

IOWA STATE UNIVERSITY College of Engineering	Harper College Transfer Plan
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Courses used in all engineering degree programs at ISU >> If offered at your school, <i>focus on these courses first</i> <<				
Iowa State	Cr	Iowa State Course Name	Harper	Cr
CHEM 1770 (or 1670)	4	General Chemistry I (for Engineers)	CHM 121	5
ENGL 1500	3	Critical Thinking and Communication	ENG 101	3
ENGL 2500	3	WOVE Composition	ENG 102	3
ENGR 1010	R	Engineering Orientation	N/A	
ENGR 1600	3	Engineering Problems	N/A	
LIB 1600	1	Information Literacy	N/A	
MATH 1650	4	Calculus I	MTH 200	5
MATH 1660	4	Calculus II	MTH 201	5
PHYS 2310/2310L	5	Classical Physics I and Lab	PHY 201	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	Harper	Cr
BIOL 2110+	AE, BME	3	Principles of Biology I	BIO 115	4
BIOL 2120+	BSE, BME	3	Principles of Biology II	BIO 116	4
CE 2740	AerE, AE, BSE, CE, ConE, EnvE, IE, ME	3	Engineering Statics	EGR 210	3
CHEM 1780+Lab	AE, BSE, BME, ChE, CE, EnvE, MatE	4	General Chemistry II and Lab	CHM 122	5
CHEM 2310+Lab	BSE, BME, CE(Envr), EnvE	4	Elementary Organic Chemistry and Lab	CHM 201	4
CHEM 3310+Lab	ChE (possibly BSE)	5	Organic Chemistry I and Lab	CHM 204	5
CHEM 3320+Lab	ChE (possibly BSE)	5	Organic Chemistry II and Lab	CHM 205	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)	ECO 211 or ECO 212	3
EM 3240	AerE, AE, BSE, CE, ConE, EnvE, ME	3	Mechanics of Materials	EGR 212	3
ENGR 1700	AE, BSE, CE, ConE, MatE, ME	3	Engineering Graphics & Intro to Design	EGR 120	4
MATH 2070	EE, CprE	3	Matrices and Linear Algebra	MTH 203	4
MATH 2650	Required (or accepted as math elective) in all majors except AE(LW), BSE	4	Calculus III	MTH 202	5
MATH 2670	All	4	Differential Equations	MTH 212	3
ME 2310	AerE, AE, BSE, ConE(MCH), EnvE, IE, ME	3	Engineering Thermodynamics I	EGR 240	3
ME 3450	AerE, AE(VS), CE, ME	3	Engineering Dynamics	EGR 211	3
PHYS 2320+Lab	AerE, BME, ChE, ConE, EE, IE, MatE, ME	5	Classical Physics II and Lab	PHY 202	5
SP CM 2120	AE, BSE, CE, EnvE, IE, ME, SE (or an elective by AerE, BME, ChE, CprE, CybE, EE, MatE)	3	Fundamentals of Public Speaking	SPE 101	3

*Harper BIO 115 & BIO 116 must both be completed in order to transfer as credit for ISU BIOL 2110 and BIOL 2120

Abbreviation key for majors listed above			
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

Last updated on 8/7/25 based on ISU's 2024-25 catalog and Harper's 2024-25 catalog. Degree requirements can change every year.

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 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	Harper	Cr
ANTHRO 2010 ²	3	Intro to Cultural Anthropology	ANT 202	3
CL ST 2730 ²	3	Greek and Roman Mythology	HUM 120	3
ECON 1010 / ECON 1020	3	Principles of Microeconomics / Macroeconomics	ECO 211 or 212	3
HD FS 2400 ¹	3	Literature for Children	LIT 219	3
HD FS 2760 ¹	3	Human Sexuality	HED 202	3
HIST 2010 ²	3	Intro to Western Civilization I	HST 141	3
HIST 2020 ²	3	Intro to Western Civilization II	HST 142	3
HIST 2210	3	Survey of U.S. History I	HST 111	3
HIST 2220	3	Survey of U.S. History II	HST 112	3
MUSIC 1020 ²	3	Intro to Music Listening	MUS 103 or 120	3
PHIL 2010	3	Intro to Philosophy	PHI 105	3
POL S 1110	3	Intro to American Government	PSC 101	3
POL S 1250 ²	3	Democracy and Dictatorship: Intro to Comparative Politics	PSC 250	3
PSYCH 1010	3	Intro to Psychology	PSY 101	3
PSYCH 2300	3	Developmental Psychology	PSY 228	3
PSYCH 2800	3	Social Psychology	SOC 215	3
RELIG 2050 ²	3	World Religions	PHI 205	3
RELIG 2100 ¹	3	Religion in America	PHI 215	3
SOC 1340	3	Intro to Sociology	SOC 101	3
SOC 2190	3	Sociology of Intimate Relationships	SOC 120	3
SOC 2350 ¹	3	Social Problems and American Values	SOC 205	3
SOC 2410	3	Youth and Crime	LEJ 205	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.

Sample Harper College course plan – Year One

SEMESTER 1

Harper Course Number	Credits	Course Name/Topic	Equivalent course at Iowa State
ENG 101	3	English/Composition I	ENGL 1500
MTH 200	5	Calculus I	MATH 1650
HUM 101	3	Western Civilization I	HIST 2010 ²
CHM 121	5	General Chemistry I	CHEM 1770 (or CHEM 1670)
	= 16 cr		

SEMESTER 2

Harper Course Number	Credits	Course Name/Topic	Equivalent course at Iowa State
ENG 102	3	English/Composition II	ENGL 2500
MTH 201	5	Calculus II	MATH 1660
PHY 201	5	Classical Physics I	PHYS 2310/2310L
ECO 211	3	Microeconomics	ECON 1010
	= 16 cr		