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

New York City College of Technology B.S. Degree in Applied Computational Physics Articulation Agreement with Borough of Manhattan Community College A.S. in Science

A. SENDING AND RECEIVING INSTITUTIONS

Sending College:	**Borough of Manhattan Community College (BMCC)**
Department:	**Sciences Department**
Program:	**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 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 Borough of Manhattan Community College (BMCC) who successfully complete an associate in science in Science. Completion of the curriculum includes the attainment of at least a 2.5 overall grade-point average.

NYCCT and BMCC agree to offer the courses noted in the BS program in Applied Computational Physics (NYCCT) and AS Science program (BMCC), 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. TRANSFER CREDITS AWARDED

Students transferring from BMCC with an A.S. in Science shall enter the B.S. program on Applied Computational Physics at NYCCT as third year students. The following courses, totaling 60 credits, will be transferred to NYCCT.

A.S. in Science

Common Core	
Required Common Core	
English Composition	6
Mathematical & Quantitative Reasoning[1]	3
Life & Physical Sciences[2]	3
Total Required Common Core	**12**
Flexible Common Core	
World Cultures & Global Issues	3
U.S. Experience in its Diversity	3
Creative Expression	6
Individual & Society	3
Scientific World[3]	3
Total Flexible Core	**18**
Total Common Core	**30**
Curriculum Requirements	
Introductory Science Courses – Choose I of the following sequences: Biology I & II – BIO 210 & BIO 220 (4cr. each) College Chemistry I & II – CHE 201 & 202 (4cr. each) Physics I & II – PHY 210 & 220 (4cr. each)	8
Program Electives – Select 16 Credits from the following: Biology I & II – BIO 210 & BIO 220 (4cr. each) College Chemistry I & II – CHE 201 & 202 (4cr. each) Physics I & II – PHY 210 & 220 (4cr. each) Principles of Microbiology – BIO 230 (4cr.) Genetics – BIO 240 (4cr.) Fundamentals of Organic Chemistry – CHE 120 (4cr.) Quantitative Analysis – CHE 205 (4cr.) Organic Chemistry I & II – CHE 230 & 240 (5cr. each) Analytic Geometry & Calculus I & II – MAT 301 & 302 (4cr. each) [4] Modern Physics – PHY 240 (3cr.) [4] Computer Methods in Science – SCI 120 (4cr.) Introduction to Microprocessors – SCI 140 (4cr.) Scientific Instrumentation – SCI 430 (4cr.)	16
Modern Language[5]	3
General Electives[6]	3
Total Curriculum Credits	**30**
Total Program Credits	**60**

FOOTNOTES

1. Students are required to take Precalculus - MAT 206.

2. Students are required to take University Physics I - PHY 215 in order to transfer to NYCCT under this agreement.

3. Students are required to take University Physics II – PHY 225 in order to transfer to NYCCT under this agreement.

4. Students are required to take MAT 301, MAT 302 and PHY 240 in order to transfer to NYCCT under this agreement.

5. Students are required to take two semesters of the same Modern Language. One semester can be taken in the Common Core.

6. These credits can be satisfied by taking STEM variants in the Common Core.

D. ADVISOR'S RECOMMENDATIONS

In order for students to transfer to NYCCT under this agreement with junior level standing, they must take the following courses at BMCC and graduate with the AS in Science.

BMCC Course	NYCCT Equivalent
PHY 215 – University Physics I	PHYS 1441/1441L
PHY 225 – University Physics II	PHYS 1442/1442L
MAT 301 – Analytic Geometry and Calculus I	MAT 1575
MAT 302 – Analytic Geometry and Calculus II	MAT 2675
PHY 240 – Modern Physics	PHYS 2443

E. SENIOR COLLEGE UPPER DIVISION COURSES REMAINING FOR BACCALAUREATE DEGREE

Students transferring to the B.S program in Applied Computational Physics at NYCCT from the A.S. program in Science at BMCC will be required to satisfactorily complete the following courses (totaling 60 credits) at NYCCT.

COLLEGE OPTION REQUIREMENTS		
Public Speaking		3
Interdisciplinary Course		3
Total Common Core & College Option Requirements		**6**
CURRICULUM REQUIREMENTS		
PHYS 2607	Introduction to Quantum Mechanics	3
PHYS 3100	Classical Mechanics	4
PHYS 3200	Electricity and Magnetism	4
PHYS 3300	Computational Fluid Dynamics	3
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	4
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
XXX	Additional program electives	14
Total Curriculum Requirements		**54**
Total Program Credits		**60**

Note: Students at New York City College of Technology must complete two courses designated Writing Intensive (WI) for the baccalaureate level, one from Gen Ed. And one from the major.

Effective date: fall 2017