New York City College of Technology, CUNY

CURRICULUM MODIFICATION PROPOSAL FORM

This form is used for all curriculum modification proposals. See the [Proposal Classification Chart](http://openlab.citytech.cuny.edu/collegecouncil/files/2014/08/2013-10-09-Proposal_Classification_Chart.pdf) for information about what types of modifications are major or minor. Completed proposals should be emailed to the Curriculum Committee chair.

|  |  |
| --- | --- |
| **Title of Proposal** | Changes in Applied Chemistry Bachelor of Science degree requirements |
| **Date** | 10/10/2017 |
| **Major or Minor** | Minor |
| **Proposer’s Name** | Diana Samaroo |
| **Department** | Department of Chemistry |
| **Date of Departmental Meeting in which proposal was approved** | May 11th, 2017 |
| **Department Chair Name** | Diana Samaroo |
| **Department Chair Signature and Date** | 10/10/2017 |
| **Academic Dean Name** | Justin Vazquez-Poritz |
| **Academic Dean Signature and Date** | 10/27/17 |
| **Brief Description of Proposal**(Describe the modifications contained within this proposal in a succinct summary. More detailed content will be provided in the proposal body. | This proposal brings the Bachelor of Science in Applied Chemistry in compliance with CUNY Pathways. It allows the inclusion of MAT 1275 and MAT 1375 into the degree-credit structure as part of General Education. These two courses (which are based on initial math placement) are pre-requisites for required courses but have not been counted in the degree credit structure. The proposal also shifts CHEM 1110 and CHEM 1210 credits from the Life and Physical Sciences and Scientific World categories, respectively and MAT 1475 from Mathematical and Quantitative Reasoning to the program-specific degree requirements. The chemistry courses become program-specific degree requirements, although CHEM 1110 and CHEM 1210 are recommended as “double duty” courses to fulfill certain General Education categories.  |
| **Brief Rationale for Proposal**(Provide a concise summary of why this proposed change is important to the department. More detailed content will be provided in the proposal body).  | The proposed changes intend to bring the program in compliance with CUNY mandate because of the existence of “hidden prerequisites.” The changes allow students to take MAT 1275 and MAT 1375 courses as part of General Education, while also removing limitations on Pathways’ requirements for MAT 1475 and two chemistry courses. |
| **Proposal History**(Please provide history of this proposal: is this a resubmission? An updated version? This may most easily be expressed as a list). | This is a new proposal |

Please include all appropriate documentation as indicated in the Curriculum Modification Checklist.

For each new course, please also complete the New Course Proposal and submit in this document.

Please submit this document as a single .doc or .rtf format. If some documents are unable to be converted to .doc, then please provide all documents archived into a single .zip file.

**ALL PROPOSAL CHECK LIST**

|  |  |
| --- | --- |
| Completed CURRICULUM MODIFICATION FORM including: |  |
| * Brief description of proposal
 | x |
| * Rationale for proposal
 | x |
| * Date of department meeting approving the modification
 | x |
| * Chair’s Signature
 | x |
| * Dean’s Signature
 | x |
| Evidence of consultation with affected departmentsList of the programs that use this course as required or elective, and courses that use this as a prerequisite. | XN/A |
| Documentation of Advisory Commission views (if applicable). | N/A |
| Completed [Chancellor’s Report Form](http://openlab.citytech.cuny.edu/collegecouncil/files/2014/08/2013-10-09-Chancellor_Report_Quick_Reference_Guide1.doc). | x |

**EXISTING PROGRAM MODIFICATION PROPOSALS**

|  |  |
| --- | --- |
| Documentation indicating core curriculum requirements have been met for new programs/options or program changes.  | N/A |
| Detailed rationale for each modification (this includes minor modifications) |  x |

**DESCRIPTION OF THE PROPOSAL**

The Bachelor of Science in Applied Chemistry was approved in 2015. With the recent CUNY mandate from Exec. Vice Chancellor Vita Rabinowitz, this proposal brings the Applied Chemistry degree in compliance with the CUNY Pathways mandate that there be no “hidden prerequisites.” It therefore allows students to take MAT 1275 and MAT 1375 as part of the degree-credit structure as part of General Education credits. It should be noted that student’s may enter at 1275, 1375 or higher. These courses are prerequisites for program-specific courses and typically would make students graduate with more than 120 credits from the BS in Applied Chemistry.

In order to remove limitations on the courses that can be taken to satisfy Pathways’ categories, this proposal also shifts MAT 1475 (4 credits), CHEM 1110 (4 credits) and CHEM 1210 (4 credits) from Pathways’ requirements to program-specific degree requirements. As a result, inclusion of the three courses listed above, displaces the following required courses: two upper level math/science elective credits, ENG 2575 - Technical Writing, and makes CHEM 4322-Advanced Spectroscopy, an elective course.

Students testing out from MAT 1275 and MAT 1375, and therefore, placed in MAT 1475 will be advised to use MAT 1475, CHEM 1110 and CHEM 1210 as “double duty” courses to fulfill Pathways’ requirements of Mathematical and Quantitative Reasoning, Life and Physical Sciences and Scientific World, respectively. By doing so, science/math elective credits will become available to students to take other upper level math and sciences elective courses. The table(s) in Section AIII below presents the changes to this degree program.

**RATIONALE OF THE PROPOSAL**

This proposal allows students to graduate from the BS in Applied Chemistry with 120 credits by eliminating “hidden prerequisites,” and removes CHEM 1110, CHEM 1210 and MAT 1475 courses from Pathways’ requirements. These changes intend to bring the BS in Applied Chemistry in compliance with CUNY policy, by allowing students to use MAT 1275 and MAT 1375, if needed, within the degree-credit structure of General Education.

# Section AIII: Changes in Degree Programs

**The following revisions are proposed for Chemistry Department**

**Program: Bachelor of Science in Applied Chemistry**

**Program Code:**

**Effective Date: Fall 2018**

|  |  |
| --- | --- |
| **FROM:** | **TO:** |
| **General Education Common Core: ~~42 credits~~**1. **Required Core1 (4 courses, ~~14 credits~~)**

**English Composition (2 courses, 6 credits)**ENG 1101 English Composition I 3 ENG 1121 English Composition II 3**Mathematical and Quantitative Reasoning (1 course, 4 credits)** ~~MAT 1475 Calculus I or higher 4~~**Life/ Physical Science (1 course, ~~4 credits~~)** ~~CHEM 1110 General Chemistry I 4~~1. **Flexible Core (6 courses, ~~19 credits~~)**

From the list of approved courses select one course from each of the following areas; no more than two courses may be selected from any discipline. **World Cultures and Global Issues** 3 **US Experience in its Diversity** 3**Creative Expression** 3**Individual and Society** 3**~~LIB 1201 Research and Documentation in the~~** **~~Information Age (recommended)~~****Scientific World** **~~CHEM 1210/L General Chemistry II (recommended)~~** ~~4~~**One additional course from any Flexible Core area** ~~3~~**III. College Option Requirement2 (12 credits):** • One course in speech/ oral communication3 **COM 1330 Public Speaking or higher**  3• One interdisciplinary liberal arts and sciences course 3• Two additional liberal arts courses to reach a minimum total of 42 credits in general education. 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. 6 **Writing Intensive Requirement**. Students at New York City College of Technology must complete two courses designated WI for the associate level, one from the Common Core and one from the Applied Chemistry program courses; and two additional courses designated WI for the baccalaureate level, one from Common Core and one from the Applied Chemistry degree program.**IV. Program-Specific Degree Requirements (~~66 Credits~~):** ~~CHEM 1110 General Chemistry I Met as Gen Ed~~~~CHEM 1210 General Chemistry II Met as Gen Ed~~CHEM 2223 Organic Chemistry I 5CHEM 2323 Organic Chemistry II 5BIO 1101 Biology I 4PHYS 1441 General Physics I Calculus Based 5PHYS 1442 General Physics II Calculus Based 5CHEM 3312 Analytical Chemistry 5CHEM 3412 Instrumental Methods of Analysis 5CHEM 3222 Physical Chemistry: Thermodynamics and Kinetics 4BIO 3601 Biochemistry 4CHEM 3622 Inorganic Chemistry 4CHEM 4312 Instrumental Chromatography 4~~CHEM 4322 Advanced Spectroscopy 4~~~~ENG 2575 Technical Writing 3~~~~MAT 1475 Calculus I~~~~4~~ ~~Met as Gen Ed~~MAT 1575 Calculus II 4**Internship/Research** CHEM 4901 Internship/Research in Applied Chemistry I 3CHEM 4902 Internship/Research in Applied Chemistry II 3~~Math/Science Elective I 4~~~~Math/Science Elective II 4~~**Elective Credits** to equal or exceed 1205 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.**Science and Mathematics Elective Courses**BIO 2311/L Anatomy and Physiology I (Lecture and Laboratory) 4BIO 2312/L Anatomy and Physiology II (Lecture and Laboratory) 4BIO 3302/L Microbiology (Lecture and Laboratory) 4BIO 3350 Elements of Bioinformatics (Lecture and Laboratory) 4BIO 3352 Bioinformatics (Lecture and Laboratory) 4BIO 3354 Computational Genomics 3BIO 3356 Molecular Modeling in Biology 3BIO 3524 Nutrition 2BIO 3526 Pathophysiology 3BIO 3620/L Molecular and Cell Biology (Lecture and Laboratory) 4CHEM 2411 Special Topics 3CHEM 4822 Medicinal Chemistry 3CST 2403 Introductory C++ Programming Language Part I 3CST 3503 C++ Programming Part II 3MAT 2071 Introduction to Proofs and Logic 4MAT 2440 Discrete Structures and Algorithms I 3MAT 2540 Discrete Structures and Algorithms II 3MAT 2572 Probability and Mathematical Statistics I 4MAT 2580 Introduction to Linear Algebra 3MAT 25886 The Mathematics of Finance 3MAT 26306 Applied Mathematics Technology--Numerical Analysis 3MAT 2675 Calculus III 4MAT 2680 Differential Equations 3MAT 3021 Number Theory 4MAT 3050 Geometry I 4MAT 3075 Introduction to Real Analysis 4MAT 3080 Modern Algebra 4MAT 3672 Probability and Mathematical Statistics II 4MAT 37706 Mathematical Modeling I – Optimization 3MAT 3772 Stochastic Models 3MAT 3777 Applied Mathematics: Applications of the  Wave Equations 3MAT 37876 Applied Mathematics – Finite Fields 3MAT 37886 Applications of the Heat Equation for Financial Mathematics 3MAT 3880 Introduction to Partial Differential Equations 3 MAT 4030 History of Mathematics 3MAT 4050 Geometry II 3MAT 4672 Computational Statistics with Applications 3MAT 4788 Financial Risk Modeling 3MAT 4872 Probability and Mathematical Statistics III 4MAT 4880 Mathematical Modeling II 3PHYS 2601/L Introduction to Research (Lecture and Laboratory) 3PHYS 2603/L Physical Principles of Medical Imaging 3PHYS 2605 Introduction to Laser Physics and Photonics 4PHYS 2607 Introduction to Quantum Mechanics 3PHYS 2609 Introduction to Quantum Computing 4**Total General Education Common Core credits: ~~42~~****Total program courses required and elective credits: ~~78~~****Total Credits for Degree: 120**~~1Applied Chemistry is a STEM degree program, requiring 4 or 5 credit courses in mathematics and sciences. Student may elect to use their required 4 or 5 credit mathematics or science courses to meet Common Core requirements in “Mathematical and Quantitative Reasoning” and “Life and Physical Sciences.” Note also that other science courses are identified as satisfying “Scientific World” courses in the Flexible Core.~~~~2Complete 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.~~3Students who have already met this requirement may choose any other liberal arts and science course in its place. ~~4Students who elect to take MAT 1475 without the requisite math background will be required to take MAT 1175, 1275, and /or 1375 in preparation, depending upon initial placement. This will increase the number of required credits for the degree by 4-12.~~~~5The number of free elective credits will vary depending upon the program-specific courses students use to meet Common Core requirements.~~~~6Some of these elective courses have pre-and co-requisites that should be taken as part of the flexible core and college option choices.~~  | **General Education Common Core: 42-46 credits**1. **Required Core1 (4 courses, 12-14 credits)**

**English Composition (2 courses, 6 credits)**ENG 1101 English Composition I 3 ENG 1121 English Composition II 3**Mathematical and Quantitative Reasoning (1 course, 4 credits)** STEM math strongly recommended2 4**Life/ Physical Science (1 course, 3-4 credits)** CHEM 1110/L General Chemistry I (recommended) 3-41. **Flexible Core (6 courses, 18-20 credits)**

From the list of approved courses select one course from each of the following areas; no more than two courses may be selected from any discipline. **World Cultures and Global Issues** 3 **US Experience in its Diversity** 3**Creative Expression** 3**Individual and Society** 3**Scientific World** STEM math strongly recommended2 4**One additional course from any Flexible Core area** CHEM 1210/L General Chemistry II (recommended) 3-4**III. College Option Requirement (12 credits):** • One course in speech/ oral communication3 **COM 1330 Public Speaking or higher**  3• One interdisciplinary liberal arts and sciences course 3• Two additional liberal arts courses to reach a minimum total of 42 credits in general education. 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. 6 **Writing Intensive Requirement**. Students at New York City College of Technology must complete two courses designated WI for the associate level, one from the Common Core and one from the Applied Chemistry program courses; and two additional courses designated WI for the baccalaureate level, one from Common Core and one from the Applied Chemistry degree program.**IV. Program-Specific Degree Requirements (74-78 Credits):** CHEM 1110 General Chemistry I 4CHEM 1210 General Chemistry II 4CHEM 2223 Organic Chemistry I 5CHEM 2323 Organic Chemistry II 5BIO 1101 Biology I 4PHYS 1441 General Physics I Calculus Based 5PHYS 1442 General Physics II Calculus Based 5CHEM 3312 Analytical Chemistry 5CHEM 3412 Instrumental Methods of Analysis 5CHEM 3222 Physical Chemistry: Thermodynamics and Kinetics 4BIO 3601 Biochemistry 4CHEM 3622 Inorganic Chemistry 4CHEM 4312 Instrumental Chromatography 4MAT 1475 Calculus I2 4MAT 1575 Calculus II 4**Internship/Research** CHEM 4901 Internship/Research in Applied Chemistry I 3CHEM 4902 Internship/Research in Applied Chemistry II 3**Elective Credits** to equal or exceed 1204 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.**Science and Mathematics Elective Courses4**BIO 2311/L Anatomy and Physiology I (Lecture and Laboratory) 4BIO 2312/L Anatomy and Physiology II (Lecture and Laboratory) 4BIO 3302/L Microbiology (Lecture and Laboratory) 4BIO 3350 Elements of Bioinformatics (Lecture and Laboratory) 4BIO 3352 Bioinformatics (Lecture and Laboratory) 4BIO 3354 Computational Genomics 3BIO 3356 Molecular Modeling in Biology 3BIO 3524 Nutrition 2BIO 3526 Pathophysiology 3BIO 3620/L Molecular and Cell Biology (Lecture and Laboratory) 4CHEM 2411 Special Topics 3**CHEM 4322/L Advanced Spectroscopy 4**CHEM 4822 Medicinal Chemistry 3CST 2403 Introductory C++ Programming Language Part I 3CST 3503 C++ Programming Part II 3MAT 2071 Introduction to Proofs and Logic 4MAT 2440 Discrete Structures and Algorithms I 3MAT 2540 Discrete Structures and Algorithms II 3MAT 2572 Probability and Mathematical Statistics I 4MAT 2580 Introduction to Linear Algebra 3MAT 25885 The Mathematics of Finance 3MAT 26305 Applied Mathematics Technology--Numerical Analysis 3MAT 2675 Calculus III 4MAT 2680 Differential Equations 3MAT 3021 Number Theory 4MAT 3050 Geometry I 4MAT 3075 Introduction to Real Analysis 4MAT 3080 Modern Algebra 4MAT 3672 Probability and Mathematical Statistics II 4MAT 37705 Mathematical Modeling I – Optimization 3MAT 3772 Stochastic Models 3MAT 3777 Applied Mathematics: Applications of the  Wave Equations 3MAT 37875 Applied Mathematics – Finite Fields 3MAT 37885 Applications of the Heat Equation for Financial Mathematics 3MAT 3880 Introduction to Partial Differential Equations 3 MAT 4030 History of Mathematics 3MAT 4050 Geometry II 3MAT 4672 Computational Statistics with Applications 3MAT 4788 Financial Risk Modeling 3MAT 4872 Probability and Mathematical Statistics III 4MAT 4880 Mathematical Modeling II 3PHYS 2601/L Introduction to Research (Lecture and Laboratory) 3PHYS 2603/L Physical Principles of Medical Imaging 3PHYS 2605 Introduction to Laser Physics and Photonics 4PHYS 2607 Introduction to Quantum Mechanics 3PHYS 2609 Introduction to Quantum Computing 4**Total General Education Common Core credits: 42-46****Total program-specific required and elective credits: 74-78****Total Credits for Degree: 120**1Applied Chemistry is a STEM degree program, requiring 4 or 5 credit courses in mathematics and sciences. For purposes of advisement, specific courses recommended are “double-duty” courses: degree requirements that also meet CUNY Pathways general education requirements in that category. Students are not required to take these courses to meet their GenEd requirements; however, those who elect to use their required 4- or 5-credit math or science courses to meet general education requirements in Mathematical and Quantitative Reasoning, Life and Physical Sciences, and/or Scientific World will have up to 12 additional credits of science and math electives available.2 The STEM math series is MAT 1275, MAT 1375, MAT 1475, MAT 1575, and MAT 2675, with each course a prerequisite for the next. Most courses in the sequence are included in the Math and Quantitative Reasoning and Scientific World categories. If initial placement determines that a student does not have the requisite math background to enter MAT 1475, they are required to take MAT 1275, and/or MAT 1375 in preparation. Students who, due to their initial placement, are required to begin their mathematics studies in a course before MAT 1475, must select MAT 1275 and/or MAT 1375 as their Mathematics and Quantitative Reasoning and Scientific World courses. 3 Students who have already met this requirement may choose any other liberal arts and science course in its place.4 The number of science/math elective credits will vary depending upon the program-specific courses students use to meet Common Core requirements.5 Students who wish to take MAT 2588 The Mathematics of Finance should be aware of the pre-and corequisites and arrange to take them as part of their flexible core and college option choices. Students who wish to take MAT 2630, MAT 3770,MAT 3787, or MAT 3788 should be aware of the prerequisite of CST 1101 and arrange to take it as part of their college option choices. |

Rationale: The proposed changes intend to bring the program in compliance with CUNY mandate because of the existence of “hidden prerequisites.” The changes allow students to take MAT 1275 and MAT 1375 courses as part of General Education, while also removing limitations on Pathways’ requirements for MAT 1475 and two chemistry courses.

**Department of Chemistry**

**Faculty Meeting Minutes**

May 11, 2017

1:05-2:00 pm in P618

In attendance: D. Samaroo, L. J. Deiner, S. Tewani, T. Nicolas, A. Martinez

Excused: P. Spellane (on fellowship leave)

Prof. Samaroo called the meeting to order at 1:05 pm and discussion centered on the following:

1. Fall 2017 courses

Current registration for fall courses was discussed and stood as follows:

Instrumental Methods of Analysis: 8 students

Inorganic Chemistry: 8 students

Instrumental Chromatography: 3 students

Advanced Spectroscopy: 2 students

1. Curriculum modification of Associate in Science and Bachelor in Applied Chemistry

In an interpretation of CUNY memo (Exec. Vice Chancellor Vita Rabinowitz), pre-requisites for chemistry courses must count as credits for students’ degrees. Also, CHEM1110, CHEM1210 and MAT1475 must be included as degree specific courses in both the AS in Chemical Technology and the BS in Applied Chemistry. These changes were vastly discussed by members of the Chemistry Department and proposals for each program with curriculum modifications were presented in order to comply with CUNY policy. A vote on the proposals was taken with the following results:

 In favor of proposal Against proposal Abstained

AS in Chemical Technology 1 3 1

BS in Applied Chemistry 3 2 0

As a consequence, the curriculum modification of the BS in Applied Chemistry as proposed was passed by the Chemistry Department. Curriculum modification of the AS in Chemical Technology was rejected by the Chemistry Department based on a major impact on learning outcomes in the resulting program.

Inorganic Chemistry (CHEM3622) was added as an elective course of the AS in Chemical Technology

1. Department self-study

A department self-study for the AS in Chemical Technology must be conducted by 2019. An outline of the content of such self-study was provided by Prof. Samaroo for members of the department to start working on different parts of it.

1. Prof. Samaroo reminded faculty members to submit all classroom observation reports.
2. Updates

Prof. Samaroo provided updates on:

* Hiring process of senior CLT and full time faculty. At this time, a candidate for the CLT position has been proposed to City Tech administration and interviews for the full time line are being conducted at the department level.
* New Academic Building. Move is on schedule for the end of Fall semester. Prof. Samaroo reminded to the members of the Chemistry Department that quotes for re-installation/re-calibration of specific instrumentation should be requested to manufacturers.

Meeting was called to an end at 2:00 pm.

 Minutes submitted by Alberto Martinez

**Evidence of consultation with affected departments.**

RE: ENG 2575 - Technical Writing

Nina Bannett

Wed 9/6/2017 1:47 PM

To:Diana Samaroo <DSamaroo@citytech.cuny.edu>;

Hi Diana,

I totally understand the need for your department to incorporate the required math and chemistry courses into your degree requirements. Thank you so much for letting me know about this change.

Best,

Nina

Nina Bannett, PhD

Professor and Chair,

English Department

Namm 512

New York City College of Technology, CUNY

300 Jay Street

Brooklyn NY 11201

nbannett@citytech.cuny.edu

718-260-5392

**From:** Diana Samaroo
**Sent:** Wednesday, September 06, 2017 2:41 PM
**To:** Nina Bannett <NBannett@citytech.cuny.edu>
**Subject:** Re: ENG 2575 - Technical Writing

Hi Nina,

ENG 2575 is an Applied Chemistry specific/degree requirement, not listed under general education.

I am attaching a snapshot of the catalog.    In order to accommodate calculus 1 and the general chemistry credits, which were under general education, we need to modify/remove some of the currently required courses i.e. ENG 2575.

 Thank you,

Diana

Diana SAMAROO, PhD

Chair | Associate Professor | Department of Chemistry

CUNY - New York City College of Technology

300 Jay Street, Pearl 613, Brooklyn, NY 11201

email: dsamaroo@citytech.cuny.edu

main: 718.260.5850

[Bachelor of Science in Applied Chemistry](https://www.citytech.cuny.edu/academics/deptsites/chemistry/bs.aspx)

**From:** Nina Bannett
**Sent:** Tuesday, September 5, 2017 2:45 PM
**To:** Diana Samaroo
**Subject:** RE: ENG 2575 - Technical Writing

Hi Diana,

Thanks for letting me know.  So the ENG 2575 course was previously a required course in General Education, but won’t be a required degree requirement?>

Best,

Nina

Nina Bannett, PhD

Professor and Chair,

English Department

Namm 512

New York City College of Technology, CUNY

300 Jay Street

Brooklyn NY 11201

nbannett@citytech.cuny.edu

718-260-5392

**From:** Diana Samaroo
**Sent:** Tuesday, September 05, 2017 2:36 PM
**To:** Nina Bannett <NBannett@citytech.cuny.edu>
**Subject:** ENG 2575 - Technical Writing

Dear Dr. Bannett,

As per the CUNY Policy regarding hidden pre-requisites, the Chemistry Department will be submitting some curriculum changes to the Applied Chemistry degree.   The program will need to 'move' 12 credits from General Education into the fold of required degree specific courses.  As such, ENG 2575 - Technical Writing (3 credits), which was previously required, will no longer be a requirement for the Applied Chemistry degree.    If you need further information/clarification, please let me know.

Best wishes,

Diana

Diana SAMAROO, PhD

Chair | Associate Professor | Department of Chemistry

CUNY - New York City College of Technology

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email: dsamaroo@citytech.cuny.edu

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[Bachelor of Science in Applied Chemistry](https://www.citytech.cuny.edu/academics/deptsites/chemistry/bs.aspx)