

Mathematics (A1040E)
Associate in Science Pre-Major

Under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement, this template has been developed by university and community college faculty as a blueprint for guiding community colleges in developing programs for students who intend to major in Mathematics. Students who successfully complete this course of study and who meet the requirements for admission to the university are eligible to apply for admission to the major with junior standing.

All community colleges will not offer all pre-major programs, and course selections may vary. Check college catalogs for course and program offerings.

<p>General Education Core (44 SHC)* Forty-four semester hours of credit in general education core courses are required as outlined on the NCCCS Curriculum Standards for Associate in Science degree programs. The general education core includes study in the areas of humanities and fine arts, social and behavioral sciences, natural sciences and mathematics, and English composition.</p>										
<p>English Composition (6 SHC) <i>Two English composition courses are required.</i> English 111, Expository Writing, is required as the first composition course. The second composition course must be selected from the following:</p> <table><tr><td>ENG 112</td><td>Argument-Based Research</td></tr><tr><td>ENG 113</td><td>Literature-Based Research</td></tr><tr><td>ENG 114</td><td>Professional Research and Reporting</td></tr></table>	ENG 112	Argument-Based Research	ENG 113	Literature-Based Research	ENG 114	Professional Research and Reporting				
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ENG 113	Literature-Based Research									
ENG 114	Professional Research and Reporting									
<p>Humanities/Fine Arts (9 SHC**) <i>Three courses from three discipline areas are required.</i> One course must be a literature course. Two additional courses from the following discipline areas are required: art, drama, dance, foreign languages, interdisciplinary humanities, music, philosophy, and religion.</p>										
<p>Social/Behavioral Sciences (9 SHC) <i>Three courses from three discipline areas are required.</i> One course must be a history course. Two additional courses from the following discipline areas are required: anthropology, economics, geography, political science, psychology, and sociology.</p>										
<p>Natural Sciences/Mathematics (20 SHC) Natural Sciences (8 SHC): The following physics sequence is required:</p> <table><tr><td>PHY 251</td><td>General Physics I (4 SHC)</td></tr><tr><td>PHY 252</td><td>General Physics II (4 SHC)</td></tr></table> <p>Mathematics (12 SHC): The following mathematics courses are required:</p> <table><tr><td>MAT 175</td><td>Precalculus I (4 SHC)</td></tr><tr><td>MAT 271</td><td>Calculus I (4 SHC)</td></tr><tr><td>MAT 272</td><td>Calculus II (4 SHC)</td></tr></table>	PHY 251	General Physics I (4 SHC)	PHY 252	General Physics II (4 SHC)	MAT 175	Precalculus I (4 SHC)	MAT 271	Calculus I (4 SHC)	MAT 272	Calculus II (4 SHC)
PHY 251	General Physics I (4 SHC)									
PHY 252	General Physics II (4 SHC)									
MAT 175	Precalculus I (4 SHC)									
MAT 271	Calculus I (4 SHC)									
MAT 272	Calculus II (4 SHC)									
<p><i>A college may award a diploma under the A1040E for completion of the entire general education core, as outlined, with a grade of "C" or better in each course.</i></p>										

Other Required Hours (20-21 SHC)* One semester hour of credit may be included in a sixty-five semester hour credit associate in science program. The transfer of the 65th hour is not guaranteed. A minimum of 20 SHC of college transfer courses in general education, pre-major or elective courses is required.

The following course is required (4 SHC):

MAT 273 Calculus III (4 SHC)

One of the following courses is required (3 SHC):

MAT 280 Linear Algebra (3 SHC) *or*

MAT 285 Differential Equations (3 SHC)

One of the following courses is required (3 SHC):

CSC 120 Computing Fundamentals I (4 SHC) *or*

CSC 134 C++ Programming (3 SHC) *or*

CSC 136 Fortran Programming (3 SHC) *or*

CSC 151 JAVA Programming (3 SHC)

Four (4) additional hours from college transfer courses approved as mathematics, natural sciences or computer sciences are required.

Three (3) additional hours from college transfer courses approved as general education humanities are required.

Three (3) additional hours from college transfer courses approved as general education social/behavioral sciences are required.

Total Semester Hours Credit (SHC) in Program: 64-65

* **Students must meet the receiving university's foreign language and/or health and physical education requirements, if applicable, prior to or after transfer to the senior institution.**

** **3 SHC in Speech/Communication may be substituted for 3 SHC in Humanities/Fine Arts. Speech/Communication may not substitute for the literature requirement.**

Application to a University

Admission application deadlines vary; students must meet the deadline for the senior institution to which they plan to transfer. Upon successful completion of the associate degree, students who meet the requirements outlined in this pre-major articulation agreement will be eligible to be considered for admission as juniors to the signatory institutions offering the baccalaureate degree as listed at www.northcarolina.edu/content.php/aa/planning/traditional.htm or in the NC Independent Colleges and Universities Handbook which is available online at www.ncicu.org/publications. Students are encouraged to contact the senior institution to confirm degree offerings.

Admission to the Major

Grade point average requirements vary, and admission is competitive across the several programs in Mathematics.

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