

# HOSTOS COMMUNITY COLLEGE

## MAJORS

### CHEMICAL ENGINEERING SCIENCE

Hostos Community College (HCC) offers the Associate in Science (A.S.) degree in Chemical Engineering as a jointly registered, dual admission program with the existing Bachelor of Engineering in Chemical Engineering (B.E./ChE.) at the City College of New York. The program has been designed to meet the licensure guidelines of the Accreditation Board for Engineering and Technology (ABET).

This program is designed to provide HCC students with the same curriculum as the first two years of the licensure qualifying Chemical Engineering program required at CCNY. The collegial nature of the program will facilitate the transition to the professional portion of the curriculum.

HCC students will be enrolled in the existing science and mathematics courses at Hostos and will enroll in eight engineering/chemistry courses at CCNY until there is sufficient enrollment to offer the courses at Hostos.

#### Hostos Community College

First Year - Fall	Credits
MAT 210 ..... Calculus I	4.0
ENG 110 ..... Expository Writing	3.0
CHE 210 ..... Chemistry I	4.0
*ENGR 10100 ..... Engineering Design I	1.0
Liberal Arts Elective	4.0
<b>Subtotal</b>	<b>16</b>

First Year - Spring	Credits
MAT 220 ..... Calculus II	4.0
ENG 111 ..... Literature and Composition	3.0
CHE 220 ..... Chemistry II	4.0
*ENGR 10300 ..... Analysis Tools for Engineers	2.0
Liberal Arts Elective	3.0
<b>Subtotal</b>	<b>16</b>

Second Year - Fall	Credits
MAT 310 ..... Calculus III	4.0
*ChE 22800 ..... Intro to Chemical Engineering Principles & Practice	4.0
CHE 310 ..... Organic Chemistry I	3.0
Liberal Arts Elective	3.0
PHY 210 ..... Physics I	4.0
<b>Subtotal</b>	<b>18</b>

Second Year - Spring	Credits
MAT 360 ..... Differential Equations	3.0
*CHEM 33000 ..... Physical Chem I	3.0
CHE 320 ..... Organic Chemistry II	3.0
CHE 312 ..... Organic Chemistry Lab I	2.0
PHY 220 ..... Physics II	4.0
*ChE 22900 ..... Chem Engr Thermo I	3.0
<b>Subtotal</b>	<b>18</b>
<b>Total Hostos Credits for Degree</b>	<b>68</b>

#### City College of New York (CCNY)

CCNY - Third Year - Fall	Credits
CHEM 33200 ..... Physical Chem II	3.0
ChE 33000 ..... Engr Thermo II	3.0
ChE 34100 ..... Trans Phenomena I	3.0
ChE 34900 ..... Prob, Stat & Design Expt	2.0
MA 39200 ..... Linear Algebra/Vector	3.0
ENG 21007 ..... Writing for Engr	3.0
<b>Subtotal</b>	<b>17</b>

CCNY - Third Year - Spring	Credits
ChE 31000 ..... Intro/Materials Science	3.0
ChE 36000 ..... ChE Science Lab	2.0
ChE 34200 ..... Trans Phenomena II	3.0
ChE 34600 ..... Transport Operations	3.0
ChE 34500 ..... Separations Operations	3.0
<b>Subtotal</b>	<b>14</b>

CCNY - Fourth Year - Fall	Credits
ChE 43200 ..... Chemical Reactions	3.0
ChE 46000 ..... Transport Operations Lab	2.0
ChE 47900 ..... Process & Control	3.0
ChE 49500 ..... Techn Chem Engr Design	3.0
LA ..... Liberal Arts elective	3.0
Technical Electives (select one course)	3.0
<b>Subtotal</b>	<b>17</b>

CCNY - Fourth Year - Spring	Credits
ChE 46200 ..... Separ Opers & Contr Lab	2.0
ChE 49600 ..... Chem Engr Design Project	3.0
Technical Electives (select 3 courses)	9.0
<b>Subtotal</b>	<b>14</b>

#### Technical Electives (see note below+)

ChE 45200 ..... Powder Sci & Tech
ChE 46700 ..... Polymer Sci & Eng
ChE 49800 ..... Research I (3cr)
ChE 49900 ..... Research II (3cr)
ChE 51200 ..... Pharmaceutical Appl
ChE 54800 ..... Comp Methods
ChE 57700 ..... Advanced Materials
ChE 58000 ..... Bioprocess Engr
ChE 59000 ..... Nanotechnology
ChE 59802 ..... Fluidization
BIO 32100 ..... Human Physiology**
BME 50300 ..... Cell/Tiss Biomat'ls
** BME 50100 ..... Cell/Tissue Mech**
BME 50200 ..... Cell/Tissue Transport**
CE 38000 ..... Environmental Engr

Engr 27600 . . . . .	Engr Economics	
ME 53600 . . . . .	Energy Conversion	
<b>Subtotal . . . . .</b>		<b>.17</b>
<b>TOTAL CUNY CREDITS . . . . .</b>		<b>.62-63</b>
<b>TOTAL DEGREE CREDITS . . . . .</b>		<b>130-131</b>

**Bachelor of Engineering in Chemical Engineering - B.E.  
(ChE)**

+ Technical Elective Requirements:

Select three courses from the Technical Electives, but not more than one 2-cr course and not more than one Biomedical Engineering course (denoted by asterisks\*\*). Students who select the Biomedical Engineering Option must take BIO 32100, ME 50100, 50200 & 50300 (total 13 credits) as their Technical Electives, for a total of 131 degree credits.

\*Course will be co-listed. Students will be given a Permit to attend CCNY until such time as there is sufficient enrollment to offer the course at Hostos.

**General Education/Liberal Arts Requirements:**

Eligible courses that can be used to fulfill the general education requirement must be equivalent to or selected from only those courses listed as meeting the objectives of the following four clusters: i) Professional and Ethical Responsibilities Cluster (Outcome f), ii) Communication Cluster (outcome g), iii) Global and Societal Context Cluster (outcome h), and iv) Contemporary Issues Cluster (outcome j). A list of approved courses is posted on the school of Engineering website at <http://www.cuny.edu/engineering> and can be viewed at the Office of Undergraduate Affairs (T-209) or the Office of Student Programs (T-2M). This list is subject to periodic review and updates.