NEW YORK CITY COLLEGE OF TECHNOLOGY
OF THE CITY UNIVERSITY OF NEW YORK
300 JAY STREET • BROOKLYN
NEW YORK 11201-2983
Physics Department
Room Pearl N811, Tel: (718) 260-5257

B.S. Degree in Applied Computational Physics
Articulation Agreement with Bronx Community College

A. SENDING AND RECEIVING INSTITUTIONS

Sending College:	Bronx Community College
Department:	Department of Engineering, Physics and Technology
Program:	Engineering Science
Degree:	Associate in Science (AS)

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

B. ADMISSION REQUIREMENTS FOR SENIOR COLLEGE PROGRAM

- The AS in Engineering Science degree and a minimum 2.50 GPA.

Students who wish to transfer but do not meet all of the above requirements or are unable to enroll within two years after graduation will receive admission consideration under our standard transfer credit policies.

Total transfer credit granted toward baccalaureate degree: 60
Total additional credits required by senior college to complete baccalaureate degree: 60

The Physics Department of New York City College of Technology (NYCCT) agrees to accept into the BS program in Applied Computational Physics students from the Bronx Community College (BCC) who successfully complete an associate in science in Engineering Science. Completion of the curriculum includes the attainment of at least a 2.5 overall grade-point average.

NYCCT and BCC agree to offer the courses noted in the BS program in Applied Computational Physics (NYCCT) and AS Engineering Science program at Bronx Community College (BCC), 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.

C. COURSE EQUIVALENCIES AND TRANSFER CREDIT AWARDED

Students transferring from BCC with an AS in Engineering Science shall enter the BS Program in Applied Computational Physics at NYCCT as third year students. The following courses, totaling 60 credits, will be transferred to NYCCT.

ASSOCIATE IN SCIENCE

COMMON CORE		
Required Common Core		
English Composition (two terms)		6
Mathematical and Quantitative Reasoning	Note: Students in this program at BCC are required to take 4-credits MAT 30 (equivalent to MAT 1375 at City Tech) or MAT 31 (equivalent to MAT 1475)	4
Life/Physical Sciences	Note: Students in this program at BCC are required to take 4-credits PHY 31 (equivalent to PHYS 1441 at City Tech)	4
	Total Required Common Core	14
Flexible Core		
Creative Expression		3
Scientific World	Note: Students in this program at BCC are required to take two 4-credit courses CHM 11 and PHY 32 (equivalent to PHYS 1442 at City Tech)	8
Individual and Society		3
World and Global Issues		3
US Experience in its Diversity		3
	Total Flexible Core	20
	Total Common Core	**34**
CURRICULUM REQUIREMENTS		
BCC course	*COURSE NAME* *NYCCT Equivalent*	
EGR 11	Introduction to Engineering Design Elective	1
EGR 31	Circuit Analysis Elective	3
MTH 31	Analytic Geometry and Calculus I MATH 1475	0-4*
MTH 32	Analytic Geometry and Calculus II MATH 1575 + 1 cr Elective	5
MTH 33	Analytical Geometry and Calculus III MATH 2675 + 1 cr Elective	5
MTH 34	Differential Equations and Selected Topics in Advanced Calculus MATH 2680 + 1 cr Elective	4
PHY 33	Physics III PHYS 2443	4
CHM 12 or ELC 96	General Chemistry II or Digital Systems I Elective	0-4*
	Total Curriculum Requirements	26
	Total Program Credits	**60**

TOTAL NUMBER OF CREDITS TRANSFERRED   **60**

Note: (*) Students in the AS program at BCC might take MAT 30 (equivalent to MAT 1375 at City Tech) or MAT 31 (equivalent to MAT 1475) to satisfy the Mathematical and Quantitative Reasoning requirement within the Common Core.

If they opt to take MAT 30 as Common Core, they should then take MAT 31 as part of the remaining Curriculum Requirements. If instead they opt to take MAT 31 as Common Core, 4 additional credits of electives will be transferred by taking CHM 12 (Chemistry II) or ELC 96 (General Digital Systems I).

D. SENIOR COLLEGE UPPER DIVISION COURSES REMAINING FOR BS DEGREE

Students transferring to the BS program in Applied Computational Physics at NYCCT from the AS program in Engineering Science at BCC will be required to satisfactorily complete the following courses (totaling 60 credits) at NYCCT.

COLLEGE OPTION REQUIREMENTS		
Public Speaking	COM 1330 or higher	3
Interdisciplinary Course	Any course in approved list, elective	3
	Total Common Core & College Option Requirements	**6**
CURRICULUM REQUIREMENTS		
PHYS 2607	Introduction to Quantum Mechanics	3
PHYS 2609	Introduction to Quantum Computing	4
PHYS 3100	Classical Mechanics	4
PHYS 3200	Electricity and Magnetism	4
PHYS 3600	Machine Learning for Physics and Astronomy	3
PHYS 4100	Computational Methods	4
PHYS 4150	Computational Methods Lab	2
PHYS 4200	Internship/Real research Experience (WI)	4
MAT 2580	Linear Algebra	3
MAT 2572	Probability and Mathematical Statistics I	4
CST 1101	Problem Solving with Computer Programming	3
CST 1201	Programming Fundamentals	3
CST 1204	Database Systems Fundamentals	3
	Additional program electives	10
	Total Curriculum Requirements	**54**
	Total Program Credits	**60**

Note: (**) To meet New York City College of Technology's bachelor's graduation requirement students must complete two additional writing intensive courses (WI), one in the core curriculum (general education) and one in the major.

TOTAL DEGREE CREDITS TO BE TAKEN AT NYCCT   **60**
TOTAL CREDITS FOR THE BS DEGREE   **120**

In order to satisfy the B.S. degree requirements, students must select the appropriate general education common core and flexible core courses to satisfy CUNY Pathways requirements for the degree program.