

# Associate in Arts Science, Mathematics, and Pre-Engineering Concentration

Students who complete this concentration will satisfy the requirements of MassTransfer. Students are encouraged to meet with the Cape Cod Community College Transfer Advisor. Students should consult with an advisor about the general education course requirements. For additional information pertaining to degree requirements, please refer to [Degree Requirements](#).

The table below specifies a full-time course load, per semester, for students planning to complete their degree in two years.

**A candidate for the Science, Mathematics, and Pre-Engineering Concentration must complete the courses shown below.**

Course #	Course Title	Credits	Prerequisites
<b>First Semester</b>			
ENL101	English Composition I	3	Appropriate scores in Reading Comprehension & in Sentence Skills on CPT or grade of C or better in ENL020 and ENL050 or ESL201
	Mathematics/Quantitative Reasoning	3/4	
	Natural or Physical Science*	4	
	Behavioral & Social Sciences	3	
	Elective	3	
<b>Second Semester</b>			
ENL102	English Composition II	3	A grade of C- or higher in ENL101
	Mathematics/Quantitative Reasoning	3/4	
	Natural or Physical Science*	4	
COM103	Human Communication	3	ENL010 or ESL102 or satisfactory basic skills assessment score
	Elective	3	
<b>Third Semester</b>			
	Humanities & Fine Arts	3	
	Behavioral & Social Sciences	3	
	Natural or Physical Science**	3/4	
	Mathematics/Quantitative Reasoning	3/4	
	Computer Science	3	
<b>Fourth Semester</b>			
	Humanities & Fine Arts	3	
	Behavioral & Social Sciences	3	
	Natural or Physical Science**	3/4	
	Mathematics/Quantitative Reasoning	3/4	
	Humanities & Fine Arts	3	
Total Credits:		62/68	

**The Associate in Arts degree does not indicate a specialized degree in a concentration.**

NOTE: BIO151 is formerly BIO101; BIO151 is formerly BIO102  
CHM151 is formerly CHM101; CHM152 is formerly CHM102  
CHM251 is formerly CHM201; CHM252 is formerly CHM202  
PHY151 is formerly PHY101; PHY152 is formerly PHY152

## Overview

Students in the Science, Mathematics, and Pre-Engineering concentration learn to solve problems and work in teams to analyze, conduct, and report on scientific experiments. Students generally focus on mathematics or one of the natural sciences, while completing the general education requirements that satisfy MassTransfer. An emphasis on science and mathematics is recommended for students interested in pursuing other degrees such as engineering, medical (including nursing), law, and economics.

## Career Outlook

Most students in the Science, Mathematics, and Pre-Engineering concentration continue their studies at a four-year school.

**Students who have chosen a particular field should check the requirements of the transfer institution.** Students may pursue various careers in biology, chemistry, physics, engineering, environmental science, medicine, dentistry, optometry, veterinary science, naturopathy, pharmacy, alternative medicine, chiropractic, and mathematics.

\*The student who pursues a **Biology Field** should select:

BIO151 General Biology I & BIO152 General Biology II  
CHM151 General Chemistry I & CHM152 General Chemistry II  
CHM251 Organic Chemistry I & CHM252 Organic Chemistry II  
MAT150 Elementary Statistics

\*The student who pursues a **Chemistry Field** should select:

CHM151 General Chemistry I & CHM152 General Chemistry II  
CHM251 Organic Chemistry I & CHM252 Organic Chemistry II  
PHY151 Physics I & PHY152 Physics II  
MAT240 Calculus I, MAT250 Calculus II, & MAT260 Calculus III  
MAT150 Elementary Statistics  
MAT245 Linear Algebra  
MAT270 Differential Equations

\*The student who pursues a **Physics Field** should select:

PHY151 Physics I & PHY152 Physics II (or)  
PHY211 University Physics I & PHY212 University Physics II  
CHM151 General Chemistry I & CHM152 General Chemistry II  
MAT240 Calculus I, MAT250 Calculus II, & MAT260 Calculus III  
MAT245 Linear Algebra  
MAT270 Differential Equations  
MAT150 Elementary Statistics

\*\*The student who pursues a **Mathematics Field** may select Mathematics courses instead of a Natural Science course.