

Engineering Science Degrees

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The Engineering Science Program is housed within the Mathematics, Engineering and Computer Science Department and offers three degrees: Civil, Electrical, and Mechanical Engineering. Each track has been designed for transfer as a Dual/Joint program with the School of Engineering at City College of New York (CCNY) and its programs, Bachelor of Engineering in Civil (B.E./C.E.), Electrical (B.E./E.E.), and Mechanical Engineering (B.E./M.E.). Students who achieve a minimum grade of C in each course of their chosen track will receive an Associate in Science (AS) from LaGuardia. Such students are then guaranteed admission to the corresponding track of the four-year program at CCNY.

Matriculated students admitted in the program will be exposed both to the formal principles of engineering and to hands-on laboratory projects. The academic requirements of the Dual/Joint programs are more than sufficient to assure graduates licensure in New York State as Professional Engineers. The bachelor's degree from CCNY is fully recognized by the Accreditation Board for Engineering and Technology (ABET) and is registered as licensure-qualifying by the New York State Department of Education.

Students who need additional skill development in reading, writing, mathematics, and communication will be required to take basic skills and/or ESL courses. These courses are not listed in the curriculum. The particular courses students must successfully complete are determined by their scores on the college placement test. For more information on basic skills requirements, see page 175.

Descriptions of courses in these majors can be found beginning on page 156.

Engineering Science: Civil Engineering Curriculum: AS Degree

Counseling	
New Student Seminar	0
English: 6 credits	
Composition I ENC/G101	3
<i>Select one of the following courses:</i>	3
Journalism ENG210	
Humor in Literature ENG256	
Humanities: 6 credits	
Introduction to Art HUA101	3
Introduction to Music HUM101	3
Social Science: 3 credits	
Urban Sociology SSN187***	3
Natural Sciences: 16 credits	
Fundamentals of Chemistry I SCC201	4
Fundamentals of Chemistry II SCC202	4
General Physics I SCP231	4
General Physics II SCP232	4
Math, Engineering & Computer Science: 19 credits	
Calculus I MAT201**	4
Calculus II MAT202	4
Calculus III MAT203*	4
Differential Equations MAT204	4
Linear Algebra MAT210*	3
Specific Program Requirements: 12 credits	
Co-op Prep for Engineering Science	0
Engineering Lab I/Internship I MAE101	1
Engineering Lab II/Internship II MAE103	2
C/C++ Programming MAC125**	3
Electrical Circuits MAE213	3
Thermodynamics I MAE219	3

TOTAL CREDITS: 62

* Students who do not complete the two-year program must pass (C-) both MAT203 & MAT210 at LGCC to satisfy Math 39200 (Linear Algebra and Vector Analysis) at CCNY.

** Students who do not complete the two-year program must pass both MAT201 and MAC125 to satisfy CSC 10200 (Introduction to Computing) at CCNY.

***The Prerequisite for SSN187, SSS100, is waived for students in Engineering Science programs.

Passing Grade Requirement: All courses require a minimum passing grade of "C".

Note: Students should consult with a counselor and/or faculty advisor in the selection of elective courses to ensure maximum transferability of credits taken.

Engineering Science: Electrical Engineering Curriculum: AS Degree

Counseling	
New Student Seminar	0
English: 6 credits	
Composition I ENC/G101	3
<i>Select one of the following courses:</i>	3
Journalism ENG210	
Humor in Literature ENG256	
Humanities: 6 credits	
Introduction to Art HUA101	3
Introduction to Music HUM101	3
Social Science: 3 credits	
Urban Sociology SSN187****	3
Natural Sciences: 16 credits	
Fundamentals of Chemistry I SCC201	4
Fundamentals of Chemistry II SCC202*	4
General Physics I SCP231	4
General Physics II SCP232	4
Math, Engineering & Computer Science: 19 credits	
Calculus I MAT201***	4
Calculus II MAT202	4
Calculus III MAT203**	4
Differential Equations MAT204	4
Linear Algebra MAT210**	3
Specific Program Requirements: 12 credits	
Co-op Prep for Engineering Science	0
Engineering Lab I/Internship I MAE101	1
Engineering Lab II/Internship II MAE103	2
C/C++ Programming MAC125***	3
Electrical Circuits MAE213	3
Thermodynamics I MAE219	3
TOTAL CREDITS: 62	

Engineering Science: Mechanical Engineering Curriculum: AS Degree

Counseling	
New Student Seminar	0
English: 6 credits	
Composition I ENC/G101	3
<i>Select one of the following courses:</i>	3
Journalism ENG210	
Humor in Literature ENG256	
Humanities: 6 credits	
Introduction to Art HUA101	3
Introduction to Music HUM101	3
Social Science: 3 credits	
Urban Sociology SSN187****	3
Natural Sciences: 16 credits	
Fundamentals of Chemistry I SCC201	4
Fundamentals of Chemistry II SCC202*	4
General Physics I SCP231	4
General Physics II SCP232	4
Math, Engineering & Computer Science: 19 credits	
Calculus I MAT201***	4
Calculus II MAT202	4
Calculus III MAT203**	4
Differential Equations MAT204	4
Linear Algebra MAT210**	3
Specific Program Requirements: 12 credits	
Co-op Prep for Engineering Science	0
Engineering Lab I/Internship I MAE101	1
Engineering Mechanics: Statics MAE 211	3
C/C++ Programming MAC125***	3
Electrical Circuits MAE213	3
Thermodynamics I MAE219	3
TOTAL CREDITS: 63	

* SCC202 at LaGuardia will count as CHEM10400 (General Chemistry II), an EE science elective at CCNY.

** Students who do not complete the two-year program must pass (C-) both MAT203 and MAT210 at LGCC to satisfy Math 39200 (Linear Algebra and Vector Analysis) at CCNY.

*** Students who do not complete the two-year program must pass (C -) both MAT201 and MAC125 to satisfy CSC10200 (Introduction to Computing) at CCNY.

**** The prerequisite for SSN187, SSS100, is waived for students in Engineering Science programs.

Passing Grade Requirement: All courses require a minimum passing grade of "C".

Note: Students should consult with a counselor and/or faculty advisor in the selection of elective courses to ensure maximum transferability of credits taken.