

**QUEENSBOROUGH
COMMUNITY COLLEGE**

**NEW YORK INSTITUTE
OF TECHNOLOGY**

*Associate in Science
Liberal Arts and Sciences – Math and Science
Mathematics Concentration*
(Placement into MATH 440)

*Bachelor of Science in
Applied and Computational
Mathematics*

Course	Credit	Course	Credit
Fall Semester: 14-15 credits			
ENGL-101 English Composition I	3	FCWR 101 Writing I	3
MA-440 Precalculus Mathematics	4	MATH 141 Precalculus	4
SP-211 Speech Communication	3	FCSP 105 Foundations of Speech Comm	3
Flexible Core 2A, 2C, or 2D <i>Recommended: Creative Expression course</i>	3	Elective	3
HE-101 Intro Health Edu <i>or</i> HE-102 Health, Behavior	1-2	Elective	1
Spring Semester: 13 credits			
ENGL-102 English Composition II	3	FCWR 151 Writing II	3
MA-441 Analytic Geometry and Calculus I	4	MATH 170 Calculus I	4
Flexible Core 2A, 2C, or 2D <i>Recommended: HIST History course</i>	3	FCIQ 101 Foundations of Inquiry [^]	3
Flexible Core 2A, 2C, or 2D <i>Recommended: SOCY-101 Sociology</i>	3	ICBS Behavioral Science Seminar [^]	3
Summer Session: 4 credits			
Major Elective Course <i>Recommended: MA-442 Analytic Geometry and Calculus II</i>	4	MATH 180 Calculus II	4
Fall Semester: 13-14 credits			
Major Elective Course <i>Recommended: MA-443 Analytic Geometry and Calculus III</i>	4	MATH 260 Calculus III	4
Major Elective Course <i>Recommended: MA-461 Linear Algebra</i>	4	MATH 310 Linear Algebra <i>and</i> 1 elective credit	4
Required Core 1C – Life & Physical Sciences <i>Recommended: PH-421 General Calculus Physics A (5)</i>	5	PHYS 170 General Physics I <i>and</i> 1 Science Elective credit	5
One credit course in PE-400, PE-500 or DAN100 series	1	Elective	1
Spring Semester: 14-16 credits			
Major Elective Course <i>Recommended: MA-451 Differential Equations</i>	4	MATH 320 Differential Equations <i>and</i> 1 elective credit	4
Major Elective Course <i>Recommended: PH-422 General Calculus Physics B (5)</i>	5	PHYS 180 General Physics II <i>and</i> 1 Science Elective credit	5
Major Elective Courses <i>Recommended: CS-101 Algorithmic Prob Solving I (4)</i>	4	CSCI 125 Computer Programming I <i>and</i> 1 elective credit	4
Major Elective Course (History completed Spring #1) <i>Recommended: Biology, Chemistry or Physics course</i>	3	FCSC 101 Foundations of Scientific Process [^]	3
TOTAL	61-62	TOTAL	61

- Follow “Recommended” courses to maximize transfer credit to New York Tech
[^]Course substitution awarded on the basis of this agreement

Program of Study at New York Institute of Technology

Bachelor of Science in Applied and Computational Mathematics

Courses to be completed at New York Tech

Core and additional requirements		Credits
ICLT 3XX	Literature Seminar	3
ICPH 3XX	Philosophy Seminar	3
ICSS 3XX	Social Science Seminar/Economics choice	3
FCWR 3XX	Professional Communication	3

Major requirements

CSCI 185	Computer Programming	3
MATH 220	Probability and Statistics	3
MATH 330	Computational Analysis	4
MATH 350	Advanced Calculus	3
MATH 410	Numerical Linear Algebra	3
MATH 490	Mathematical Modeling Capstone	5
MATH XXX	Mathematics Electives (300-level and above)	6

Concentration Options: *Choose One* 20

General Concentration

MATH 450	Partial Differential Equations	<i>or</i>	
MATH 455	Numerical Analysis	3	
MATH 3XX	Mathematics Elective (300-level and above)	3	
CSCI XXX	Computer Science Elective	3	
Science Elective		2	
Computer Science <i>or</i> Science Elective		9	

or

Mathematical Modeling Concentration

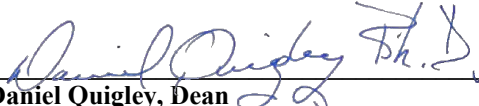
MATH 450	Partial Differential Equations	3	
MATH 470	Mathematical Fluid Dynamics	3	
PHYS 220	General Physics III	4	
PHYS 225	Intro to Modern Physics	3	
PHYS 450	Mathematical Physics	3	
CSCI XXX	Computer Science Elective	3	
Computer Science <i>or</i> Science Elective		1	

or

Scientific Computation Concentration

CSCI 235	Elements of Discrete Structures	3	
CSCI 312	Theory of Computations	3	
CSCI 335	Design and Analysis of Algorithms	3	
MATH 440	Numerical Optimization	3	
MATH 455	Numerical Analysis	3	
Science Elective		2	
Computer Science <i>or</i> Science Elective		3	

Total Credits at New York Institute of Technology: 59



Dr. Daniel Quigley, Dean
College of Arts and Sciences
New York Institute of Technology

05/04/2021

Date

Effective as of Fall 2021