Intro to Women's and Gender Studies	SOC 1120 or WMST 1120	3

\*When Normandale HIST 1101, 1102 and 1103 are all taken the courses will transfer as ISU HIST 201 (6 cr) and HIST 202 (6 cr)

### 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 Normandale course plan – Year One

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

### SEMESTER 1

<b>Normandale Course</b>	<b>Credits</b>	<b>Course Name/Topic</b>	<b>Equivalent course at Iowa State</b>
ENGC 1101	4	English/Composition I	ENGL 150
MATH 1510	5	Calculus I	MATH 165
CHEM 1061	5	General Chemistry I	CHEM 177 (or CHEM 167)
	= 14 cr		

### SEMESTER 2

<b>Normandale Course</b>	<b>Credits</b>	<b>Course Name/Topic</b>	<b>Equivalent course at Iowa State</b>
MATH 1520	5	Calculus II	MATH 166
PHYS 1121	5	Classical Physics I	PHYS 221 (aka PHYS 231/231L)
ECON 2201	3	Microeconomics	ECON 101
	= 13 cr		