

IOWA STATE UNIVERSITY

College of Engineering

College of Lake County 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 and/or college trigonometry/prep for calculus.
- The College of Engineering requires two years of a single foreign language in high school or the equivalent in college.
- Beginning Fall 2023, ISU is offering a new degree program, Biomedical Engineering. This program requires a separate application and certain first-year course requirements. If you have interest in this degree, please consult with engineering@iastate.edu

Courses required in all engineering degree programs at ISU				
<i>>> focus on these courses first <<</i>				
Iowa State	Cr	Iowa State Course Name	CLC	Cr
CHEM 177 (or 167)	4	General Chemistry I (for Engineers)	CHM 121	5
ENGL 150	3	Critical Thinking and Communication	ENG 121	3
ENGL 250	3	WOVE Composition	ENG 122	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	MTH 145	5
MATH 166	4	Calculus II	MTH 146	4
PHYS 231/231L	5	Classical Physics I and Lab	PHY 123 & 124	8*

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	CLC	Cr
BIOL 211 ⁺	AE	3	Principles of Biology I	BIO 161	4
BIOL 212 ⁺	BSE	3	Principles of Biology II	BIO 162	4
CE 274	All except ChE,CprE,CybE,EE,MatE,SE	3	Engineering Statics	EGR 125	3
CHEM 178/178L	ChE,CE,EnvE,MatE (possibly AE,BSE)	4	General Chemistry II and Lab	CHM 123	5
CHEM 231/231L	BSE, CE(<i>Envr</i>), EnvE	4	Elementary Organic Chemistry & Lab	CHM 125	5
CHEM 331/333L	ChE (possibly BSE)	5	Organic Chemistry I and Lab	CHM 222	5
CHEM 332/334L	ChE (possibly BSE)	5	Organic Chemistry II and Lab	CHM 223	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 222 or ECO 221	3
EM 324	AerE, AE, BSE, CE, ConE, EnvE, ME	3	Mechanics of Materials	EGR 222	3
MATH 207	EE, CprE	3	Matrices and Linear Algebra	MTH 225	3
MATH 265	Required (or accepted as math elective) in all majors except AE(<i>LW</i>), BSE	4	Calculus III	MTH 246	5
MATH 267 or 266	All	4	Differential Equations	MTH 227	3
ME 345	AerE, AE(<i>PM</i>), CE, ME	3	Engineering Dynamics	EGR 225	3
MICRO 201/201L	AE(<i>LW</i>), CE(<i>Envr</i>), EnvE	3	Intro to Microbiology and Lab	BIO 246	4
PHYS 232/232L	AerE,ChE,ConE,EE,IE,MatE,ME	5	Classical Physics II and Lab	PHY 124 & 221*	8
SP CM 212	AE, BSE, CE,EnvE,IE,ME, SE (also accepted as an elective by ChE,CprE,CybE,EE,MatE)	3	Fundamentals of Public Speaking	CMM 121	3

*When CLC PHY 123, PHY 124 and PHY 221 are all taken the courses will transfer as credit for ISU PHYS 231/231L (6) and PHYS 232/232L (6)

*CLC BIO 161 & BIO 162 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>EC; FB; OP</i>	Biological Systems Engineering Ecological option; Food & Bioprocess option; Open option	CybE	Cyber Security Engineering
		EE	Electrical Engineering
		EnvE	Environmental Engineering
ChE	Chemical Engineering	IE	Industrial Engineering
CE <i>Envr</i>	Civil Engineering Environmental Specialization	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	CLC	Cr
ANTHRO 201 ²	3	Intro to Cultural Anthropology	ANT 221	3
ECON 101 or ECON 102	3	Principles of Microeconomics or Macroeconomics	ECO 222 or 221	3
HD FS 240 ¹	3	Literature for Children	ENG 249	3
HD FS 276 ¹	3	Human Sexuality	PSY 228	3
HIST 201 ²	3	Intro to Western Civilization I	HST 121	3
HIST 202 ²	3	Intro to Western Civilization II	HST 122	3
HIST 221	3	Survey of U.S. History I	HST 221	3
HIST 222	3	Survey of U.S. History II	HST 222	3
MUSIC 102 ²	3	Intro to Music Listening	MUS 124	3
PHIL 201	3	Intro to Philosophy	PHI 121	3
POL S 111	3	Intro to American Government	PSC 121	3
POL S 125 ²	3	Democracy and Dictatorship: Intro to Comparative Politics	PSC 221	3
POL S 121 ²	3	Intro to International Politics	PSC 222	3
PSYCH 101	3	Intro to Psychology	PSY 121	3
PSYCH 230	3	Developmental Psychology	PSY 220 or 222	3
PSYCH 280	3	Social Psychology	PSY 225	3
RELIG 205 ²	3	World Religions	PHI 126	3
SOC 134	3	Intro to Sociology	SOC 121	3
SOC 235 ¹	3	Social Problems and American Values	SOC 222	3
SOC 241	3	Youth and Crime	CRJ 229	3
WGS 201 ¹	3	Intro to Women’s and Gender Studies	GXS 121	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-students.
- Email questions to engineering@iastate.edu.

Last updated on 9/6/23 based on course listings in the ISU 2022-23 catalog and the CLC 2022-23 catalog.

Sample CLC course plan – Year One

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

SEMESTER 1

CLC Course Number	Credits	Course Name/Topic	Equivalent course at Iowa State
ENG 121	3	English/Composition I	ENGL 150
MTH 145	5	Calculus I	MATH 165
PHY 123 and PHY 221	8	Classical Physics I	PHYS 231/231L
	= 16 cr		

SEMESTER 2

CLC Course Number	Credits	Course Name/Topic	Equivalent course at Iowa State
ENG 122	3	English/Composition II	ENGL 250
MTH 146	4	Calculus II	MATH 166
PHY 124	6	Classical Physics II	PHYS 232/232L
ECO 222	3	Microeconomics	ECON 101
	= 16 cr		

SUMMER 1

CLC Course Number	Credits	Course Name/Topic	Equivalent course at Iowa State
CHM 121	5	General Chemistry I	CHEM 177 (or CHEM 167)
	= 5 cr		