

Industrial and Systems Engineering - ISE (BSISE)

This is a recommended program of study for students planning to transfer to the College of Engineering to earn a Bachelor of Science in Industrial and Systems Engineering, Major - Industrial and Systems Engineering (ISE).

Recommended VCCS Courses	VCCS Credits	Virginia Tech Course Application	VT Credits	Satisfies Pathways Area
First Year				
CHM 111	4	CHEM 1035, 1045	4	
EGR 121	2-3	ENGE 1215	2	
EGR 122	2-3	ENGE 1216	2	
ENG 111, 112	6	ENGL 1105, 1106	6	1
MTH 263+264	8-10	MATH 1225, 1226	8	5
MTH 266	2-3	MATH 2114	2-3	
PHY 231 or 241 ¹	4-5	PHYS 2305	4	4
Transferable courses (Area 2)	6	Area 2	6	2
TOTAL	34-40		34-35	
Second Year				
EGR 126 C++ or CSC 210 C++	3-4	CS 1044	3	
MTH 267	3-4	MATH 2214	3	
MTH 265	4	MATH 2204	3	
PHY 232 or 242 ¹	4-5	PHYS 2306	4	4
EGR 140 or 240	3	ESM 2104	3	
EGR 206	2	ISE 2014	2	
Transferable courses (Area 3)	6	Area 3	6	3
EGR 245	3	Engineering Science Elective	3	
TOTAL	31-34		31	

Footnotes

¹ Take either PHY 231 + 232 or 241 + 242 but do not mix. For PHY 241 + 242, both courses must be taken before credit will be awarded from Virginia Tech

See Foreign Language Requirement

Computer Requirement: All students in the College of Engineering, including transfer students, are required to purchase a personal computer. Check the [Engineering Education website](#) to obtain current requirements for hardware and software. Computer hardware and software can be purchased through the university at substantial discounts. It is advisable to get current pricing information from the College before purchasing hardware and/or software. Note that original copies of software licenses for software to be used in

Engineering Education courses will be required by the ENGE faculty. Students who do not produce these original software licenses will be dropped from the course.

Comments:

1. All students are subject to the Virginia Tech Pathways to General Education requirements. Students should consult the relevant sections of this guide before taking community college courses in these areas to avoid possible loss of credit. Warning: Choose equivalent Liberal Education humanities/ social science courses with care. Not all community college courses have Virginia Tech equivalents, and not all transfer at the same amount of credit. In general, courses without Virginia Tech equivalents will not be accepted for transfer credit by the College of Engineering.

2. The College of Engineering has a guaranteed admission agreement with the Virginia Community College System. Students may elect to fulfill the guaranteed admission agreement requirements and take their remaining major requirements at Virginia Tech. Note that choice of specific major is not guaranteed.

***Note:** Students may need to take additional course work for the first or second year that is not available at the community college. A maximum of one-half of the 124 semester hours required for the degree may be transferred from the list provided. Students who enroll at the end of their second or sophomore year may need to enroll in summer sessions at Virginia Tech to take prerequisite course(s) for the junior year. Please contact an ISE Academic Advisor at (540) 231-6388 or (540) 231-2364 for more information.*