

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	Inver Hills	Cr
CHEM 1770 (or 1670)	4	General Chemistry I (for Engineers)	CHEM 1061	5
ENGL 1500	3	Critical Thinking and Communication	ENG 1108	4
ENGL 2500	3	WOVE Composition	ENG 1114	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	MATH 1133	5
MATH 1660	4	Calculus II	MATH 1134	5
PHYS 2310/2310L	5	Classical Physics I and Lab	PHYS 1081	5

\*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	Inver Hills	Cr
BIOL 2110+	AE, BME	3	Principles of Biology I	BIOL 1154	4
BIOL 2120+	BSE, BME	3	Principles of Biology II	BIOL 1155	5
CE 2740	AerE, AE, BSE, CE, ConE, EnvE, IE, ME	3	Engineering Statics	ENGR 2020	3
CHEM 1780+Lab	AE, BSE, BME, ChE, CE, EnvE, MatE	4	General Chemistry II and Lab	CHEM 1062	5
CHEM 3310+Lab	ChE (possibly BSE)	5	Organic Chemistry I and Lab	CHEM 2061	5
CHEM 3320+Lab	ChE (possibly BSE)	5	Organic Chemistry II and Lab	CHEM 2062	5
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)	ECON 1106 or 1105	3
EM 3240	AerE, AE, BSE, CE, ConE, EnvE, ME	3	Mechanics of Materials	ENGR 2024	3
MATH 2070	EE, CprE	3	Matrices and Linear Algebra	MATH 2221	3
MATH 2300	SE	3	Discrete Mathematics	MATH 2100	4
MATH 2650	Required (or accepted as math elective) in all majors except AE(LW), BSE	4	Calculus III	MATH 2219	5
MATH 2670	All	4	Differential Equations	MATH 2222	3
ME 3450	AerE, AE(VS), CE, ME	3	Engineering Dynamics	ENGR 2025	3
MICRO 2010+Lab	AE(LW)	3	Intro to Microbiology	BIOL 2205	4
PHYS 2320+Lab	AerE,BME,ChE,ConE,EE,IE,MatE,ME	5	Classical Physics II and Lab	PHYS 1082	5
SP CM 2120	AE,BSE,CE,EnvE,IE,ME,SE (also accepted as an elective by BME,ChE,CprE,CybE,EE,MatE)	3	Fundamentals of Public Speaking	COMM 1110	3

\*Inver Hills BIOL 1154 and BIOL 1155 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 <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	Inver Hills	Cr
ANTHRO 2010 <sup>2</sup>	3	Intro to Cultural Anthropology	ANTH 1110	3
ECON 1010 / ECON 1020	3	Principles of Microeconomics / Macroeconomics	ECON 1106 or 1105	3
HD FS 2400 <sup>1</sup>	3	Literature for Children	EDU 2805	3
HD FS 2760 <sup>1</sup>	3	Human Sexuality	HSER 1140	3
HIST 2010 <sup>2</sup>	3	Intro to Western Civilization I	HIST 1106	4
HIST 2020 <sup>2</sup>	3	Intro to Western Civilization II	HIST 1107	4
HIST 2210	3	Survey of U.S. History I	HIST 1114	4
HIST 2220	3	Survey of U.S. History II	HIST 1115	4
MUSIC 1020 <sup>2</sup>	3	Intro to Music Listening	MUSC 1140	3
PHIL 2010	3	Intro to Philosophy	PHIL 1110	3
POL S 1110	3	Intro to American Government	POLS 1111	3
PSYCH 1010	3	Intro to Psychology	PSYC 1101	3
PSYCH 2300	3	Developmental Psychology	PSYC 1210	3
PSYCH 2800	3	Social Psychology	PSYC 2100	3
RELIG 2050 <sup>2</sup>	3	World Religions	HIST 2125	4
SOC 1340	3	Intro to Sociology	SOC 1100	4
SOC 2350 <sup>1</sup>	3	Social Problems	SOC 1114	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.
- Email questions to [engineering@iastate.edu](mailto:engineering@iastate.edu). Additional resources are available at [www.engineering.iastate.edu/transfer-students](http://www.engineering.iastate.edu/transfer-students).

### Sample Inver Hills course plan – Year One

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

#### SEMESTER 1

Inver Hills Course Number	Credits	Course Name/Topic	Equivalent course at Iowa State
ENG 1108	4	English/Composition I	ENGL 1500
MATH 1133	5	Calculus I	MATH 1650
CHEM 1061	5	General Chemistry I	CHEM 1770 (or CHEM 1670)
	= 14 cr		

#### SEMESTER 2

Inver Hills Course Number	Credits	Course Name/Topic	Equivalent course at Iowa State
ENG 1114	3	English/Composition II	ENGL 2500
MATH 1134	5	Calculus II	MATH 1660
PHYS 1081	5	Classical Physics I	PHYS 2310 & 2310L
ECON 1106	3	Microeconomics	ECON 1010
	= 16 cr		