

Engineering Science – Associate in Science (A.S.) Degree

Graduates of the Associate in Science degree program in Engineering Science are prepared for admission with advanced standing to a Bachelor of Science (B.S.) engineering program. To facilitate placement in the majority of baccalaureate engineering degree programs, it is strongly advised that students complete the following course of study leading to the Associate in Science degree. The Engineering Science curriculum is a cooperative offering of the engineering technology, science, and mathematics programs, and is coordinated by the Electrical and Computer Engineering

Technology (ECET) Department. Academic advisement is provided by the Departments of Electrical and Computer Engineering Technology (Technology Building, Room 20, telephone 718-631-6207) and the Department of Mechanical Engineering Technology and Design Drafting (Science Building, Room 124, telephone 718-631-6294) and the Department of Physics (Science Building, Room 342, telephone 718-631-6366). Interested students should contact the ECET Department (T-20, 718-631-6207) as soon as possible following admission to the College.

REQUIREMENTS FOR THE A.S. DEGREE

GENERAL EDUCATION CORE REQUIREMENTS AND PRE- AND COREQUISITES FOR THE MAJOR

	Credits
EN-101, 102	English Composition I, II6
_____	Humanities elective or
_____	Speech Communication (SP-211)*3
HI-110§, 111§, or 112§	History3
_____	Social Sciences, History or
_____	Humanities elective3
_____	Social Sciences elective*3
HE-102§	Health Education2
MA-441, 442, 443	Analytic Geometry and Calculus I, II, III12
MA-451 or	Differential Equations or*
MA-461	Linear Algebra4
CH-151§, 152	General Chemistry I, II9
PH-411, 412, 413	Calculus Physics I, II, III10
PH-440 or	Modern Physics or
PH-414	Analytical Mechanics4
	<u>Sub-total 59</u>

REQUIREMENTS RELATED TO THE MAJOR

6 credits selected from the courses below, in consultation with an adviser†:

CH-251	Organic Chemistry I	
CH-252	Organic Chemistry II	
CS-101	Algorithmic Problem Solving I	
EE-101	Engineering Design I	
EE-103	Computer-Aided Analysis for Electrical Engineers	
EE-204	Electric Circuits	
ET-810	Digital Computation Fundamentals	
GE-101	Physical Geology	
MA-471§	Introduction to Discrete Mathematics	
MT-488	Computer-Aided Design Drafting (CADD)	
		<u>Sub-total 6</u>

Total Credits Required65

NOTES:

* SP-211 and SS-212 meet engineering core requirements at City College and the College of Staten Island. MA-451 and 461 meet engineering core requirements at City College for ChE, CE, EE and ME. MA-461 is required for Computer Science.

† Students planning to transfer to one of the baccalaureate programs in engineering at City College should select courses appropriate to their intended major as follows:

Chemical Engineering – EE-101; ET-810 or CS-101; CH-251, 252. EE-204 will transfer as an elective.

Civil Engineering – EE-101; ET-810 or CS-101; EE-204; GE-101
Electrical Engineering – EE-101, 103; ET-810 or CS-101; EE-204
Mechanical Engineering – EE-101; ET-810 or CS-101; EE-204; MT-488
Computer Science – CS-101; MA-471

§ Sections of this course denoted as “WT” may be taken to partially satisfy the Writing Intensive Requirement.

Two (2) Writing Intensive classes are required for the Associate degree. See page 69.

SUGGESTED SEQUENCE OF COURSES

Semester 1		Credits
MA-441	Analytic Geometry and Calculus I.....	4
PH-411	Calculus Physics I.....	3 1/2
EN-101	English Composition I.....	3
CH-151	General Chemistry I.....	4 1/2
	<u>Sub-total 15</u>	
Semester 2		
MA-442	Analytic Geometry and Calculus II.....	4
PH-412	Calculus Physics II.....	3
EN-102	English Composition II.....	3
CH-152	General Chemistry II.....	4 1/2
SS-	Social Science elective.....	3
	<u>Sub-total 17 1/2</u>	
Semester 3		
MA-443	Analytic Geometry and Calculus III.....	4
PH-413	Calculus Physics III.....	3 1/2
_____	Major requirement (see left).....	3
HI-	History 110, 111, or 112.....	3
_____	Humanities elective or	
_____	Speech Communication (SP-211).....	3
	<u>Sub-total 16 1/2</u>	
Semester 4		
MA-451 or	Differential Equations or	
MA-461	Linear Algebra.....	4
PH-440 or	Modern Physics or	
PH-414	Analytical Mechanics.....	4
_____	Major requirement (see left).....	3
_____	Social Sciences, History or Humanities elective.....	3
HE-102	Health Education.....	2
	<u>Sub-total 16</u>	
	Total Credits Required.....	65