



Engineering Science

Associate in Science Degree, Transfer program

Division of Math, Physics, Technology & Engineering Science, Associate Dean: Bradley Cole
 Department Chair: Debra Dudick

Engineering Science provides a foundation in engineering principles, physical sciences, mathematics, and social fields in preparation for making important contributions to engineering and society. The program provides university parallel coursework for the first two years of a bachelor’s degree in engineering. Graduates continue their education by transferring to a four-year institution where they specialize in traditional fields such as electrical, mechanical, chemical, civil, environmental, materials, aerospace, and biomedical engineering. Past graduates have successfully completed studies at Alfred University, Clarkson University, Cornell University, Rensselaer Polytechnic Institute, Rochester Institution of Technology, SUNY Buffalo, the Watson School of Engineering at SUNY Binghamton, and numerous others nationwide.

Corning Community College maintains membership in the State University of New York Two Year Engineering Science Association, a consortium of two-year and four-year ABET accredited institutions offering study in engineering.

Graduates will be able to demonstrate an understanding of engineering principles and concepts through graphic, oral, and written communication; apply engineering principles and concepts in solution of problems and experiments; perform selected tasks relative to laboratory experiments in the physical sciences; interpret data according to physical fundamentals; demonstrate computer literacy and programming proficiency; use information from appropriate literature sources in completing objectives; and apply teamwork concepts in the solution of problems, experiments, or projects.

The State University of New York (SUNY) requires students who intend to receive a bachelor’s degree from a SUNY college to complete at least 30 credit hours in specific general education areas. Students in this program who plan to transfer to a SUNY college can meet 15 credits of the general education requirement. For more specific information about this requirement, refer to SUNY General Education Requirement on page 8 and see an advisor for program assistance.

High school or equivalent preparation required: Four years of science including biology, chemistry and physics, and four years of mathematics, including algebra, geometry or intermediate algebra, trigonometry, and pre-calculus. Students who don’t have this preparation will be able to get it here, but it may take longer to complete the program.

Program Requirements

English (ENGL 1010-1020. By placement)*	6	Engineering (ENGR 1010, 1030)	5
Mathematics (MATH 1610-1620, 2610-2620)*	16	Physics (PHYS 1820, 2830, 2840)	12
Social Sciences electives (ECON 2001-2002 recommended)	6	Technical Concentration (see list below)	14
Computer programming (ENGR 1050)	3	Wellness	2
Chemistry (CHEM 1510-1520)	8	Total hours	72

*Based on placement, students may be required to take ENGL 0950 and/or ENGL 0990 before taking ENGL 1010, and prerequisite math classes before taking required math course.

<i>Sample Sequence: intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.</i>	
<i>First Semester</i>	<i>Second Semester</i>
English	English
Mathematics (MATH 1610)	Mathematics (MATH 1620)
Chemistry (CHEM 1510)	Chemistry (CHEM 1520)
C for Engineers (ENGR 1050)	Physics (PHYS 1820)
Engineering Orientation (ENGR 1010)	Graphics for Engineers (ENGR 1030)
Wellness (Awareness/Instructional Component)	Wellness (Activity Component)
<i>Third Semester</i>	<i>Fourth Semester</i>
Mathematics (MATH 2610)	Mathematics (MATH 2620)
Physics (PHYS 2830)	Physics (PHYS 2840)
Technical Concentration	Technical Concentration
Social Sciences (ECON 2001 recommended)	Social Sciences (ECON 2002 recommended)
Wellness (Activity Component)	

Technical Concentration: Select from CHEM 2010-2020; ENGR 2110-2120, 2150, 2180. Courses should be chosen to conform to the program requirements of the college to which the student plans to transfer. If Chemical Engineering is the intended transfer major, select CHEM 2010-2020 and two of the ENGR courses. Otherwise, select the four ENGR courses.