IOWA STATE UNIVERSITY
College of Engineering

North Iowa Area Community College (NIACC) Transfer Plan

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**	**NIACC**	**Cr**
CHEM 1770 (or 1670)	4	General Chemistry I (for Engineers)	CHM 166	5
ENGL 1500	3	Critical Thinking and Communication	ENG 105	3
ENGL 2500	3	WOVE Composition	ENG 106	3
ENGR 1010	R	Engineering Orientation	Not Offered	
ENGR 1600	3	Engineering Problems	EGR 181	3
LIB 1600	1	Information Literacy	Not Offered	
MATH 1650	4	Calculus I	MAT 210	4
MATH 1660	4	Calculus II	MAT 216	4
PHYS 2310/2310L	5	Classical Physics I and Lab	PHY 212	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**	**NIACC**	**Cr**
AGRON 1810	AE*(LW)*	3	Intro to Crop Science	AGA 114	3
AGRON 1820	AE*(LW,VS)*	3	Intro to Soil Science	AGA 154	3
BIOL 2110[+]	AE, BME	3	Principles of Biology I	BIO 202	4
BIOL 2120[+]	BSE, BME	3	Principles of Biology II	BIO 203	4
CE 2740	AerE, AE, BSE, CE, ConE, EnvE, IE, ME	3	Engineering Statics	EGR 274	3
CHEM 1780+Lab	AE, BSE, BME, ChE, CE, EnvE, MatE	4	General Chemistry II and Lab	CHM 176	5
CHEM 3310+Lab	ChE (possibly BSE)	5	Organic Chemistry I and Lab	CHM 263	5
CHEM 3320+Lab	ChE (possibly BSE)	5	Organic Chemistry II and Lab	CHM 273	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)	ECN 130 or ECN 120	3
EM 3240	AerE, AE, BSE, CE, ConE, EnvE, ME	3	Mechanics of Materials	EGR 324	3
ENGR 1700	AE, BSE, CE, ConE, MatE, ME	3	Engineering Graphics & Intro to Design	EGR 192	3
MATH 2650	Required (or accepted as math elective) in all majors except AE*(LW)*, BSE	4	Calculus III	MAT 219	4
MATH 2670	**All**	4	Differential Equations	MAT 226	3
PHYS 2320+Lab	AerE,BME,ChE,ConE,EE,IE,MatE,ME	5	Classical Physics II and Lab	PHY 222	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	SPC 112	3

[+]NIACC Name BIO 202 & BIO 203 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;*	Building Emphasis; Electrical Emphasis;
LW;AP;	Land&Water Resources option; Animal Production	*HH; MCH*	Heavy/Highway; Mechanical Emphasis
VS	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 8/8/25 based on ISU's 2024-25 catalog and NIACC'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**	**NIACC**	**Cr**
ANTHRO 2010[2]	3	Intro to Cultural Anthropology	ANT 105	3
ECON 1010 / ECON 1020	3	Principles of Microeconomics / Macroeconomics	ECN 130 or 120	3
HD FS 2400[1]	3	Literature for Children	EDU 235	3
HIST 2010[2]	3	Intro to Western Civilization I	HIS 110	3
HIST 2020[2]	3	Intro to Western Civilization II	HIS 111	3
HIST 2210	3	Survey of U.S. History I	HIS 151	3
HIST 2220	3	Survey of U.S. History II	HIS 152	3
MUSIC 1020[2]	3	Intro to Music Listening	MUS 100	3
PHIL 2010	3	Intro to Philosophy	PHI 101	3
POL S 1110	3	Intro to American Government	POL 111	3
POL S 1210[2]	3	Intro to International Politics	POL 121	3
PSYCH 1010	3	Intro to Psychology	PSY 111	3
PSYCH 2300	3	Developmental Psychology	PSY 121	3
PSYCH 2800	3	Social Psychology	PSY 251	3
RELIG 2050[2]	3	World Religions	REL 101	4
SOC 1340	3	Intro to Sociology	SOC 110	3
SOC 2190	3	Sociology of Intimate Relationships	SOC 120	3
SOC 2350[1]	3	Social Problems and American Values	SOC 115	3
SOC 2410	3	Youth and Crime	CRJ 201	3

More information and resources

- Pre-engineering students are encouraged to join Iowa State's free Admissions Partnership Program: www.admissions.iastate.edu.
- 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. Additional resources are available at www.engineering.iastate.edu/transfer-students.

Sample NIACC course plan – Year One
SEMESTER 1

NIACC Course Number	Credits	Course Name/Topic	Equivalent course at Iowa State
ENG 105	3	English/Composition I	ENGL 1500
MAT 210	4	Calculus I	MATH 1650
CHM 166	5	General Chemistry I	CHEM 1770 (or CHEM 1670)
MUS 100 or ANT 105	3	SS/H (meets International Perspective) (or choose another SS/H Elective)	MUSIC 1020[2] or ANTHRO 2010[2]
	= 15 cr		

SEMESTER 2

NIACC Course Number	Credits	Course Name/Topic	Equivalent course at Iowa State
ENG 106	3	English/Composition II	ENGL 2500
MAT 216	4	Calculus II	MATH 1660
EGR 181	3	Engineering Problems I	ENGR 1600
PHY 212	5	Classical Physics I	PHYS 2310/2310L
	= 15 cr		

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