



**2024-2025 Academic Year**

# Mathematics

## Associate in Science Degree in Liberal Arts and Sciences (A.S.)

**B-STEM Division**

Business, Science, Technology, Engineering and Math

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The **Mathematics** option of the Liberal Arts and Sciences program prepares graduates for transfer into the junior year of a baccalaureate degree program in mathematics or a related area.

### PROGRAM OUTCOMES

- Apply a range of mathematical skills spanning fundamental concepts to more advanced mathematical concepts;
- Apply quantitative knowledge, including the required technological skills and theoretical knowledge;
- Demonstrate critical thinking skills to solve real world problems using mathematical modeling;
- Communicate methods of solutions and results to problems using mathematical language and notation.

Admission to the program requires a high school diploma or its equivalent with one year of laboratory science (biology, chemistry, physics) and four years of mathematics including algebra I and II, plane geometry, and algebra with trigonometry; two years of a world language are recommended. Students who have not taken these courses or who have not completed them within the last five years may take appropriate preparatory courses at the college.

This program may be pursued part-time or full-time, and may be completed by daytime or evening attendance. It is recommended that students plan coursework and electives carefully and consult an academic advisor regularly.

Mathematics students have successfully transferred to colleges and universities throughout New Jersey and across the nation.

# DEGREE CURRICULUM

2024-2025 Academic Year

MATH.AS

CIP 240101

The course sequence below represents a recommended example of how this degree program can be completed in two years, presuming a Fall Term start and satisfaction of all Developmental Studies (foundation courses) requirements and prerequisites. Actual approaches toward completion depend on each student's anticipated transfer institution, career objectives, or other individual circumstances.

Students are encouraged to meet regularly with an academic advisor or Success Coach to consider options, establish plans, and monitor progress.

Code	Course (lecture/lab hours)	Credits	To Do This Semester
<b>FIRST SEMESTER</b>			
<a href="#">MAT 151</a>	Calculus I for the Mathematical and Physical Sciences (4/0)	4	<ul style="list-style-type: none"> <li>✓ Meet with your faculty advisor to complete an academic plan. Make sure you are aware of any course prerequisites you may need to take, and how long it will take to complete your degree.</li> </ul>
<a href="#">CSW 100</a>	College Success and Personal Wellness (2/0) <ul style="list-style-type: none"> <li>• Some exemptions apply. Consult academic advisor for details.</li> </ul>	2	
<a href="#">ENG 101</a>	English Composition I (3/0)	3	<ul style="list-style-type: none"> <li>✓ Use your online tools: Check your <a href="#">MercerMail</a> daily, utilize features of Office 365, and get to know <a href="#">Student Planning</a>.</li> <li>✓ Take advantage of <a href="#">Learning Centers</a> or <a href="#">Online Tutoring</a> to support your studies and assignments.</li> </ul>
— —	<a href="#">Lab Science general education elective</a> <ul style="list-style-type: none"> <li>• PHY 115 and 215 recommended. BIO 101 and 102 or CHE 101 and 102 may be selected if they serve a transfer need.</li> </ul>	4	
— —	<a href="#">General Education elective</a> <ul style="list-style-type: none"> <li>• For the program's three General Education electives, select either [A] two semesters of a world language and one course from the Social Science <a href="#">general education</a> category; or [B] two courses from the Social Science <a href="#">general education</a> category and one from the Humanities <a href="#">general education</a> category (PHI 113 recommended).</li> </ul>	3	

## SECOND SEMESTER

<u>MAT 152</u>	Calculus II for the Mathematical and Physical Sciences (4/0)	4	<p>✓ Transitioning to college can be challenging. Meet with your <a href="#">Success Coach</a> for guidance and support.</p> <p>✓ Apply for <a href="#">financial aid</a> by May 1.</p> <p>✓ Contact professors with questions and use their office hours to develop a connection.</p> <p>✓ Apply for Continuing Student scholarships at <a href="http://www.mccc.edu/m-scholarships">www.mccc.edu/m-scholarships</a>.</p> <p>✓ Begin attending college transfer events and visit campuses. Be sure to visit the <a href="#">Transfer Services</a> and <a href="#">Career Services</a> offices to get to know how the transfer process works and to explore career options.</p> <p>✓ Plan for how you will complete transfer applications while finishing your classes.</p>
<u>ENG 102</u>	English Composition II (3/0)	3	
— —	<u>Lab Science general education elective</u>	4	
	<ul style="list-style-type: none"> <li>PHY 115 and 215 recommended. BIO 101 and 102 or CHE 101 and 102 may be selected if they serve a transfer need.</li> </ul>		
— —	Program elective	4 or 3	
	<ul style="list-style-type: none"> <li>Based on student's transfer needs and interests, for Program electives select either [A] three 4-credit courses; or [B] four 3-credit courses.</li> </ul>		

## THIRD SEMESTER

<u>MAT 251</u>	Calculus III (4/0)	4	<p>✓ Keep in contact with each professor and your faculty advisor. Make sure you are on track to graduate.</p>
<u>CMN 111</u>	Speech: Human Communication (3/0)		
	OR	3	
<u>CMN 112</u>	Public Speaking (3/0)		

— —	<u>General Education elective</u>	3	<ul style="list-style-type: none"> <li>For the program's three General Education electives, select either [A] two semesters of a world language and one course from the Social Science <a href="#">general education</a> category; or [B] two courses from the Social Science <a href="#">general education</a> category and one from the Humanities <a href="#">general education</a> category (PHI 113 recommended).</li> </ul>	<ul style="list-style-type: none"> <li>✓ Complete your applications to desired transfer institutions.</li> <li>✓ Develop team and leadership skills by getting involved in <a href="#">activities and clubs</a>.</li> </ul>
— —	Program elective	4 or 3	<ul style="list-style-type: none"> <li>Based on student's transfer needs and interests, for Program electives select either [A] three 4-credit courses; or [B] four 3-credit courses.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Manage your stress! Take advantage of the MCCC pool, <a href="#">Fitness Center</a>, free yoga and Zumba. Reach out for <a href="#">counseling</a> or other support if you need it. Your <a href="#">Success Coach</a> can connect you with resources.</li> </ul>
— —	Program elective	0 or 3	<ul style="list-style-type: none"> <li>Required only if Program elective option [B] applied in Semesters 2, 3, and 4.</li> </ul>	

## FOURTH SEMESTER

<u>MAT 252</u>	Differential Equations (4/0)	4		<ul style="list-style-type: none"> <li>✓ Apply for <a href="#">financial aid</a> by May 1.</li> </ul>
<u>MAT 208</u>	Linear Algebra (4/0)	4		<ul style="list-style-type: none"> <li>✓ Talk to your faculty advisor and the <a href="#">Transfer office</a> for advice on how to successfully transition to a new school.</li> </ul>
— —	<u>General Education elective</u>	3	<ul style="list-style-type: none"> <li>For the program's three General Education electives, select either [A] two semesters of a world language and one course from the Social Science <a href="#">general education</a> category; or [B] two courses from the Social Science <a href="#">general education</a> category and one from the Humanities <a href="#">general education</a> category (PHI 113 recommended).</li> </ul>	<ul style="list-style-type: none"> <li>✓ Apply for Graduating Student scholarships at <a href="http://www.mccc.edu/m-scholarships">www.mccc.edu/m-scholarships</a>.</li> </ul>
— —	Program elective	4 or 3	<ul style="list-style-type: none"> <li>Based on student's transfer needs and interests, for Program electives select either [A] three 4-credit courses; or [B] four 3-credit courses.</li> </ul>	