

# Mathematics and Computer Studies

K201 Kellenberg Hall  
516.323.3425

**Deborah Upton, Ed.D., Chairperson**

**Professors Emeriti:** Mary Joan Collison, C. Vincent Pané, S. Francis Dominici Piscatella, O.P.

**Associate Professors:** Robert Gordon, Manyiu Tse, Deborah Upton

**Assistant Professors:** Bryan L. Clark, Natalie Hammerman, Jason Schanker

**Adjunct Professors:** Leslie Kellner, Salvatore Petrilli, Jr.

**Adjunct Associate Professor:** Peter Hollenstein

**Adjunct Assistant Professor:** Lawrence DiFiore

**Adjunct Instructors:** Michael Alesi, Ronald Cavallaro, Joseph Convery, Marie Fischer, Maria Flood, Kristin Grant-Anglin, Martha Green, Vincent Grillo, Christine Healy, Alan Hulsaver, Nancy LiVolis, Georgette Macrina, Monica Martin, Michael Olivo, Richard Schiller, Roberta Silver, John Towers

## INTERDISCIPLINARY STUDIES

Students wishing to declare computer science, computer information systems, or mathematics as an area of concentration for the interdisciplinary studies major must take a minimum of 21 credits.

For an Interdisciplinary Studies major concentration in Computer Information Systems, students complete courses as follows: CIS 100, 102/105, 103, 112, 224, 255 and 360.

For an Interdisciplinary Studies major concentration in Computer Science, students complete courses as follows: CSC 120, 121, 229, 235, 244 and at least 5 additional credits from MAT 228 or CSC 200-, 300-, or 400-level courses, in consultation with the departmental chairperson.

For an Interdisciplinary Studies major concentration in Mathematics, students complete courses as follows: MAT 221, 222, 223 and at least 9 more credits in mathematics selected in consultation with the department chairperson. One of the additional three courses must be either MAT 324 or MAT 251 and another of the additional courses must be numbered above MAT 223. Any exceptions to this must be made in writing by the mathematics department chairperson.

## MINORS

The Mathematics and Computer Studies Department offers minors in Mathematics, Computer Science and Computer Information Systems. Minor requirements are described in the section of the catalog on Minors. Minors do not suffice for an area of concentration in the interdisciplinary studies major (as described under the Interdisciplinary Studies Program).

## Programs for Mathematics Majors

### GOALS AND OBJECTIVES

- To prepare Mathematics students for graduate work, teaching in secondary and elementary schools and positions relating to mathematics in industry and business.
- To provide all students with a knowledge of the fundamentals of mathematics and its importance in the world today.
- To give all students the mathematical knowledge necessary for them to advance and succeed in their respective fields.

### GENERAL EDUCATION REQUIREMENTS

MAT 110, 114/115/129/225, 116, 118, 209, 210, 220, 221 and 225 will fulfill the General Education requirement.

### MATHEMATICS—B.A.

New York State Registered Program Code: 07465

HEGIS Code: 1701.01 {Mathematics, General}

Molloy Program of Study Code: MATBA

	<b>Credits</b>
<b>General Education Requirements:</b> Acceptable courses listed under General Education Requirements — (38 credits needed) See <b>NOTE</b>	
<i>Arts and Fine Arts (2 out of 3 disciplines) (6 credits):</i> ART History/MUS History/COM Speech	6
<i>English and Modern Languages (1 of each discipline) (9 credits):</i> ENG 110; Modern Language; and Modern Language/Literature	9
<i>Social and Behavioral Sciences (3 out of 4 disciplines) (9 credits):</i> HIS/POL/PSY/SOC	9
<i>Philosophy, Theology and Ethics (1 of each discipline) (9 credits):</i> PHI; TRS; and ETH	9
<i>Physical Education (1 credit):</i> PED	1
<i>Core Course (4 credits):</i> COR	4
<b>Major Requirements</b> (Minimum of 42 credits):	
<b>For Statistics, complete either* MAT 115 or MAT 225 - (3 credits):</b>	3
MAT 115 Elementary Statistics	*
MAT 225 Statistics for the Natural Sciences	*
MAT 221 Calculus I	4
MAT 222 Calculus II	4
MAT 223 Calculus III	4
MAT 229 Discrete Mathematical Structures	3
MAT 232 Introduction to Linear Algebra	3
MAT 251 Modern Geometry	3

MAT 324 History and Philosophy of Mathematics	3
MAT 330 Modern Algebra - Ring Theory	3
MAT 345 Introduction to Real Analysis	3
MAT 460 Internship in Mathematics	3
MAT 491 Mathematics Senior Seminar	3
<i>Complete 3 additional credits in mathematics: (MAT 331, MAT 335, MAT 336, MAT 342, MAT 347, MAT 356, MAT 361)</i>	3
<b>Related Requirements</b> (9-11 credits)**:	
<i>At least 6-8 credits in Lab science, preferably including PHY 270</i>	6
<i>Required 3 credits in either: CSC 103 or CSC 120 or CIS 235</i>	3
<b>FST Requirement:</b>	
FST 101 College Experience (If required)	1
<b>Electives:</b> 0-2 Elective credits must be Liberal Arts and Sciences (LAS) for a B.A. degree. (39 Electives with 1-3 LAS credits are required if FST is waived.)	38
<i>(Adjust Electives needed for having a Minor(s), Remedials, ESL, Honors Programs, PED/FST waivers as needed, under consultation with advisor.)</i>	--
<b>Total:</b>	<b>128</b>

**NOTE: The General Education requirement is 44, and has been adjusted to 38, because the following Major and Related requirements will also satisfy the General Education requirement: MAT 221 and a Lab Science course.**

## CHILDHOOD EDUCATION - MATHEMATICS—B.S.

New York State Registered Program Code: 23868  
HEGIS Code: 802.00 (Elementary Education, General)  
Molloy Program of Study Code: CMABS

	<b>Credits</b>
<b>General Education Requirements:</b> Acceptable courses listed under General Education Requirements — (38 credits needed) See <b>NOTE</b>	
<b>Education Childhood General Education Requirements:</b> Second Math course; Second Science course (Take two Lab Science courses to also count towards the two Lab Science Mathematics Related Requirement and to meet the Math & Science General Education Requirements) — (0 credits needed) See <b>NOTE</b>	
<i>Arts and Fine Arts (1 of each discipline) (6 credits): ART History; MUS History</i>	6
<i>English and Modern Languages (1 of each discipline) (9 credits): ENG 110; ENG 262 (required for Education majors); Modern Language</i>	9
<i>Social and Behavioral Sciences (1 of each discipline) (9 credits): HIS; POL; PSY 205 (required for Education majors)</i>	9

<i>Philosophy, Theology and Ethics (1 of each discipline) (9 credits): PHI; TRS; and ETH</i>	9
<i>Physical Education (1 credit): PED 125 (required for Education majors)</i>	1
<i>Core Course (4 credits): COR</i>	4
<b>Major Requirements</b> (Minimum of 30 credits):	
<i>Complete either* MAT 115 or MAT 225 (3 credits):</i>	3
MAT 115 Elementary Statistics	*
MAT 225 Statistics for the Natural Sciences	*
MAT 209 Mathematics for Elementary Teachers from an Advanced Standpoint - Number Sense and Operations	3
MAT 210 Mathematics for Elementary Teachers from an Advanced Standpoint - Algebra and Geometry	3
MAT 221 Calculus I	4
MAT 222 Calculus II	4
<i>Complete either** MAT 251 or MAT 324 (3 credits):</i>	3
MAT 251 Modern Geometry	**
MAT 324 History and Philosophy of Mathematics	**
MAT 491 Mathematics Senior Seminar	3
<i>Complete 7 more MAT Elective credits (Under consultation with advisor)</i>	7
<b>Related Requirements</b> - (9-11 credits) CSC 102 or CIS 103 or CIS 112 or CSC 120 or CIS 235; At least <b>6 credits</b> in lab science	9
<b>Education - Childhood Major Requirements</b> (40 total credits):	
<b>Phase I—Apprentice Semester</b> (13 credits):	
EDU 329 Strategies for All Learners in the Diverse Classroom	3
EDU 330 Field Experience in a School Setting	0
EDU 360 Foundations of Education for Regular and Special Education Teachers	3
EDU 361 Law and Professionalism in Inclusive Settings	1
EDU 364 Instructional Technology for Teachers	3
EDU 365 Critical Examination of Issues in Education	3
<b>Phase II—Pre-Professional Semester</b> (15 credits):	
EDU 332 Literacy in the Content Areas for Childhood Teachers I	3
EDU 333 Literacy in the Content Areas for Childhood Teachers II	3
EDU 341 Mathematics in the Diverse Classroom	3
EDU 346 Science in the Diverse Classroom	3
EDU 351 Social Studies in the Diverse Classroom	3
EDU 355 Field Experience in a School Setting - Childhood Programs	0

<b>Phase III—Professional Semester (12 credits):</b>	
EDU 352 Teaching to Diverse Learners	3
EDU 480 Childhood Student Teaching	8
EDU 488 Student Teaching Seminar	1
<b>FST Requirement:</b>	
FST 101 College Experience (If required)	1
<b>Electives:</b> The Liberal Arts and Sciences (LAS) requirement for a B.S. degree is met. (11 Electives are required if FST is waived.)	10
(Adjust Electives needed for having a Minor(s), Remedials, ESL, Honors Programs, PED/FST waivers as needed, under consultation with advisor.)	--
<b>Total:</b>	<b>128</b>

**NOTE: The General Education requirement is 44, and has been adjusted to 38, because the following Major or Related requirements will also satisfy the General Education requirement: MAT 115/MAT 225 and a Lab Science.**

**The Education Childhood General Education requirement is a minimum of 6 credits and is adjusted to 0 credits because the following Major or Related requirements are taken—MAT 221 and a second Lab Science course.**

## CHILDHOOD EDUCATION 1-6/EARLY CHILDHOOD BIRTH-2- MATHEMATICS—B.S.

New York State Registered Program Code: 23868

HEGIS Code: 802.00 {Elementary Education, General}

Molloy Program of Study Code: CMBBS

	<b>Credits</b>
<b>General Education Requirements:</b> Acceptable courses listed under General Education Requirements — (38 credits needed) See <b>NOTE</b>	
<b>Education Childhood/Early Childhood General Education Requirements:</b> Second Math course; Second Science course (Take two Lab Science courses to also count towards the two Lab Science Mathematics Related Requirement and to meet the Math & Science General Education Requirements) — (0 credits needed) See <b>NOTE</b>	
Arts and Fine Arts (1 of each discipline) (6 credits): ART History; MUS History	6
English and Modern Languages (1 of each discipline) (9 credits): ENG 110; ENG 262 (required for Education majors); Modern Language	9
Social and Behavioral Sciences (1 of each discipline) (9 credits): HIS; POL; PSY 205 (required for Education majors)	9
Philosophy, Theology and Ethics (1 of each discipline) (9 credits): PHI; TRS; and ETH	9
Physical Education (1 credit): PED 125 (required for Education majors)	1
Core Course (4 credits): COR	4
<b>Major Requirements</b> (Minimum of 30 credits):	

Complete either* MAT 115 or MAT 225 (3 credits):	3
MAT 115 Elementary Statistics	*
MAT 225 Statistics for the Natural Sciences	*
MAT 209 Mathematics for Elementary Teachers from an Advanced Standpoint - Number Sense and Operations	3
MAT 210 Mathematics for Elementary Teachers from an Advanced Standpoint - Algebra and Geometry	3
MAT 221 Calculus I	4
MAT 222 Calculus II	4
Complete either** MAT 251 or MAT 324 (3 credits):	3
MAT 251 Modern Geometry	**
MAT 324 History and Philosophy of Mathematics	**
MAT 491 Mathematics Senior Seminar	3
Complete 7 more MAT Elective credits (Under consultation with advisor)	7
<b>Related Requirements</b> - (9-11 credits) CSC 102 or CIS 103 or CIS 112 or CSC 120 or CIS 235; At least 6 credits in lab science	9
<b>Education - Childhood Major Requirements</b> (43 total credits):	
<b>Phase I—Apprentice Semester</b> (13 credits):	
EDU 329 Strategies for All Learners in the Diverse Classroom	3
EDU 330 Field Experience in a School Setting	0
EDU 360 Foundations of Education for Regular and Special Education Teachers	3
EDU 361 Law and Professionalism in Inclusive Settings	1
EDU 364 Instructional Technology for Teachers	3
EDU 365 Critical Examination of Issues in Education	3
<b>Pre-Phase II—Before Pre-Professional Semester</b> (3 credits):	
Complete 3 credits from either*** EDU 336 or EDU 337:	3
EDU 336 Curriculum and Methodology in Early Childhood Education	***
EDU 337 Examination of Issues in Early Childhood Education, Birth-Grade 2	***
<b>Phase II—Pre-Professional Semester</b> (15 credits):	
EDU 332 Literacy in the Content Areas for Childhood Teachers I	3
EDU 333 Literacy in the Content Areas for Childhood Teachers II	3
EDU 341 Mathematics in the Diverse Classroom	3
EDU 346 Science in the Diverse Classroom	3
EDU 351 Social Studies in the Diverse Classroom	3

EDU 355 Field Experience in a School Setting - Childhood Programs	0
<b>Phase III—Professional Semester (12 credits):</b>	
EDU 352 Teaching to Diverse Learners	3
EDU 481 Childhood 1-6/Early Childhood B-2 Student Teaching	8
EDU 488 Student Teaching Seminar	1
<b>FST Requirement:</b>	
FST 101 College Experience (If required)	1
<b>Electives:</b> The Liberal Arts and Sciences (LAS) requirement for a B.S. degree is met. (8 Electives are required if FST is waived.)	7
<i>(Adjust Electives needed for having a Minor(s), Remedials, ESL, Honors Programs, PED/FST waivers as needed, under consultation with advisor.)</i>	--
<b>Total:</b>	<b>128</b>

**NOTE: The General Education requirement is 44, and has been adjusted to 38, because the following Major or Related requirements will also satisfy the General Education requirement: MAT 115/MAT 225 and a Lab Science.**

**The Education Childhood/Early Childhood General Education requirement is a minimum of 6 credits and is adjusted to 0 credits because the following Major or Related requirements are taken—MAT 221 and a second Lab Science course.**

## CHILDHOOD EDUCATION - MATHEMATICS/ SPECIAL EDUCATION—B.S.

New York State Registered Program Code: 23869

HEGIS Code: 802.00 {Elementary Education, General}

Molloy Program of Study Code: CMSBS

	<b>Credits</b>
<b>General Education Requirements:</b> Acceptable courses listed under General Education Requirements — (38 credits needed) See <b>NOTE</b>	
<b>Education Adolescence General Education Requirements:</b>	
Second Math course; Second Science course (Take two Lab Science courses to also count towards the two Lab Science Mathematics Related Requirement and to meet the Math & Science General Education Requirements) — (0 credits needed) See <b>NOTE</b>	
Arts and Fine Arts (1 of each discipline) (6 credits): ART History; MUS History	6
English and Modern Languages (1 of each discipline) (9 credits): ENG 110; ENG 262 (required for Education majors); Modern Language	9
Social and Behavioral Sciences (1 of each discipline) (9 credits): HIS; POL; PSY 205 (required for Education majors)	9
Philosophy, Theology and Ethics (1 of each discipline) (9 credits): PHI; TRS; and ETH	9
Physical Education (1 credit): PED 125 (required for Education majors)	1

Core Course (4 credits): COR	4
<b>Major Requirements</b> (Minimum of 30 credits):	
Complete either* MAT 115 or MAT 225 (3 credits):	3
MAT 115 Elementary Statistics	*
MAT 225 Statistics for Natural Sciences	*
MAT 209 Mathematics for Elementary Teachers from an Advanced Standpoint - Number Sense and Operations	3
MAT 210 Mathematics for Elementary Teachers from an Advanced Standpoint - Algebra and Geometry	3
MAT 221 Calculus I	4
MAT 222 Calculus II	4
Complete either** MAT 251 or MAT 324 (3 credits):	3
MAT 251 Modern Geometry	**
MAT 324 History and Philosophy of Mathematics	**
MAT 491 Mathematics Senior Seminar	3
Complete 7 more MAT Elective credits (Under consultation with advisor)	7
<b>Related Requirements</b> - (9-11 credits) CSC 102 or CIS 103 or CIS 112 or CSC 120 or CIS 235; At least 6 credits in lab science	9
<b>Education - Childhood Major Requirements</b> (46 total credits):	
<b>Prior To or During Apprentice Semester</b> - (6 credits):	
PSY 331 Assessment, Diagnosis and Evaluation in Education	3
PSY 335 Exceptionality: Identification and Management in Education	3
<b>Phase I—Apprentice Semester</b> (13 credits):	
EDU 329 Strategies for All Learners in the Diverse Classroom	3
EDU 330 Field Experience in a School Setting	0
EDU 360 Foundations of Education for Regular and Special Education Teachers	3
EDU 361 Law and Professionalism in Inclusive Settings	1
EDU 364 Instructional Technology for Teachers	3
EDU 365 Critical Examination of Issues in Education	3
<b>Phase II—Pre-Professional Semester</b> (15 credits):	
EDU 332 Literacy in the Content Areas for Childhood Teachers I	3
EDU 333 Literacy in the Content Areas for Childhood Teachers II	3
EDU 341 Mathematics in the Diverse Classroom	3
EDU 346 Science in the Diverse Classroom	3
EDU 351 Social Studies in the Diverse Classroom	3

EDU 357 Field Experience in a School Setting - Childhood/Special Education Program	0
<b>Phase III—Professional Semester (12 credits):</b>	
EDU 352 Teaching to Diverse Learners	3
EDU 482 Childhood/Special Education Student Teaching	8
EDU 488 Student Teaching Seminar	1
<b>FST Requirement:</b>	
FST 101 College Experience (If required)	1
<b>Electives:</b> The Liberal Arts and Sciences (LAS) requirement for a B.S. degree is met. (5 Electives are required if FST is waived.)	4
<i>(Adjust Electives needed for having a Minor(s), Remedials, ESL, Honors Programs, PED/FST waivers as needed, under consultation with advisor.)</i>	--
<b>Total:</b>	<b>128</b>

**NOTE: The General Education requirement is 44, and has been adjusted to 38, because the following Major or Related requirements will also satisfy the General Education requirement: MAT 115/MAT 225 and a Lab Science.**

**The Education Childhood/Special Education General Education requirement is a minimum of 6 credits and is adjusted to 0 credits because the following Major or Related requirements are taken—MAT 221 and a second Lab Science course.**

## CHILDHOOD EDUCATION - MATHEMATICS/ SPECIAL EDUCATION—B.S./M.S.

New York State Registered Program Code: 31975  
HEGIS Code B.S.: 802.00 {Elementary Education, General}  
HEGIS Code M.S.: 808.00 {Special Education, General}  
Molloy Program of Study Code: CMSBM

	<b>Credits</b>
<b>General Education Requirements:</b> Acceptable courses listed under General Education Requirements — (38 credits needed) See <b>NOTE</b>	
<b>Education 5 Year Childhood/Special Education General Education Requirements:</b>	
Second Math course; Second Science course (Take two Lab Science courses to also count towards the two Lab Science Mathematics Related Requirement and to meet the Math & Science General Education Requirements) — (0 credits needed) See <b>NOTE</b>	
<i>Arts and Fine Arts (2 disciplines) (6 credits):</i> ART History; MUS History	6
<i>English and Modern Languages (1 of each discipline) (9 credits):</i> ENG 110; ENG 262 (required for Education majors); Modern Language	9
<i>Social and Behavioral Sciences (1 of each discipline) (9 credits):</i> HIS; POL; PSY 205 (required for Education majors)	9
<i>Philosophy, Theology and Ethics (1 of each discipline) (9 credits):</i> PHI; TRS; and ETH	9

<i>Physical Education (1 credit):</i> PED 125 (required for Education majors)	1
<i>Core Course (4 credits):</i> COR	4
<b>Major Requirements</b> (Minimum of 30 credits):	
<i>Complete either* MAT 115 or MAT 225 (3 credits):</i>	3
MAT 115 Elementary Statistics	*
MAT 225 Statistics for Natural Sciences	*
MAT 209 Mathematics for Elementary Teachers from an Advanced Standpoint - Number Sense and Operations	3
MAT 210 Mathematics for Elementary Teachers from an Advanced Standpoint - Algebra and Geometry	3
MAT 221 Calculus I	4
MAT 222 Calculus II	4
<i>Complete either** MAT 251 or MAT 324 (3 credits):</i>	3
MAT 251 Modern Geometry	**
MAT 324 History and Philosophy of Mathematics	**
MAT 491 Mathematics Senior Seminar	3
<i>Complete 7 more MAT Elective credits</i> (Under consultation with advisor)	7
<b>Related Requirements</b> - (9-11 credits) CSC 102 or CIS 103 or CIS 112 or CSC 120 or CIS 235; At least <b>6 credits</b> in lab science	9
<b>Education - Childhood/Special Education Major Requirements</b> (58 total EDU credits):	
<b>Pre-Apprentice Semester</b> —(3 credits):	
<b>Fall of Junior Year:</b>	
EDU 365 Critical Examination of Issues in Education	3
<b>Apprentice Semester</b> —(13 credits):	
<b>Spring of Junior Year:</b>	
EDU 360 Foundations of Education for Regular and Special Education Teachers	3
EDU 361 Law and Professionalism in Inclusive Settings	1
EDU 364 Instructional Technology for Teachers	3
EDU 500B Apprentice Field Experience in Childhood/Special Education Inclusive Classroom	0
EDU 504 Interdisciplinary Childhood and Middle Childhood Teaching Methods for Diverse Learners	3
EDU 537 Diverse Abilities and Needs of Students in Inclusive Classrooms	3
<b>Pre-Professional Semester</b> —(15 credits):	
<b>Fall of Senior Year:</b>	
EDU 503 Science Curriculum and Methods for Childhood Diverse Learners	3

EDU 505 Methods of Teaching Mathematics in Inclusive Childhood and Middle Childhood Classrooms	3
EDU 506A Childhood Integrated Language Arts and Reading for the Inclusive Classroom of Diverse Learners	6
EDU 570 Characteristics of Students with Disabilities	3
<b>Professional Semester—(12 credits):</b>	
<b>Spring of Senior Year:</b>	
EDU 509 Methods of Teaching Social Studies in Childhood and Middle School Inclusive Classrooms	3
EDU 513 Meeting the Needs of Culturally Diverse Students in Inclusive Classrooms	3
EDU 550B Pre-Professional Childhood/Special Education Field Experience in Inclusive Classrooms	0
EDU 571 Assessment, Diagnosis and Evaluation of Students with Disabilities	3
EDU 572 Strategies and Methods for Teaching Childhood Students with Disabilities	3
<b>5th Year - Fall of Professional Year—(9 credits):</b>	
EDU 547B Developing Action Research for Special Education and Inclusive Classrooms in Childhood Education	3
EDU 551B Student Teaching Childhood (Grades 1-3, Regular and Special Education)	3
EDU 552B Student Teaching Childhood/Special (Grades 4-6 Regular and Special Education)	3
EDU 553B Student Teaching Seminar - Childhood/Special Education (Grades 1-6)	0
<b>5th Year - Spring of Professional Year—(6 credits):</b>	
EDU 549B Teacher as Researcher in Special Education and Inclusive Classrooms of Childhood Learners	3
EDU 574 Curriculum Content and Practices for Teaching Childhood Students with Disabilities	3
<b>FST Requirement:</b>	
FST 101 College Experience (If required)	1
<b>Electives:</b> The Liberal Arts and Sciences (LAS) requirement for a B.S. degree is met. (No Electives are required if FST is waived.)	0
<i>(Adjust Electives needed for having a Minor(s), Remedials, ESL, Honors Programs, PED/FST waivers as needed, under consultation with advisor.)</i>	--
<b>Total:</b>	<b>135-136</b>

**NOTE: The General Education requirement is 44, and has been adjusted to 38, because the following Major or Related requirements will also satisfy the General Education requirement: MAT 115/MAT 225 and a Lab Science.**

**The Education 5 Year Childhood/Special Education General Education requirement is a minimum of 6 credits and is adjusted to 0 credits because the following Major or Related requirements are taken—MAT 221 and a second Lab Science course.**

## ADOLESCENCE EDUCATION - MATHEMATICS—

### B.A.

New York State Registered Program Code: 23880

HEGIS Code: 1701.00 (Mathematics 7-12 Teacher)

Molloy Program of Study Code: AMABA

### Credits

**General Education Requirements:** Acceptable courses listed under General Education Requirements — (38 credits needed) See **NOTE**

#### Education Adolescence General Education Requirements:

Second Math course; Second Science course (Take two Lab Science courses to also count towards the two Lab Science Mathematics Related Requirement and to meet the Math & Science General Education Requirements) — (0 credits needed) See **NOTE**

*Arts and Fine Arts (2 out of 3 disciplines) (6 credits):* ART History/MUS History/COM Speech 6

*English and Modern Languages (1 of each discipline) (9 credits):* ENG 110; ENG literature (ENG 161 or ENG 366 recommended); Modern Language 9

*Social and Behavioral Sciences (1 of each discipline) (9 credits):* HIS; POL; PSY 206 (required for Education majors) 9

*Philosophy, Theology and Ethics (1 of each discipline) (9 credits):* PHI; TRS; and ETH (Ethics) 9

*Physical Education (1 credit):* PED 1

*Core Course (4 credits):* COR 4

#### Major Requirements (Minimum of 39 credits):

*Complete either\* MAT 115 or MAT 225 (3 credits):* 3

MAT 115 Elementary Statistics \*

MAT 225 Statistics for the Natural Sciences \*

MAT 221 Calculus I 4

MAT 222 Calculus II 4

MAT 223 Calculus III 4

MAT 229 Discrete Mathematical Structures 3

MAT 232 Introduction to Linear Algebra 3

MAT 251 Modern Geometry 3

MAT 320 Mathematics for the Secondary Teacher from an Advanced Standpoint 3

MAT 330 Modern Algebra - Ring Theory 3

MAT 491 Mathematics Senior Seminar 3

*Complete 6 elective credits within major under consultation with advisor (MAT 324 is highly recommended as one of the electives)* 6



**Related Requirements** - (9-11 credits): CSC 103 or CSC 120 or CIS 235; At least **6 credits** in Lab Science - preferably including PHY 270 9

**Education - Adolescence Major Requirements**  
(31 total credits):

**Phase I—Apprentice Semester** (13 credits):

EDU 329 Strategies for All Learners in the Diverse Classroom 3

EDU 330 Field Experience in a School Setting 0

EDU 360 Foundations of Education for Regular and Special Education Teachers 3

EDU 361 Law and Professionalism in Inclusive Settings 1

EDU 364 Instructional Technology for Teachers 3

EDU 365 Critical Examination of Issues in Education 3

**Phase II—Pre-Professional Semester and Methodology courses** (9 credits):

EDU 314 Methods and Techniques of Teaching Mathematics for Adolescent Students 3

EDU 334 Literacy in the Content Areas for Adolescent Students 3

EDU 366 Principles and Techniques of Teaching Adolescent Students 3

EDU 368 Field Experience in a School Setting -Adolescence Programs 0

**Phase III—Professional Semester** (9 credits):

EDU 485 Adolescence Student Teaching 8

EDU 488 Student Teaching Seminar 1

**FST Requirement:**

FST 101 College Experience (If required) 1

**Electives:** 5 Elective credits must be Liberal Arts and Sciences (LAS) for a B.A. degree. (11 Electives with 6 LAS credits are required if FST is waived.) 10

*(Adjust Electives needed for having a Minor(s), Remedials, ESL, Honors Programs, PED/FST waivers as needed, under consultation with advisor.)* --

**Total:** 128

**NOTE: The General Education requirement is 44, and has been adjusted to 38, because the following Major or Related requirements will also satisfy the General Education requirements: MAT 115/MAT 225 and a Lab Science course.**

**The Education Adolescence General Education requirement is 6 and has been adjusted to 0, because the following Major and Related requirements are taken: MAT 221 and a second Lab Science course.**

**ADOLESCENCE EDUCATION - MATHEMATICS/ SPECIAL EDUCATION—B.A.**

New York State Registered Program Code: 23873  
HEGIS Code: 1701.00 {Mathematics 7-12 Teacher}  
Molloy Program of Study Code: AMSBA

**Credits**

**General Education Requirements:** Acceptable courses listed under General Education Requirements — (38 credits needed) See **NOTE**

<b>Education Adolescence General Education Requirements:</b>	
Second Math course; Second Science course (Take two Lab Science courses to also count towards the two Lab Science Mathematics Related Requirement and to meet the Math & Science General Education Requirements) — (0 credits needed) See <b>NOTE</b>	
<i>Arts and Fine Arts (2 out of 3 disciplines) (6 credits):</i> ART History/MUS History/COM Speech	6
<i>English and Modern Languages (1 of each discipline) (9 credits):</i> ENG 110; ENG literature (ENG 161 or ENG 366 recommended); Modern Language	9
<i>Social and Behavioral Sciences (1 of each discipline) (9 credits):</i> HIS; POL; PSY 206 (required for Education majors)	9
<i>Philosophy, Theology and Ethics (1 of each discipline) (9 credits):</i> PHI; TRS; and ETH (Ethics)	9
<i>Physical Education (1 credit):</i> PED	1
<i>Core Course (4 credits):</i> COR	4
<b>Major Requirements</b> (Minimum of 39 credits):	
Complete either* or MAT 115 or MAT 225 (3 credits):	3
MAT 115 Elementary Statistics	*
MAT 225 Statistics for the Natural Sciences	*
MAT 221 Calculus I	4
MAT 222 Calculus II	4
MAT 223 Calculus III	4
MAT 229 Discrete Mathematical Structures	3
MAT 232 Introduction to Linear Algebra	3
MAT 251 Modern Geometry	3
MAT 320 Mathematics for the Secondary Teacher from an Advanced Standpoint	3
MAT 330 Modern Algebra - Ring Theory	3
MAT 491 Mathematics Senior Seminar	3
Complete <b>6 elective credits</b> within major under consultation with advisor (MAT 324 is highly recommended as one of the electives)	6
<b>Related Requirements</b> - (9-11 credits): CSC 103 or CSC 120 or CIS 235; At least <b>6 credits</b> in Lab Science; preferably including PHY 270	
<b>Education - Adolescence/Special Education Major Requirements</b> (37 total credits):	

<b>Prior To or During Apprentice Semester</b> - (6 credits):	
PSY 331 Assessment, Diagnosis and Evaluation in Education	3
PSY 335 Exceptionality, Identification, and Management in Education	3
<b>Phase I—Apprentice Semester</b> (13 credits):	
EDU 329 Strategies for All Learners in the Diverse Classroom	3
EDU 330 Field Experience in a School Setting	0
EDU 360 Foundations of Education for Regular and Special Education Teachers	3
EDU 361 Law and Professionalism in Inclusive Settings	1
EDU 364 Instructional Technology for Teachers	3
EDU 365 Critical Examination of Issues in Education	3
<b>Phase II—Pre-Professional Semester and Methodology courses</b> (9 credits):	
EDU 314 Methods and Techniques of Teaching Mathematics for Adolescent Students	3
EDU 334 Literacy in the Content Areas for Adolescent Students	3
EDU 366 Principles and Techniques of Teaching Adolescent Students	3
EDU 370 Field Experience in a School Setting-Adolescence/Special Education Program	0
<b>Phase III—Professional Semester</b> (9 credits):	
EDU 487 Adolescence/Special Education Student Teaching	8
EDU 488 Student Teaching Seminar	1
<b>FST Requirement:</b>	
FST 101 College Experience (If required)	1
<b>Electives:</b> The Liberal Arts and Sciences (LAS) requirement for a B.A. degree is met. (5 Electives are required if FST is waived.)	4
<i>(Adjust Electives needed for having a Minor(s), Remedials, ESL, Honors Programs, PED/FST waivers as needed, under consultation with advisor.)</i>	
<b>Total:</b>	<b>128</b>

**NOTE: The General Education requirement is 44, and has been adjusted to 38, because the following Major or Related requirements will also satisfy the General Education requirements: MAT 115/MAT 225 and a Lab Science course.**

**The Education Adolescence/Special Education General Education requirement is 6 and has been adjusted to 0, because the following Major and Related requirements are taken: MAT 221 and a second Lab Science course.**

### **ADOLESCENCE EDUCATION - MATHEMATICS/ SPECIAL EDUCATION—B.A./M.S.**

New York State Registered Program Code: 31981  
 HEGIS Code B.A.: 1701.00 {Mathematics 7-12 Teacher}  
 HEGIS Code M.S.: 808.00 {Special Education, General}  
 Molloy Program of Study Code: AMSBM