THE CITY UNIVERSITY OF NEW YORK
ARTICULATION AGREEMENT

A. SENDING AND RECEIVING INSTITUTIONS

Sending College: **Bronx Community College of the City University of New York**

Department: Engineering, Physics and Technology

Program: Liberal Arts and Sciences, Chemistry Option

Degree: Associate in Science

Receiving College: **New York City College of Technology of the City University of New York**

Department: Chemistry

Program: Applied Chemistry

Degree: Bachelor of Science

B. ADMISSION REQUIREMENTS FOR SENIOR COLLEGE PROGRAM

(e.g., minimum GPA, audition/portfolio):

Admissions Criteria for the Bachelor of Science in Applied Chemistry:

- Must be CUNY proficient (reading, writing, and mathematics)
- Must have minimum cumulative GPA of 2.0.
- Must be prepared to enter MAT1275 or higher.

Students with the AS in Liberal Arts / Chemistry Option are guaranteed at least 60 credits toward a 120-credit bachelor's degree.

Applications received by UAPC before February 15 for September admission and before September 15 for February admission will be processed first. Applications received after those deadlines will be processed on a space-available basis.

Associate in Science Degree from Bronx Community College.

Bronx Community College graduates with the Associate Degree in Science will receive 60 credits toward the Bachelor of Science in Applied Chemistry at New York City College of Technology. In addition, they will be deemed to have met all lower level general education requirements.

Total transfer credits granted toward the baccalaureate degree: 60

Total additional credits required at the senior college to complete baccalaureate degree: 60

Determination of the Liberal Arts credits required for the baccalaureate degree in accordance with New York State Education Department requirements will be made by New York City College of Technology.

C. COURSE TO COURSE EQUIVALENCIES AND TRANSFER CREDIT AWARDED

CUNY Pathways General Education Requirements	
Required Common Core	**Credits**
A. English Composition (2 courses) B. Mathematical and Quantitative Reasoning (1 course) **MTH 30 Pre-Calculus Mathematics OR MTH 31 Analytic Geometry & Calculus I** C. Life and Physical Sciences (1 course) **CHM 11 General Chemistry I**	14
Flexible Common Core	**Credits**
A. World Cultures and Global Issues (1 course) ***Students are advised to complete two modern language courses.*** B. U.S. Experience in Its Diversity (1 course) C. Creative Expression (1 course) D. Individual and Society (1 course) ***Students are advised to complete COMM 11 Fundamentals of Interpersonal Communication*** E. Scientific World (1 course) **CHM 12 General Chemistry II** ▪ Restricted Elective: Select one course from Areas A-E.	19
Subtotal	**33**

Major Requirements				Transfer Credit Granted
[Bronx Community College] **Course & Title**	**Credit**	[New York City College of Technology] **Course & Title**	**Credit**	
MTH 31 Analytical Geometry & Calculus I	0-4	MAT 14751 Calculus I	0-4	0-4
MTH 32 Analytical Geometry & Calculus II	5	MAT 1575 Calculus II	4	4
Free Elective	0-5	*Free Elective*	0-5	0-5
			SUBTOTAL	**4-13**

Chemistry Option Requirements				
[Bronx Community College] **Course & Title**	**Credit**	[New York City College of Technology] **Course & Title**	**Credit**	**Transfer Credit Granted**
CHM 31 Organic Chemistry I	5	CHEM 2223 Organic Chemistry I	5	5
CHM 32 Organic Chemistry II	5	CHEM 2323 Organic Chemistry II	5	5
Choose 2 of the 3 courses below: CHM 33 Quantitative Analysis BIO 11 General Biology I PHY 11 Physics I	8	CHEM 3312 Analytical Chemistry BIO 1101 Biology I PHYS 1441 General Physics I: Calculus Based	8	8
			SUBTOTAL	**18**

TOTAL	**60**

D. SENIOR COLLEGE UPPER DIVISION COURSES REMAINING FOR BACCALAUREATE DEGREE

Pathways College Option Requirements	Credits
▪ One interdisciplinary Liberal Arts and Sciences course ▪ In meeting their general education requirements overall, students must take at least one advanced liberal arts course or two sequential courses in a foreign language. Students who complete two foreign language courses at BCC will not be required to fulfill this requirement. Students who complete COMM 11 will have fulfilled the speech requirement.	6
SUBTOTAL	**6**

Writing Intensive Requirement
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.

Applied Chemistry Major
The Bachelor of Science (BS) in Applied Chemistry is designed to provide a strong foundation in laboratory skills that will enable graduates to achieve "college-to-career" employment. This includes hands-on training in extensive laboratory course work, necessary for students to launch careers in chemical industry and in the broad range of industries that utilize analytical chemistry. While fulfilling its primary goal of excellent preparation for immediate entry into a career position, the program also prepares students for post-baccalaureate study and health profession schools because it meets all of the American Chemical Society's requirements for approval of bachelor's degree programs. Read more at: http://www.citytech.cuny.edu/chemistry/applied-chemistry-bs.aspx

Program Specific Requirements	**Credits**
BIO 1101 Biology I (*Students who complete BIO 11 will not be required to complete this course.*) PHYS 1441 General Physics I: Calculus Based (*Students who complete PHY 11 will not be required to complete this course.*) PHYS 1442 General Physics II: Calculus Based CHEM 3312 Analytical Chemistry (*Students who complete CHM 33 will not be required to complete this course*) CHEM 3412 Instrumental Methods of Analysis CHEM 3222 Physical Chemistry: Thermodynamics and Kinetics BIO 3601 Biochemistry CHEM 3622 Inorganic Chemistry CHEM 4312 Instrumental Chromatography CHEM 4322 Advanced Spectroscopy ENG 2575 Technical Writing	37-38
Internship / Research CHEM 4901 Internship/Research in Applied Chemistry I CHEM 4902 Internship/Research in Applied Chemistry II	6
Science and Mathematics Electives *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/L Anatomy and Physiology I (Lecture and Laboratory) BIO 2312/L Anatomy and Physiology II (Lecture and Laboratory) BIO 3302/L Microbiology (Lecture and Laboratory) BIO 3350 Elements of Bioinformatics (Lecture and Laboratory) BIO 3352 Bioinformatics (Lecture and Laboratory) BIO 3354 Computational Genomics BIO 3356 Molecular Modeling in Biology BIO 3524 Nutrition BIO 3526 Pathophysiology BIO 3620/L Molecular and Cell Biology (Lecture and Laboratory) CHEM 2411 Special Topics CHEM 4822 Medicinal Chemistry CST 2403 Introductory C++ Programming Language Part I	10-11

CST 3503 C++ Programming Part II MAT 2071 Introduction to Proofs and Logic MAT 2440 Discrete Structures and Algorithms I MAT 2540 Discrete Structures and Algorithms II MAT 2572 Probability and Mathematical Statistics I MAT 2580 Introduction to Linear Algebra MAT 25886 The Mathematics of Finance MAT 26306 Applied Mathematics Technology-Numerical Analysis MAT 2675 Calculus III MAT 2680 Differential Equations MAT 3021 Number Theory MAT 3050 Geometry I MAT 3075 Introduction to Real Analysis MAT 3080 Modern Algebra MAT 3672 Probability and Mathematical Statistics II MAT 37706 Mathematical Modeling I Optimization MAT 3772 Stochastic Models MAT 3777 Applied Mathematics: Applications of the Wave Equations MAT 37876 Applied Mathematics Finite Fields MAT 37886 Applications of the Heat Equation for Financial Mathematics MAT 3880 Introduction to Partial Differential Equations using Mathematical Models in Biology MAT 4030 History of Mathematics MAT 4050 Geometry II MAT 4672 Computational Statistics with Applications MAT 4788 Financial Risk Modeling MAT 4872 Probability and Mathematical Statistics III MAT 4880 Mathematical Modeling II PHYS 2601/L Introduction to Research (Lecture and Laboratory) PHYS 2603/L Physical Principles of Medical Imaging PHYS 2605 Introduction to Laser Physics and Photonics PHYS 2607 Introduction to Quantum Mechanics PHYS 2609 Introduction to Quantum Computing	
TOTAL	**60**

E. Articulation Agreement Follow-Up Procedures

1. Procedures for reviewing, up-dating, 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 representatives from each institution's respective department or program, selected by their Chairperson and program director.

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 will be able to provide Bronx Community College (BCC) the following information:

a) and the number of BCC 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.

The New York City College of Technology Chemistry Department will coordinate efforts with their respective Admissions Office to make certain that materials are sent with recruitment officers for BCC's annual Transfer Day event or STEM Fair.