



## ARTICULATION AGREEMENT FORM

**College of Agreement Initiation:** New York City College of Technology

### A. SENDING AND RECEIVING INSTITUTIONS

*Sending College:* Borough of Manhattan Community College

*Department:* Mathematics

*Program:* Mathematics

*Degree:* Associate in Science

*Receiving College:* New York City College of Technology

*Department:* Mathematics

*Program:* Mathematics Education

*Degree:* Bachelor of Science

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### B. ADMISSION REQUIREMENTS FOR SENIOR COLLEGE PROGRAM

Students must:

- satisfy the College requirements for admission into a baccalaureate program;
- be eligible to enroll in MAT 1475 or higher;
- have a minimum cumulative GPA of 3.0\*; and
- submit an application, write an essay and be interviewed by program director.

\* Exceptions can be granted by the Mathematics Education Program director.

Total transfer credits granted toward the baccalaureate degree: 60

Total additional credits required at the senior college to complete baccalaureate degree: 61

**C. COURSES TRANSFERRED FROM BOROUGH OF MANHATTAN COMMUNITY COLLEGE (BMCC)**

Students transferring from BMCC with an Associate Degree in Mathematics shall enter the Bachelor of Science in Mathematics Education program at NYCCT as juniors. They will have the following courses transferred to NYCCT.

**COURSE-TO-COURSE EQUIVALENCIES AND TRANSFER CREDIT AWARDED**

BMCC		NYCCT	
Course and Title	Credits		Credits
<b>Required Common Core (14)</b>			
English Composition	6	English Composition	6
Life and Physical Sciences Choose one of the following: Biology I - BIO 210 (4cr.) OR Chemistry I - CHE 201 (4cr.) OR Physics I - PHY 210 (4cr.) OR PHY 215	4	Life and Physical Sciences	4
Mathematical and Quantitative Reasoning Required MAT 206 Precalculus or higher	4	Mathematical and Quantitative Reasoning	4
<b>Required Flexible Core (18)</b>			
Creative Expression 1 FUNDAMENTALS OF SPEECH - SPE 100 OR SPE 102 required (3cr.)*	3	COM 1330 Public Speaking	3
Creative Expression 2	3	Additional Liberal Arts	3
World Cultures & Global Issues	3	World Cultures & Global Issues <i>(Foreign language course is required)</i>	3
US Experience in its Diversity	3	US Experience in its Diversity	3
Individual and Society (IS) PSY 1101 recommended	3	Individual and Society (IS) PSY 1101 recommended	3
Scientific World (SW) <i>Science or Programing course is required.</i> <i>Recommended: CSC 110 or CSC 111**</i>	3	Scientific World (SW)*	3
<b>Modern Language course is required**</b>	3	One additional Flex Core Course:	3
<b>Mathematics Core Content Courses (15)</b>			
MAT 301 Calculus I	4	MAT 1475 Calculus I	4
MAT 302 Calculus II	4	MAT 1575 Calculus II	4
MAT 303 Calculus III	4	MAT 2675, Calculus III	4
MAT 315 Linear Algebra	3	MAT 2580 Linear Algebra	3
<b>Mathematics Electives (10 credits)</b> <i>(Choose 3 courses from the following: MAT 209; MAT 310; MAT 320; MAT 505; and MAT 601)</i>			
<i>Suggested Selection***</i>			
MAT 310: Bridge to Advanced Mathematics	3	MAT 2571 Introduction to Proofs and Logic (advanced liberal arts, WI)	4
MAT 320: Abstract Algebra	3	MAT 3080: Modern Algebra	4
MAT 209: Statistics	4	MAT 1372 Statistics with Probability	3
<b>TOTAL</b>	<b>60</b>		<b>60</b>

\* May transfer as IS, if more advantageous: COM 1330 and PSY 1101 are in the Individual and Society flexible core at NYCCT.

\*\* Programing course is recommended as students graduating with a teaching degree and 12 credits of Computer Science can apply for an additional teaching certificate in Computer Science.

\*\*\* Other selections are possible: e.g. MAT 310, MAT 505, MAT 209 or MAT 310, MAT 601, MAT 505 or MAT 310, MAT 320, MAT 209.

Students who transfer to NYCCT after earning the AS in Mathematics at BMCC by completing the 60 credits shown above, will be required to satisfactorily complete the following 61 credits at NYCCT in order to earn the BS in Mathematics Education.

**D. SENIOR COLLEGE COURSES REMAINING FOR COMPLETION OF BACCALAUREATE DEGREE<sup>1,2,3</sup>**

<b>Course and Title</b>	<b>Credits</b>
<b>Mathematics Core Content Courses (11)<sup>2,3</sup></b>	
MAT 3050 Geometry	4
MAT 3075 Introduction to Real Analysis	4
MAT 4030 History of Mathematics	3
Mathematics Elective ( <i>recommended</i> MAT 2440)	3
<b>PEDAGOGICAL CORE (32)<sup>2</sup></b>	
<b>Specialized Pedagogical Courses</b>	
MEDU 1010 Foundation of Mathematics Education	3
MEDU 1021 Teaching and Learning Strategies for Mathematics Teachers	3
MEDU 2901 Peer Leader Training in Mathematics	1
MEDU 3000 Mathematics of the Secondary School Curriculum	4
MEDU 3001 Methods of Teaching Middle School Mathematics	3
MEDU 3002 Methods of Teaching Secondary School Mathematics (WI)	3
MEDU 3003 Microteaching	3
MEDU 4000 Student Teaching Seminar	4
MEDU 4001 Student Teaching in High School	4
MEDU 4002 Student Teaching in High School	4
<b>Common Pedagogical Core (9)<sup>2</sup></b>	
EDU 3610: Human Learning and Instruction	3
EDU 2455: Methods and Materials for Special Needs Students	3
EDU 3670: Methods of Literacy Instruction	3
<b>College Option (3)<sup>2</sup></b>	
Interdisciplinary Course	3
Advanced Liberal Arts ( <i>recommended</i> MAT 2540)	3
<b>TOTAL</b>	<b>61</b>

<sup>1</sup> In addition to requirements of the AS degree, City Tech bachelor's degree students are required to take one Writing Intensive (WI) course in the Major and one WI course in the liberal arts and sciences. **All graduates must also satisfy CUNY Pathways requirements.**

<sup>2</sup> Complete lists of liberal arts and sciences courses and advanced liberal arts and sciences courses, as well as semester-specific lists of interdisciplinary courses, are available online at the City Tech Pathways website.

<sup>3</sup> Depends on any mathematics or education courses transferred.

## **E. PROCEDURES FOR REVIEWING, UP- DATING, MODIFYING OR TERMINATING AGREEMENT**

Both colleges will confer every three years to review the agreement. Any changes or modifications to program requirements will be reported to the other college subsequent to the date of the change or modification. The agreement will then be updated accordingly. Given notification, both colleges have the right to terminate the agreement at any time.

*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, selected by their chairpersons and/or program directors.

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

Each semester, NYCCT will provide BMCC with the following information: a) the number of BMCC students who enrolled; and b) the aggregate GPA of these enrolled students.

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

This articulation agreement will be publicized on BMCC's website and on NYCCT's website. Transfer advisers at BMCC will promote this agreement with eligible students.

BMCC students who plan to transfer into the Mathematics Education degree program at NYCCT are advised to choose the listed Program Requirements indicated in this document in order to satisfy the requirements for the A.S. degree at BMCC and to ensure that the maximum number of credits are transferred to satisfy the Mathematics Education program requirements at NYCCT. Refer to the college website for a list of the general requirements for the A.S. degree.

*4. Campus Updates to Transfer Credit Rules:*

Each college will update their transfer rules in CUNYfirst based on the agreed upon course evaluation, as indicated in this document. When either college makes course revisions to courses included in the agreement, they will notify the other party.

Effective Date: Fall 2020