

GENERAL ENGINEERING | Fall 2026 Implementation

This is the general common curriculum for Biomedical, Chemical, Civil, Electrical, Computer, Mechanical, and Aerospace Engineering.

[TransferVA – General Engineering Two-Year Curriculum](#)

Current Master Course File: <https://courses.vccs.edu>

	Associate Degree Requirements	Credits	VCCS Courses
	Student Development	1-2	SDV 100 or 101
UCGS	Written Communication <i>Block I</i>	3	ENG 111 College Composition I
		3	ENG 112 College Composition II ENG 113 Technical Professional Writing
	Art/Humanities/Literature <i>Block II</i>	3	Any UCGS Art or Humanities course
		3	Any UCGS Art, Humanities, or Literature (must be from a different category than previous selection)
	Social & Behavioral Sciences <i>Block III</i>	3	Any UCGS Social & Behavioral Science course
	History <i>Block VI</i>	3	Any UCGS History course
	Natural Sciences <i>Block IV</i>	4	CHM 111 Chemistry I PHY 241 Univ Physics I
	Math <i>Block V</i>	4	MTH 263 Calculus I
	General Education <i>Block VII</i>	4	MTH 264 Calculus II
		4	CHM 111 Chemistry I PHY 241 Univ Physics I PHY 242 Univ Physics II
		6-8	MTH 265 Calculus III MTH 266 Linear Algebra MTH 267 Diff Equations MTH 288 Discrete Math MTH 283 Prob & Stat
		2	EGR 121 Foundations of Engineering

Pre-major and major requirements	Major Specific Engineering Classes	9-10	EGR 122 Engineering Design EGR 125 Introduction to Programming for Engineers EGR 206 Engineering Economics EGR 240 Statics EGR 245 Dynamics EGR 246 Mechanics of Materials EGR 248 Thermodynamics for Engineering, EGR 270 Fundamentals of Computer Engineering EGR 271 Electric Circuits I EGR 272 Electric Circuits II EGR 280 Foundations of Environmental Engineering EGR 282 Hydraulics for Civil and Environmental Engineering EGR 231 Mass and Energy Balances EGR 232 Chemical Engineering Thermodynamics CSC 221 Introduction to Problem Solving and Programming CSC 222 Object Oriented Programming CSC 223 Data Structures
	Prerequisites, additional associate degree requirements, and other courses	Up to 18	BIO 101 General Biology I BIO 206 Cell Biology CHM 112 Chemistry II CHM 241/245 Organic Chemistry I CHM 242/246 Organic Chemistry II CST 100 or CST 110 Communications GOL 105 Physical Geology Students who have completed all prerequisites (MTH 161-162 or 167) and community college requirements should take additional courses from the rows above or transfer elective courses to fulfill the 65-70 credit requirement. Consult transfer guides on www.transfervirginia.org and community college advisor for additional guidance.
	Total Credits	65-70	

Course Prerequisites: Engineering program is based on students being Calculus ready. Precalculus courses do not apply to Engineering degree requirements upon transfer. If a student needs to complete MTH 161/162 or MTH 167 first, it is recommended that they start in the Associate of Science in Science or Computer Science, prior to enrolling in Engineering.

For any classes related to computer languages selected by institution, the language will be indicated as a “Topic” in SIS and thus be on student transcript. The language impacts the transferability of some courses or the requirement of having a specific language experience. Directions are on the final tab of this curriculum plan.