MATHEMATICS EDUCATION CONCENTRATION

Program Description

The **Mathematics Education Concentration** within the Associate in Science in Mathematics and Pre-Engineering is designed for students who plan to transfer to a four-year institution to pursue a bachelor's degree in mathematics education or a related teacher preparation program.

This concentration provides a strong foundation in mathematics while preparing students for future teaching roles in middle or secondary school settings. Students develop skills in calculus, quantitative reasoning, and mathematical problem-solving while gaining an understanding of how mathematical concepts are learned and applied in educational environments. Coursework emphasizes analytical thinking, clear communication of mathematical ideas, and the development of strong content knowledge necessary for teaching mathematics.

The program prepares students for upper-level coursework in mathematics education and teacher preparation programs.

Transfer Information

The Mathematics Education concentration is structured to align with bachelor's degree programs in mathematics education and related teacher preparation pathways.

Students planning to pursue teacher certification should work closely with faculty and Advising & Transfer Services to ensure coursework aligns with the transfer and certification requirements of their intended institution. Because teacher preparation programs often have GPA and admission requirements, early academic planning is recommended.

Students planning to transfer within New Jersey should explore the "Transfer Programs" feature on NJ Transfer (www.njtransfer.org (http://www.njtransfer.org)) to review articulation agreements and institutional requirements.

Career Information

The A.S. in Mathematics and Pre-Engineering – Mathematics Education Concentration is designed primarily for transfer. A bachelor's degree and completion of a state-approved teacher preparation program are required to become a certified teacher.

With further education and certification, graduates may pursue careers such as:

- Middle School Mathematics Teacher
- High School Mathematics Teacher
- Mathematics Tutor or Academic Support Specialist
- Curriculum or Educational Program Developer

Students are encouraged to consult with faculty and Career Services early in their academic journey to explore transfer pathways, teaching certification requirements, and career opportunities in mathematics education.

Fall One		Credit Hours
ENGL 151	English I	3
STSC 150	Student Success Seminar	2
MATH 166	Topics in Algebra	4
EDUC 178	Introduction to the Education of Exceptional Students	3
Technology Gen. Ed. Requirement (https://catalog.ocean.edu/academic-information/general-education/)		3
CSIT 124	Introduction to Programming (Recommended)	
	Credit Hours	**15**
Spring One		
ENGL 152	English II	3
MATH 196	Precalculus	4
PSYC 172	General Psychology	3
MATH 171	Finite Mathematics	3
	Credit Hours	**13**
Summer One		
MATH 265	Calculus I	4
	Credit Hours	**4**
Fall Two		
MATH 266	Calculus II	4
MATH 158	Mathematical Modeling	4
PHYS 281 & 281L	General Physics I Lecture and General Physics I Lab	4
Humanities Gen. Ed. Requirement (https://catalog.ocean.edu/academic-information/general-education/)		3
	Credit Hours	**15**
Spring Two		
MATH 267	Calculus III	4
EDUC 261 or EDUC 277	Development of the Learner or The Teaching Profession in America	3
PSYC 173 or PSYC 273	Child Psychology or Adolescent Psychology	3
COMM 154	Fundamentals of Public Speaking	3
	Credit Hours	**13**
	Total Credit Hours	**60**

Fall One		Credit Hours
ENGL 151	English I	3
STSC 150	Student Success Seminar	2
MATH 196	Precalculus	4
EDUC 178	Introduction to the Education of Exceptional Students	3
MATH 158	Mathematical Modeling	4
	Credit Hours	**16**
Spring One		
ENGL 152	English II	3
MATH 171	Finite Mathematics	3
MATH 265	Calculus I	4
PSYC 172	General Psychology	3
Humanities Gen. Ed. Requirement (https://catalog.ocean.edu/academic-information/general-education/)		3
	Credit Hours	**16**
Fall Two		
MATH 266	Calculus II	4
EDUC 261	Development of the Learner	3
PHYS 281 & 281L	General Physics I Lecture and General Physics I Lab	4
Technology Gen. Ed. Requirement (https://catalog.ocean.edu/academic-information/general-education/)		3
	Credit Hours	**14**

Spring Two		
MATH 267	Calculus III	4
MATH 270	Discrete Mathematics	3
EDUC 277	The Teaching Profession in America	3
PSYC 173 or PSYC 273	Child Psychology or Adolescent Psychology	3
COMM 154	Fundamentals of Public Speaking	3
	Credit Hours	**16**
	Total Credit Hours	**62**

Fall One		**Credit Hours**
ENGL 151	English I	3
STSC 150	Student Success Seminar	2
MATH 265	Calculus I	4
EDUC 178	Introduction to the Education of Exceptional Students	3
MATH 158	Mathematical Modeling	4
	Credit Hours	**16**
Spring One		
ENGL 152	English II	3
MATH 266	Calculus II	4
PHYS 281 & 281L	General Physics I Lecture and General Physics I Lab	4
Humanities Gen. Ed. Requirement (https://catalog.ocean.edu/academic-information/general-education/)		3
	Credit Hours	**14**
Summer One		
MATH 275	Linear Algebra	3
	Credit Hours	**3**
Fall Two		
MATH 267	Calculus III	4
PSYC 172	General Psychology	3
EDUC 261	Development of the Learner	3
Technology Gen. Ed. Requirement (https://catalog.ocean.edu/academic-information/general-education/)		3
	Credit Hours	**13**
Spring Two		
MATH 270	Discrete Mathematics	3
MATH 281	Differential Equations	4
EDUC 277	The Teaching Profession in America	3
COMM 154	Fundamentals of Public Speaking	3
PSYC 173 or PSYC 273	Child Psychology or Adolescent Psychology	3
	Credit Hours	**16**
	Total Credit Hours	**62**