

College Transfer Programs

A 10 40 0AE Associate in Science - Pre Engineering

Students who have not met the prerequisite requirements to enroll in MAT 271 Calculus I, will need to enroll in the Associate in Science in Pre-Engineering program. Once a student meets the prerequisite requirements for MAT 271, they can change their program of study to the Associate in Engineering (A10500).

CONCENTRATION OVERVIEW

The Associate in Science Degree is designed to meet the two-year general college requirement of four-year colleges and universities. The curriculum has a heavy concentration in mathematics and science areas to allow College of The Albemarle students, after two years of study, to transfer with junior-level status.

This curriculum is suited to students who want to pursue a four-year degree in areas of study such as computer science, engineering, mathematics, the sciences or professional programs that require strong mathematics and science backgrounds.

Upon completion of this concentration, graduates will be able to analyze and solve quantitative problems, reason logically from hypothesis to conclusion, apply mathematics techniques in scientific problem solving, and use laboratory technology, equipment, and techniques critically and safely to investigate scientific problems using proper scientific methods.

Student Learning Outcomes – Upon completion of the program, students will:

1. Prepare a deliverable designed to increase knowledge, foster understanding, or promote change in audiences' attitudes, values, beliefs, or behavior.
2. Apply appropriate strategies to identify materials, evaluate information, and reference relevant discipline materials to effectively address a topic.
3. Use mathematical skills to logically analyze and interpret mathematics in context.
4. Develop meaningful questions, gather and analyze evidence, and create evidence-based conclusions or solutions.

Graduation requirement: At least 60 semester hours must be completed with at least a 2.0 ("C") grade point average on a 4.0 scale. Note: Courses with a grade of D will not transfer under the comprehensive articulation agreement.

Partnership: College of The Albemarle has articulation agreements with certain universities for students transferring into specific programs of study. Students can complete the first two years of that specific baccalaureate degree at College of The Albemarle. Students should check with their advisor and the COA website for more information. www.albemarle.edu/student-resources/transfer-from-coa/

COA students who earn an Associate of Science degree and follow the designated degree plans can transition seamlessly into the Bachelor of Science in Biology and Biblical Studies degree or the Bachelor of Science in Science Education degree at Mid-Atlantic Christian University.

***This program offers a [Career and College Promise pathway \(CCP\) P1042C](#). Courses within the pathway are highlighted in yellow.**



A 10 400AE Associate in Science Pre-Engineering

COURSE NUMBER	COURSE TITLE	SEMESTER	CO-REQUISITES	PRE-REQUISITES	CREDITS
STUDENT SUCCESS					1
ACA 122	Transfer & Career Success			None	1
COMPOSITION					6
ENG 111	Writing & Inquiry			ENG 025	3
ENG 112	Writing/Research in the Disciplines			ENG 111	3
MATHEMATICS					8-9
Select 2 courses from:					
MAT 171 (MAT 035 or MAT 110 or MAT 143 or MAT 152 with a C or higher), MAT 172 (MAT 171 with a grade of C or higher), MAT 175 (MAT 035 or MAT 110 or MAT 143 or MAT 152 with a C or higher), MAT 263 (MAT 171 with a grade of C or higher), MAT 271 (MAT 172 with a grade of C or higher), or MAT 272 (MAT 271 with a grade of C or higher).					
Note: Students can not receive credit for both MAT 263 and MAT 271. Students cannot receive credit for MAT 175 if they have credit for MAT 171-172.					
Recommendation for AE Students: MAT 171, MAT 172, MAT 175, MAT 271, or MAT 272.					
			Varies	Varies – pre-requisites in parentheses	4-5
			Varies	Varies – pre-requisites in parentheses	4
NATURAL SCIENCES					8
Select a two-course sequence from:					
BIO 111-112 (ENG 025 and MAT 025), CHM 151-152 (ENG 025 and MAT 025, and either CHM 090 or one unit of HS Chemistry), PHY 151-152 (MAT 171 or MAT 271), or PHY 251-252 (MAT 271 and co-requisite MAT 272).					
Recommendation for AE Students: PHY 251 & PHY 252 or CHM 151 & CHM 152					
			Varies	Varies – pre-requisites in parentheses	4
			Varies	Varies – pre-requisites in parentheses	4
SOCIAL/BEHAVIORAL SCIENCES					6
Select 2 courses from different disciplines:					
ECO 251 (ENG 025 and MAT 025), ECO 252 (ENG 025 and MAT 025), HIS 111 (ENG 025), HIS 112 (ENG 025), HIS 131 (ENG 025), HIS 132 (ENG 025), POL 120 (ENG 025), PSY 150 (ENG 025), or SOC 210 (ENG 025).					
Recommendation for AE Students: ECO 251 and choice of HIS 111, HIS 112, HIS 131, HIS 132, POL 120, PSY 150, or SOC 210.					
				Varies – pre-requisites in parentheses	3
				Varies – pre-requisites in parentheses	3

10 400AE Associate in Science Pre-Engineering

COURSE NUMBER	COURSE TITLE	SEMESTER	CO-REQUISITES	PRE-REQUISITES	CREDITS
HUMANITIES/FINE ARTS/COMMUNICATIONS					6
Select 2 courses from at least two different disciplines: ART 111 (none), ART 114 (ENG 025), ART 115 (ENG 025), COM 120 (none), COM 231 (none), DRA 111 (none), ENG 231 (ENG 112), ENG 232 (ENG 112), ENG 241 (ENG 112), ENG 242 (ENG 112), MUS 110 (none), MUS 112 (none), or PHI 240 (ENG 111). Recommendation for AE Students: ART 111, ART 114, ART 115, COM 231, ENG 231, ENG 232, ENG 241, ENG 242, MUS 110, MUS 112 or PHI 240					
				Varies – pre-requisites in parentheses	3
				Varies – pre-requisites in parentheses	3
OTHER GENERAL EDUCATION HOURS					11
Select 11 additional credit hours from the College of The Albemarle (COA) list of Comprehensive Articulation Agreement (CAA) courses, coded either as Universal General Education Transfer Course (UGETC) or as General Education (GEN ED). Recommendations for AE Students: BIO 111, CHM 151, CHM 152, COM 110, COM 120, ECO 252, PHI 240, PHY 251 or PHY 252.					
				Varies	Varies
ADDITIONAL COURSEWORK					14
Select 14 additional credit hours from the College of The Albemarle list of Comprehensive Articulation Agreement (CAA) courses. Recommendations for AE Students: EGR 150*, DFT 170*, CHM 151, CHM 152, MAT 271*, MAT 272*, MAT 273*, MAT 280, PHY 251, PHY 252, BIO 111, COM 110, COM 231, CSC 151, or ECO 252. *HIGHLY ENCOURAGED.					
				Varies	Varies
				Varies	Varies
				Varies	Varies
				Varies	Varies
				Varies	Varies
TOTAL SEMESTER HOURS REQUIRED FOR ASSOCIATE DEGREE					60-61*

* The total number of elective hours needed is based upon course choices made in Mathematics. A student must have 60-61 credit hours to complete this degree.

A 10 400AE Associate in Science Pre-Engineering Suggested Sequence of Courses

First Year Fall Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
ACA 122 Transfer & Career Success	Pre-Requisites: None	0	2	0	2	1
ENG 111 Writing and Inquiry	Pre-Requisites: ENG 025	3	0	0	3	3
Mathematics Recommendation: MAT 171	Pre-Requisites: Varies	3	2	0	5	4
Natural Science Recommendation: CHM 151	Pre-Requisites: Varies	3	2-3	0	5-6	4
Social/Behavioral Science Recommendation: see pick list	Pre-Requisites: Varies	3	0	0	3	3
TOTAL SEMESTER HOURS		12	6-7	0	18-19	15
First Year Spring Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
ENG 112 Writing/Research in Disciplines	Pre-Requisites: ENG 111	3	0	0	3	3
Mathematics Recommendation: MAT 172	Pre-Requisites: Varies	3	2	0	5	4
CAA Elective Recommendation: EGR 150	Pre-Requisites: None	1	2	0	3	2
Natural Science Recommendation: CHM 152	Pre-Requisites: Varies	3	3	0	6	4
Humanities/Fine Arts/ Communications Recommendation: see pick list	Pre-Requisites: Varies	3	0	0	3	3
TOTAL SEMESTER HOURS		13	7	0	20	16

Recommend moving to Associate in Engineering (A10500) after Year 1 and the completion of MAT 171 & MAT 172 or MAT 175.

Second Year Fall Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
General Education Course Recommendation: MAT 271	Pre-Requisites: Varies	3	2	0	5	4
Humanities/Fine Arts Recommendation: see pick list	Pre-Requisites: Varies	3	0	0	3	3
Social /Behavioral Science Recommendation: ECO 251	Pre-Requisites: Varies	3	0	0	3	3
CAA Elective(s) Recommendation: see pick list	Pre-Requisites: Varies	3	Varies	0	3-4	3-4
CAA Elective(s) Recommendation: DFT 170	Pre-Requisites: Varies	2	2	0	4	3
TOTAL SEMESTER HOURS		14	Varies	0	18-19	16-17
Second Year Spring Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
General Education Course Recommendation: PHY 251	Pre-Requisites: Varies	3	3	0	6	4
General Education Course Recommendation: MAT 272	Pre-Requisites: Varies	3	2	0	5	4
CAA Elective(s) Recommendation: see pick list	Pre-Requisites: Varies	Varies	Varies	0	Varies	6
TOTAL SEMESTER HOURS		Varies	Varies	0	20-22	14
TOTAL SEMESTER HOURS REQUIRED FOR ASSOCIATE DEGREE						60-61*