

NASSAU COMMUNITY COLLEGE		NEW YORK INSTITUTE OF TECHNOLOGY	
		2021	
<i>Associate in Science Liberal Arts and Sciences: Mathematics</i>		<i>Bachelor of Science in Applied and Computational Mathematics</i> Concentrations: General, Mathematical Modeling, or Scientific Computation	
Course	Credit	Course	Credit
First Semester: 17 credits			
CSC 120 Computer Science I	4	CSCI 125 Computer Program I <i>and</i> Elective (1)	4
ENG 100 Enhanced Composition I, ENG 101 Composition I, <i>or</i> ENG 108 Craft of Composition	3	FCWR 101 Writing I	3
Humanities Elective	3	FCIQ 101 Foundations of Inquiry*	3
MAT 122 Calculus I	4	MATH 170 Calculus I	4
Social Science Elective <i>Recommended: American History</i>	3	ICSS Social Sciences Seminar*	3
Second Semester: 17 credits			
ENG 102 Composition II <i>or</i> ENG 109 Art of Analysis	3	FCWR 151 Writing II	3
Humanities Elective	3	Equivalent Elective	3
MAT 123 Calculus II	4	MATH 180 Calculus II	4
MAT 241 Discrete Mathematical Structures	3	CSCI 235 Elements of Discrete Structures	3
PED Activity Course(s)	1	Elective	1
Social Science Elective <i>Recommended: PSY, SOC, or ANT</i>	3	ICBS Behavioral Science Seminar*	3
Third Semester: 16-17 credits			
HED Health Elective	2-3	Elective	2-3
MAT 131 Probability with Statistical Inference	3	MATH 220 Probability and Statistics	3
MAT 200 Foundations of Advanced Mathematics	3	Mathematics Elective (MATH 215)	3
MAT 225 Multivariable Calculus	4	MATH 260 Calculus III	4
PHY 151 Physics Science and Math I	4	PHYS 170 General Physics I	4
Fourth Semester: 14-15 credits			
Elective(s) <i>Recommended: Science course</i>	3-4	FCSC 101 Foundations of Scientific Process*	3
MAT 226 Elementary Linear Algebra	4	MATH 310 Linear Algebra <i>and</i> Elective (1)	4
MAT 234 Elementary Differential Equations	3	MATH 320 Differential Equations	3
PHY 152 Physics Science and Math II	4	PHYS 180 General Physics II	4
TOTAL	64-66	TOTAL	64-65

*Transfer substitution awarded on the basis of this agreement
Note – Follow “*Recommended*” courses to maximize transfer credit to New York Tech

Program of Study at New York Institute of Technology

Bachelor of Science in Applied and Computational Mathematics

<u>Core and Additional Requirements*</u>		<u>Credits</u>	
FCSP 105	Foundations of Speech Communication	3	
FCWR 3XX	Professional Communication	3	
ICLT 3XX	Literature Seminar	3	
ICPH 3XX	Philosophy Seminar	3	
Electives		0-1	(12-13)

<u>Major Requirements</u>			
CSCI 185	Computer Programming II	3	
MATH 330	Computational Analysis	4	
MATH 350	Advanced Calculus	3	
MATH 410	Numerical Linear Algebra	3	
MATH 490	Mathematical Modeling Capstone	5	
MATH 3XX/4XX	Mathematics Electives (300-level and above)	6	(24)

Additional Courses for Concentrations

General Concentration

MATH 450	Partial Differential Equations <i>or</i>		
MATH 455	Numerical Analysis	3	
MATH 3XX/4XX	Mathematics Elective (300-level and above)	3	
Science Elective		4	
Computer Science <i>or</i> Science Elective		9	(19)

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	
Computer Science <i>or</i> Science Elective		3	

or

Scientific Computation Concentration

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		4	
Computer Science <i>or</i> Science Elective		3	

Total Credits at New York Institute of Technology **55-56**



03/30/2021

Dr. Daniel Quigley, Dean

Date

College of Arts and Sciences, New York Institute of Technology

Effective as of Fall 2021
**Requirements may vary depending on electives completed at Nassau CC*