



**NEW YORK CITY COLLEGE OF TECHNOLOGY**  
OF THE CITY UNIVERSITY OF NEW YORK  
300 JAY STREET • BROOKLYN  
NEW YORK 11201-2983  
*Chemistry Department*  
Academic Complex – A516, Tel: (718) 260-5853

**Articulation Agreement between Eugenio Maria de Hostos Community College (AS in Liberal Arts and Science) and New York City College of Technology (BS in Applied Chemistry)**

Sending College: Hostos Community College (HCC)  
Department: Natural Sciences Department  
Program: Liberal Arts and Science  
Degree: Associate in Science (AS)

Receiving College: New York City College of Technology (NYCCT)  
Department: Chemistry Department  
Program: Applied Chemistry  
Degree: Bachelor of Science (BS)

**B. ADMISSION REQUIREMENTS FOR SENIOR COLLEGE PROGRAM**

Hostos Community College (HCC) students who successfully complete an associate in science in Liberal Arts and Science with a minimum GPA of 2.5 and are admitted to NYCCT will be eligible to receive transfer credits towards the BS in Applied Chemistry as described in this articulation agreement. Students who wish to transfer who do not meet these requirements will receive admission consideration under our standard transfer credit policies.

NYCCT and HCC agree to offer the courses noted in the BS program in Applied Chemistry (NYCCT) and the Liberal Arts and Sciences AS program (HCC), as described in this agreement, and as outlined in each college's course catalog. Each college agrees to notify the other if course numbers, content, or catalog descriptions change. Furthermore, the parties involved understand that any change in course number, content, or catalog description may require a modification to this agreement.

Total transfer credits granted toward the baccalaureate degree: 60  
Total additional credits required at the senior college to complete baccalaureate degree: 60  
Total credits required for the BS in Applied Chemistry: 120

### C. COURSE EQUIVALENCIES AND TRANSFER CREDIT AWARDED

Students transferring from HCC with an AS in Liberal Arts and Science shall enter the BS Program in Applied Chemistry at NYCCT as third year students. The following courses, totaling 60 credits, will be transferred to NYCCT as described below.

Hostos Community College		New York City College of Technology	
Common Core Requirements	Credits	Transfer Credit	Transfer Credit Granted
<b>Required Common Core:</b> ENG 110 English Composition I or equivalent ENG 111 English Composition II	6	ENG 1101 English Composition I ENG 1121 English Composition II	6
MQR: MAT 210 Calculus I*	4	MAT 1475 Calculus I	4
Life and Physical Sciences BIO 210 OR CHE 210 OR PHY 210	4	Life and Physical Sciences BIO 1101 OR CHEM 1110 OR PHYS 1441 <sup>1</sup>	4
<b>Flexible Common Core:</b> World Cultures and Global Issues ANT 101, BLS 101, ENG 200, ENG 213, ENG 215, ENG 222, HIS 201, HIS 202, HUM 100, LAC 108, LAC 118, POL 207, SPA 117, SPA 118, WGS 200	3	World Cultures and Global Issues	3
US Experience in its Diversity BLS 114, ENG 225, HIS 210, HIS 211, HIS 214, LAC 101, LAC 132, POL 101, WGS 100	3	US Experience in Diversity	3
Creative Expression ENG 203, ENG 204, ENG 210, ENG 212, ENG 214, ENG 221, LAC 246, VPA 114, VPA 141, VPA 181, VPA 192	3	Creative Expression	3
Individual and Society ECO 101, ECO 102, CJ 101, ENG 223, ENG 224, ENG 228, ENG 230, LIN 100, LIN 102, LIN 103, PSY 101, PSY 110, PSY 120, PSY 121, SOC 101	3	Individual and Society	3
Scientific World BIO 220 OR CHE 220 OR PHY 220	4	Scientific World BIO 1201 OR CHEM 1210 OR PHYS 1442 <sup>1</sup>	4
One additional course from Scientific World: BIO 260 OR BIO 310 OR CHE 310/312 OR MAT 220 OR MAT 310	3-4	Flexible Core BIO 2450 OR BIO 3302 OR CHEM 2223 <sup>1</sup> OR MAT 1575 OR MAT 2675	3-4
<b>Subtotal</b>	<b>33-34</b>	<b>Subtotal</b>	<b>33-34</b>
<b>Requirements for the Major</b>	<b>Credits</b>	<b>Transfer Credit</b>	<b>Credits</b>
Select one course sequence from an area of concentration different from that selected in the Common Core (Life and Physical Sciences and Scientific World): a. BIO 210 and BIO 220 General Biology I and II b. CHE 210 and CHE 220 General Chemistry I and II c. PHY 210 and PHY 220 General Physics I and II	8	BIO 1101 and BIO 1210 - General Biology I and II CHEM 1110 and CHEM 1210 – General Chemistry I and II PHYS 1441 and PHYS 1442 – General Physics I and II: Calculus Based	8
Choose (2) additional courses from the following: BIO 230 Anatomy and Physiology I BIO 240 Anatomy and Physiology II BIO 260 Introduction to Genetics BIO 299 Independent Studies in Biology BIO 310 Microbiology CHE 299 Independent Studies in Chemistry CHE 310/312 Organic Chemistry I MAT 220 Calculus II MAT 310 Calculus III PHY 299 Independent Studies in Physics	<b>8-9</b>	Equivalent courses: BIO 2311 Anatomy and Physiology I <sup>2</sup> BIO 2312 Anatomy and Physiology II <sup>2</sup> BIO 2450 Genetics <sup>2</sup> BIO 3302 Microbiology <sup>2</sup> CHEM 2223 Organic Chemistry I MAT 1575 Calculus II MAT 2675 Calculus III <sup>2</sup>  Transfer credit for CHEM 4901 will be given for any of the following: BIO 299, CHE 299, PHY 299	8-9
<b>Subtotal</b>	49-51		
Free Electives*	9-11	Free electives	9-11
<b>Total Credits for Degree</b>	<b>60</b>	<b>Total</b>	<b>60</b>

2 WI courses at Hostos (both might be Science courses)

Notes: \*Depending on placement, students may be required to complete MAT 160. These students should consult with an advisor in the Math department. Students, who are required to take MAT 160, will complete the course as part of the Common Core Mathematical and Quantitative Reasoning and will take MAT 210 under “free electives”

The program has received a waiver to specify particular courses students must take in STEM areas of the Common Core (Mathematical and Quantitative Reasoning).

If students take a different course in this area, they will be certified as having completed the Common Core area, but it may not be possible for them to finish their degree in 60 credits.

<sup>1</sup>PHYS 1441 is a 5-credit course at NYCCT

<sup>2</sup>These courses are not required by the Applied Chemistry BS degree; students will receive science/math electives credits

#### D. SENIOR COLLEGE UPPER DIVISION COURSES REMAINING FOR BACCALAUREATE DEGREE

Course and Title	Credits
<b>Program Specific Degree Requirements</b>	
CHEM 3222 Physical Chemistry: Thermodynamics and Kinetics	4
CHEM 3312 Analytical Chemistry	5
CHEM 3412 Instrumental Methods of Analysis	5
CHEM 3622 Inorganic Chemistry	4
CHEM 4312 Instrumental Chromatography	4
CHEM 4323 Advanced Laboratory Applications in Advanced Spectroscopy	2
BIO 3601 Biochemistry	4
CHEM 4901 Internship/Research in Applied Chemistry I	3
<i>The following courses may be required if not taken at the Associate level at HCC:</i>	
CHEM 1110 General Chemistry I	4
CHEM 1210 General Chemistry II	4
CHEM 2223 Organic Chemistry I	5
CHEM 2323 Organic Chemistry II	5
MAT 1575 Calculus II	4
PHYS 1441 General Physics I: Calculus Based	5
PHYS 1442 General Physics II: Calculus Based	5
<b>College Option Requirements<sup>3</sup></b>	
One course in speech/ oral communication <sup>4</sup>	3
One interdisciplinary liberal arts and sciences course	3
<b>Elective Credits to equal or exceed 120 credits at City Tech<sup>5,6</sup></b>	
Choose courses from the following list to bring total number of credits to 120. The choice of electives, to be made in close consultation with the Program Coordinator or Academic Advisor, should ideally reflect the student's interests, post-baccalaureate study plans, and career goals.	
BIO 2311 Anatomy and Physiology I (Lecture and Laboratory)	4
BIO 2312 Anatomy and Physiology II (Lecture and Laboratory)	4
BIO 3302 Microbiology (Lecture and Laboratory)	4
BIO 3350 Elements of Bioinformatics (Lecture and Laboratory)	4
BIO 3352 Bioinformatics (Lecture and Laboratory)	4
BIO 3356 Molecular Modeling in Biology	3
BIO 3524 Nutrition	2
BIO 3526 Pathophysiology	3
BIO 3620 Molecular and Cell Biology (Lecture and Laboratory)	4
CHEM 2411 Special Topics	4
CHEM 4902 Internship Research in Applied Chemistry II	3
CHEM 4822 Medicinal Chemistry	3
CST 2403 Introductory C++ Programming Language Part I	3
CST 3503 C++ Programming Part II	3

MAT 2071 Introduction to Proofs and Logic	4
MAT 2440 Discrete Structures and Algorithms I	3
MAT 2540 Discrete Structures and Algorithms II	3
MAT 2572 Probability and Mathematical Statistics I	4
MAT 2580 Introduction to Linear Algebra	3
MAT 2588 The Mathematics of Finance	3
MAT 2630 Applied Mathematics Technology--Numerical Analysis	3
MAT 2675 Calculus III	4
MAT 2680 Differential Equations	3
MAT 3021 Number Theory	4
MAT 3050 Geometry I	4
MAT 3075 Introduction to Real Analysis	4
MAT 3080 Modern Algebra	4
MAT 3672 Probability and Mathematical Statistics II	4
MAT 3770 Mathematical Modeling I - Optimization	3
MAT 3772 Stochastic Models	3
MAT 3777 Applied Mathematics: Applications of the Wave Equations	3
MAT 3787 Applied Mathematics - Finite Fields	3
MAT 3788 Applications of the Heat Equation for Financial Mathematics	3
MAT 3880 Introduction to Partial Differential Equations using Mathematical Models in Biology	3
MAT 4030 History of Mathematics	3
MAT 4050 Geometry II	3
MAT 4672 Computational Statistics with Applications	3
MAT 4788 Financial Risk Modeling	3
MAT 4872 Probability and Mathematical Statistics III	4
MAT 4880 Mathematical Modeling II	3
PHYS 2601 Introduction to Research (Lecture and Laboratory)	3
PHYS 2603 Physical Principles of Medical Imaging	3
PHYS 2605 Introduction to Laser Physics and Photonics	4
PHYS 2607 Introduction to Quantum Mechanics	3
PHYS 2609 Introduction to Quantum Computing	4
<b>Writing Intensive Requirement</b>	
Students at New York City College of Technology must complete two courses designated WI for the baccalaureate level, one from liberal arts and one from the major.	

<sup>3</sup>Complete lists of liberal arts and sciences courses and advanced liberal arts courses, as well as semester-specific lists of interdisciplinary courses and writing intensive courses, are available online at the City Tech Pathways website.

<sup>4</sup>Students who have already met this requirement may choose any other liberal arts and science course in its place.

<sup>5</sup>The number of free elective credits will vary depending upon the program-specific courses students use to meet Common Core requirements.

<sup>6</sup>Some of these elective courses have pre-and co-requisites that should be taken as part of the flexible core and college option choices.

## **E. ARTICULATION AGREEMENT FOLLOW-UP PROCEDURES**

### **1. Procedures for reviewing, updating modifying or terminating agreement:**

When either of the degree programs involved in this agreement undergoes a change, the agreement will be reviewed and revised accordingly by faculty from each institution's respective departments or programs, selected by their Chairpersons and program directors.

### **2. Procedures for evaluating agreement, e.g., tracking the number of students who transfer under the articulation agreement and their success:**

New York City College of Technology (NYCCT) will be able to provide Hostos Community College (HCC) the following information:

a) the number of HCC students who enrolled and their cumulative GPA

### **3. Sending and receiving college procedures for publicizing agreement, e.g., college catalogs, transfer advisers, Websites, etc.:**

Notice of articulation will be placed in the respective recruiting brochures, as appropriate and websites. Respective transfer and academic advisers will be informed and provided with copies of this agreement.

Effective Date: Spring 2020