



# ASSOCIATE OF SCIENCE MATHEMATICS

**2023-24 Catalog**  
Effective Summer 2023

*The catalog in force is assigned to students based on the academic year they first applied to the college, and changes only when students change their major or request the change in writing. Refer to Policy No. 3357:15-13-28.*

**7500**

*Arts and Sciences Division*

*Mathematics Department*

Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
<b>FRESHMAN EXPERIENCE</b>				
SSC101	Student Success Seminar^^	1	<i>Take first semester</i>	
<b>ENGLISH COMPOSITION AND ORAL COMMUNICATION: 6 credit hours minimum</b>				
ENG124	College Composition^ (required)	3	Co-ENG024 or Co-ENG011 or Proficiency	
ENG221	Technical Report Writing	3	ENG124	
ENG230	Business Communication	3	ENG124	
ENG231	College Composition II	3	ENG124	
COM122	Interpersonal Communication	3		
COM123	Small Group Communication	3	IDS102 or Proficiency	
COM125	Introduction to Communication Theory^▲-	3	IDS102 or Proficiency	
COM121	Effective Speaking	3		
<b>SOCIAL AND BEHAVIORAL SCIENCES: 6 credit hours minimum</b>				
PSC121	U.S. Government and Politics	3		
PSY121	General Psychology^	3	IDS102 or Proficiency	
SOC121	Sociology^	3	IDS102 or Proficiency	
SOC225	Diversity in American Society (required)	3	IDS102 or Proficiency	
BUS122	Basic Economics^	3	IDS102 or Proficiency	
BUS221	Microeconomics^	3	IDS102 or Proficiency	
BUS222	Macroeconomics^	3	IDS102 or Proficiency	
<b>ARTS AND HUMANITIES: 6 credit hours minimum</b>				
ENG233	British Literature I: Med to 1785	3	ENG124	
ENG234	British Literature II: 1785 to Present	3	ENG124	
ENG236	American Literature: Colonial to 1865	3	ENG124	
ENG237	American Literature: 1865 to Present	3	ENG124	
HIS121	U.S. History I to 1877	3		
HIS122	U.S. History II from 1877	3		
HIS221	World Civilization to 17th Century	3		
HIS222	World Civilization from 17th Century	3		
PHL122	Ethics	3		
<b>NATURAL SCIENCES: 7 credit hours minimum (1 lab course required)</b>				
BIO121	Anatomy and Physiology I (lab)^▲	4	BIO101 or Proficiency	
BIO122	Anatomy and Physiology II (lab)	4	BIO121 or BIO123	
BIO124	Human Diseases	3	BIO122 or BIO123	
BIO126	Science, Energy, & the Environment (lab)	4		
BIO127	Human Biology (lab)	4		
BIO129	Meteorology (lab)	3		

^Based upon SSC placement scores.

^^To promote student success, this course should be taken in the first semester.

▲ Because of the strong emphasis on science in this major, applicants must have successfully completed chemistry and biology in high school. Students who did not complete the courses in high school, and those who prefer to refresh their knowledge of the material, should complete the listed pre-requisites.

▲-Fall only courses. Please see your academic advisor for availability.

Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
<b>NATURAL SCIENCES, continued: 7 credit hours minimum (1 lab course required)</b>				
BIO141	General Biology I (lab)	4		
BIO142	General Biology II (lab) ▲+	4		
BIO221	Principles of Microbiology (lab)	4	BIO122 or BIO123 or BIO127 or BIO141	
CHM101	Introduction to Chemistry <sup>^</sup> ▲	4	(MTH022 or MTH023 or Proficiency) or MTH105 or MTH107 or Proficiency	
CHM123	General, Organic, and Biological Chemistry (lab)	4	(MTH024 or MTH025 or Proficiency) or MTH105 or MTH107 or (CHM101 or Proficiency)	
CHM141	General Chemistry I (lab) <sup>^</sup> ▲	5	(CHM101 or Proficiency) or (MTH024 or MTH025 or Proficiency)	
CHM142	General Chemistry II (lab) ▲+	5	CHM141	
PHY101	Principles of Physics (lab) <sup>^</sup>	4	(MTH024 or MTH025 or Proficiency) or MTH105 or MTH107 and (IDS102 or Proficiency)	
PHY121	College Physics I with Algebra (lab) <sup>^</sup>	4	MTH135 or (MTH125 and MTH130) or Proficiency	
PHY122	College Physics II with Algebra (lab)	4	PHY121	
PHY105	Astronomy (lab)	4		
PHY221	General Physics I with Calculus (lab) ▲-	5	MTH223 and Co-MTH224	
PHY222	General Physics II with Calculus (lab) ▲+	5	PHY221 and MTH224 and Co-MTH225	
<b>MATHEMATICS, STATISTICS, AND LOGIC CORE: 26 credit hours required</b>				
MTH135	Precalculus <sup>^</sup> – A student may take MTH125 (College Algebra) and MTH130 (Trigonometry) over two semesters to satisfy this requirement.	5	MTH025 or Proficiency	
MTH214	Discrete Mathematics <sup>^</sup>	3	MTH125 or MTH135 or Proficiency	
MTH223	Analytic Geometry and Calculus I <sup>^</sup>	4	MTH135 or (MTH125 and MTH130) or Proficiency	
MTH224	Analytic Geometry and Calculus II	4	MTH223	
MTH225	Analytic Geometry and Calculus III	4	MTH224	
MTH226	Linear Algebra▲-	3	MTH224	
MTH227	Ordinary Differential Equations▲+	3	MTH224	
<b>ADDITIONAL ELECTIVES FROM THIS SHEET TO COMPLETE DEGREE <sup>5</sup></b>		<b>8-9</b>	<i>Check for prerequisites</i>	
<b>TOTAL CREDIT HOURS</b>		<b>61-65</b>		

<sup>^</sup>Based upon SSC placement scores.

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<sup>5</sup>**Additional Electives:** Any courses listed on this sheet not already being used to fulfill another requirement.

▲-Fall only courses. Please see your academic advisor for availability.

▲+Spring only courses. Please see your academic advisor for availability.

## FULL-TIME STUDENT ADVISING NOTES

Academic Advising

Students should make an appointment to see their advisor before registering for classes each semester. They should have prepared a completed registration form, including courses they wish to take, prior to this meeting.

Course Sequence

The semester-by-semester listing below provides the normal scheduling option for full-time associate degree students who plan to finish in two years.

<u>First Semester</u>		<u>Credit Hours</u>	<u>Pre- and Co-requisites</u>
SSC101	Student Success Seminar^^	1	Take first semester
MTH135	Precalculus^- A student may take MTH125 (College Algebra) and MTH130 (Trigonometry) over two semesters to satisfy this requirement.	5	MTH025 or Proficiency
ENG124	College Composition^ (required)	3	Co-ENG024 or Co-ENG011 or Proficiency
	Social and Behavioral Science Elective <sup>2</sup>	3	Check for prerequisite
	Arts and Humanities Elective <sup>4</sup>	3	Check for prerequisite
		<b>15</b>	
<u>Second Semester</u>			
MTH223	Analytic Geometry and Calculus I^	4	MTH135 or (MTH125 and MTH130) or Proficiency
SOC225	Diversity in American Society (required)	3	IDS102 or Proficiency
MTH214	Discrete Mathematics^	3	MTH125 or MTH135 or Proficiency
	Arts and Humanities Elective <sup>4</sup>	3	Check for prerequisite
	English Composition and Oral Communication Elective <sup>3</sup>	3	Check for prerequisite
		<b>16</b>	
<u>Third Semester</u>			
MTH224	Analytic Geometry and Calculus II	4	MTH223
		<b>4</b>	
<u>Fourth Semester</u>			
MTH225	Analytic Geometry and Calculus III	4	MTH224
MTH226	Linear Algebra ▲-	3	MTH224
	Natural Science Elective▲ <sup>1</sup>	4-5	Check for prerequisite
	Additional Elective <sup>5</sup>	3	Check for prerequisite
		<b>14-15</b>	
<u>Fifth Semester</u>			
MTH227	Ordinary Differential Equations▲+	3	MTH224
	Additional Elective <sup>5</sup>	3-4	Check for prerequisite
	Natural Science Elective▲ <sup>1</sup>	3-5	Check for prerequisite
	Additional Elective <sup>5</sup>	3	Check for prerequisite
		<b>12-15</b>	
	<b>TOTAL CREDITS</b>	<b>61-65</b>	

^ Based upon SSC placement scores.

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<sup>1</sup> Natural Science Electives: BIO121, BIO122, BIO124, BIO126, BIO127, BIO129, BIO141, BIO142, BIO221, CHM101, CHM123, CHM141, CHM142, PHY101, PHY105, PHY121, PHY122, PHY221, PHY222

<sup>2</sup> Social and Behavioral Science Electives: BUS122, BUS221, BUS222, PSC121, PSY121, SOC121

<sup>3</sup> English Composition and Oral Communication Electives: COM121, COM122, COM123, COM125, ENG221, ENG230, ENG231

<sup>4</sup> Arts and Humanities Electives: ENG233, ENG234, ENG236, ENG237, HIS121, HIS122, HIS221, HIS222, PHL122

<sup>5</sup> Additional Electives: Any courses listed on this sheet not already being used to fulfill another requirement.

▲-Fall only courses. Please see your academic advisor for availability.

▲+Spring only courses. Please see your academic advisor for availability.