

ARTICULATION AGREEMENT FORM

College of Agreement Initiation: New York City College of Technology

SENDING AND RECEIVING INSTITUTIONS

Sending College: Bronx Community College
Department: Mathematics and Computer Science
Program: Mathematics
Degree: Associate in Science

Receiving College: New York City College of Technology
Department: Mathematics
Program: Mathematics Education
Degree: Bachelor of Science

PROGRAM DESCRIPTION FOR THE BACHELOR OF SCIENCE IN MATHEMATICS EDUCATION

The Bachelor of Science in Mathematics Education at New York City College of Technology will prepare students to teach middle school and secondary school mathematics (grades 7 to 12) in New York State. The program includes an intensive course of study in mathematics and mathematics pedagogy. The program also includes a mathematical application component. In this component, students take electives from among the following areas: Architecture, Electrical Engineering Technology, Computer Systems, Applied Mathematics and Physics. These electives provide teacher candidates with a deeper understanding of the application and importance of mathematics.

ADMISSION REQUIREMENTS FOR SENIOR COLLEGE PROGRAM

- 2.5 overall GPA
- Interview by Faculty of Mathematics Department of NYCCT
- Essay submission

Total transfer credits granted toward the baccalaureate degree: 60

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

COURSE-TO-COURSE EQUIVALENCIES AND TRANSFER CREDIT AWARDED

Bronx Community College		New York City College of Technology Equivalent (Or Other Evaluation)		Credit Granted
Course & Title	Cr.	Course & Title	Cr.	
Core Requirements				
ENG 11 Composition and Rhetoric I <i>OR</i> ENG 10 Fundamentals of Composition and Rhetoric	3	ENG 1101 English Composition I	3	3
CMS 11 Fundamentals of Interpersonal Communications	3	Communications	3	3
HIS 10 History of the Modern World, or HIS 11 Introduction to the Modern World	3	Literature	3	3
MTH 31 Calculus and Analytic Geometry I	4	MAT 1475 Calculus I	4	4
Choose one of the following sequences: PHY 31 Physics I PHY 32 Physics II, <i>OR</i> CHM 11 General College Chemistry I CHM 12 General College Chemistry II, <i>OR</i> BIO 11 General Biology I BIO 12 General Biology II	8	PHYS 1441 Physics 1.3 (5 Cr.) PHYS 1443 Physics 2.3 (5 Cr.), <i>OR</i> CHEM 1110 Chemistry I (4 Cr.) CHEM 1210 Chemistry II (4 Cr.), <i>OR</i> BIO 1101 Biology I (4 Cr.) BIO 1201 Biology II (4 Cr.)	8-10	8
SUBTOTAL				21
Required Areas of Study				
ENG 12 Composition and Rhetoric II	3	ENG 1121 English Composition II	3	3
ART 11 Introduction to Art <i>OR</i> MUS 11 Introduction to Music	3	Literature/Aesthetics/Philosophy	3	3
PSY 11 Psychology	3	PSY 1101 Introduction to Psychology	3	3
SUBTOTAL				9
Specialization Requirements				
MTH 32 Analytic Geometry and Calculus II	5	MAT 1575 Calculus II+MAT 1476L	5	5
MTH 33 Analytic Geometry and Calculus III	5	MAT 2675 Calculus III+1 Cr math applications elective	5	5
MTH 42 Linear Algebra (4 Cr), MTH 46 Abstract Algebra (4 Cr), and MTH 34 Differential Equation and Selected Topics in Advanced Calculus (4 Cr)	12	MAT 2580 Linear Algebra (3 Cr), MAT 2070 Introduction to Proof and Logic (3 Cr), MAT 2680 Differential Equations (3 Cr), and MAT 3080 Modern Algebra (3 Cr)	12	12
SUBTOTAL				22
Free Electives				
MTH 48 Advanced Calculus	4	MAT 3075 Introduction to Analysis	4	4
PHY 33 Physics III <i>OR</i> AST 11 Stellar Astronomy	4	PHY 2443 Physics 3.3 <i>OR</i> PHY 1117 Astronomy I	4	4
SUBTOTAL				8
TOTAL				60

SENIOR COLLEGE COURSES REMAINING FOR BACCALAUREATE DEGREE

The courses are arranged into four components: The Mathematics Component, Pedagogy Component, Liberal Arts and Science Core Component, and the Mathematical Applications Component.

MATHEMATICS COMPONENT

Course and Title	Credits
MAT 2630 Applied Mathematics Technology	3
MAT 3020 Number Theory	3
MAT 2572 Probability and Statistics I	4
MAT 3050 Geometry I	3
MAT 4050 Geometry II	3
MAT 4030 History of Mathematics	3
Component Subtotal	19

PEDAGOGY COMPONENT

Course and Title	Credits
MEDU 2901 Peer Leader Training in Mathematics	1
MEDU 1010 Foundations of Mathematics Education	3
MEDU 1020 Teaching and Learning Strategies for Mathematics Teachers	2
MEDU 2010 Pedagogy of Mathematics Applications and Technology	2
MEDU 3010 Methods of Teaching Middle School Mathematics	3
MEDU 3020 Methods of Teaching Secondary School Mathematics	3
MEDU 3030 Assessment Techniques in Mathematics	2
MEDU 4010 Supervised Student Teaching and Seminar in Middle School Mathematics	4
MEDU 4020 Supervised Student Teaching and Seminar in Middle School Mathematics	4
EDU 2455 Methods and Materials for Special Needs Students	3
EDU 4600 Professional Development Seminar	2
Component Subtotal	29

MATHEMATICAL APPLICATIONS COMPONENT

Course and Title	Credits
CST 1101 Intro Programming	3
Component Subtotal	3

LIBERAL ARTS AND SCIENCE CORE COMPONENT

Course and Title	Credits
PSY 2501 Child and Adolescent Development	3
PSY 3502 Human Learning and Instruction	3
One additional course from: Literature: any ENG 2000/3400 series, AFR, PRS 2200 series or Philosophy: any PHIL 2000 series or higher, AFR 2600 series.	3
Component Subtotal	9

SUMMARY OF REMAINING COURSES

Component	Credits
Mathematics	19
Pedagogy	29
Liberal Arts and Science Core	9
Mathematical Applications	3
Total	60