

Liberal Arts: Mathematics and Natural Science (Mathematics)



◆ TRANSFER DEGREE M MIDDLETOWN CAMPUS N NEWBURGH CAMPUS DL DISTANCE LEARNING

Program Description

The Mathematics registered track will provide students the opportunity to explore mathematics careers and prepare them for successful transfer to a four-year school. Transfer and career paths include statistics, artificial intelligence, actuarial science, teaching, cryptography, mathematical modeling, finance, economics, and more.

For more information, visit the [SUNY Transfer Path](#) website.

This degree has been approved by SUNY and NYS Education Department for online distance learning delivery. This does not mean that SUNY Orange offers every course in the program online; however, many are offered in this format. Please check the current credit course schedule for online DL virtual course listings offered each semester.

Program Outcomes

Students will:

- demonstrate essential and foundational knowledge in the natural sciences and liberal arts.
- demonstrate understanding of the methods scientists use to explore natural phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical analysis
- perform mathematically with proper notation and vocabulary commensurate with chosen field of study
- demonstrate ability to apply systematic reasoning and critical thinking skills
- demonstrate effective communication both oral and written
- transfer to, and succeed at, an upper-level institution

Admissions Criteria

Admission to this program requires that students be high school graduates or have high school equivalency diplomas (HSEs). If students are not high school graduates, they may be eligible for admission to the College's 24 Credit Hour Program. If students are home schooled, they may be eligible for admissions.

Before initiating study for this A.S. degree a student must have achieved a mathematical proficiency which includes intermediate level algebra. At SUNY Orange, this means that a student must have tested beyond MAT 102 (Intermediate Algebra) to begin progress toward this degree. If this is not the case the student must speak with an advisor in order to choose the proper preparatory courses.

Transfer Options

SUNY Orange has special relationships with upper-level colleges and universities for transfer. Students regularly transfer with junior status to colleges and universities in the State University of New York System as well as to private and state colleges and universities across the country.

Your Career Coach

Career opportunities

- Statistics
- Artificial Intelligence
- Actuarial Science
- Teaching
- Cryptology
- Mathematical Modeling
- Finance
- Economics

[Explore careers with Career Coach](#)

Mathematics Track Gateway Courses:

- Gateway courses: MAT 205

Courses above have been recommended by the department to help introduce you to the program (Gateway courses) and guide you in selecting courses that will provide you with the best academic experience (Key courses and suggested Electives).

First Semester

Course #	Course Name	P, C, P/C	Cr
ENG 101	Freshman English 1	P	3

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Course #	Course Name	P, C, P/C	Cr
MAT 205	Calculus 1	P	4
_____	Elective		3
_____	SUNY Elective (GE 2)		3
_____	SUNY Elective (GE 3)		3
_____	Total Semester Credits		16

Milestones

During this semester, students should:

- Visit Career Services and explore a career inventory
- Connect with the Math Lab and the [Center for Student Success](#) to discuss challenges and become more academically successful
- If you are interested in becoming a tutor, discuss the qualifications with the Math Lab Coordinator or the Director of the Center for Student Success

Second Semester

Course #	Course Name	P, C, P/C	Cr
MAT 206	Calculus 2	P	4
ENG 102	Freshman English 2	P	3
MAT ____	Restricted Math Elective *		3
_____	SUNY Elective (GE 2)		3
_____	SUNY Elective (GE 4, 5 or 6)		3
PES 100	Concepts of Physical Wellness		1
_____	Total Semester Credits		17

Milestones

During this semester, students should:

- Visit Transfer Fair and speak with potential transfer schools
- Apply for returning student scholarships
- When choosing electives, consider degree requirements at your top transfer school choices

Third Semester

Course #	Course Name	P, C, P/C	Cr
MAT 207	Calculus 3	P	4
MAT ____	Restricted Math Elective *		3
COM 101	Foundations of Communication		3
_____	SUNY Elective (GE 8 or 9)		3
PES ____	Physical Education		0.5
PES ____	Physical Education		0.5
_____	Total Semester Credits		14

Milestones

During this semester, students should:

- Begin communication with potential references and apply to transfer school
- Seek guidance on resume development

Fourth Semester

Course #	Course Name	P, C, P/C	Cr
MAT ____	Restricted Math Elective *		3
Either			
_____	SUNY Elective (GE 2)		
Or			
CSC 101	Computer Science 1		
Or			
CSC 102	Computer Science 2		
Or			
CSC 201	Data Structures		
Or			
CSC 204	Computer Organization and Assembly Language		3

Course #	Course Name	P, C, P/C	Cr
	Elective		3
Either			
MAT 122	College Trigonometry***	P	
Or			
	Elective		3
Either			
MAT 121	College Algebra**	P	
Or			
MAT 131	Pre-Calculus**	P	
Or			
	Elective		3
	Total Semester Credits		15

Milestones

During this semester, students should:

- Apply for graduation
- Apply for transfer scholarships

TOTAL DEGREE CREDITS: 62

Notes:

* Students may select from these Restricted Math electives: MAT 120 Intro. to Statistics, MAT 136 Intro. to Discrete Math, MAT 211 Linear Algebra, MAT 214 Differential Equations

** For students who place into MAT 121 or MAT 131

*** For students who place into MAT 121