ASSOCIATE IN ENGINEERING DEGREE
(A10500)

The Associate in Engineering (AE) degree shall be granted for a planned program of study consisting of a minimum of 60 semester hours of credit (SHC) of courses. Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic computer use.

The degree plan includes required general education and prerequisite courses that are acceptable to all state funded Bachelor of Engineering programs. Students who follow the degree progression plan will meet the entrance requirements at all of the North Carolina public Bachelor of Science Engineering programs. Associate in Engineering graduates may then apply to any of these programs without taking additional and sometimes duplicative courses. *Admission to Engineering programs is highly competitive and admission is not guaranteed.*

To be eligible for the transfer of credits under the AE to the Bachelor of Science in Engineering Articulation Agreement, community college graduates must obtain a grade of "C" or better in each course and an overall GPA of at least 2.5 on a 4.0 scale.

GENERAL EDUCATION COURSES: Total of 42 SHC

GENERAL EDUCATION

The general education common course pathway includes study in areas of English composition; humanities and fine arts; social and behavioral sciences; natural sciences, and mathematics.

UNIVERSAL GENERAL EDUCATION TRANSFER COMPONENT (UGETC)

(Universal General Transfer Component (UGETC) courses will transfer for equivalency credit to all UNC institutions) ***• Exceptions (i.e. courses which are not classified as UGETC) are italicized.***

English Composition (6 SHC)

ENG	111	Writing & Inquiry	3
ENG	112	Writing/Research in the Disciplines	3

Humanities/Fine Arts/Communications (6 SHC)

Students must select (1) course from **each category** for a total of 6 SHC.

Humanities:

ENG	231	American Literature I	3
ENG	232	American Literature II	3
PHI	215	Philosophical Issues	3
PHI	240	Introduction to Ethics	3
**REL*	*110*	*World Religions*	3

*(*REL 110 will transfer for equivalency credit to the engineering programs at all five UNC institutions that offer undergraduate engineering programs. It may not transfer with equivalency to other programs.)*

Fine Arts and Communication:

Students **must take one (1)** of the following courses:

COM	231	Public Speaking	3
ART	111	Art Appreciation	3
ART	114	Art History Survey I	3
ART	115	Art History Survey II	3
MUS	110	Music Appreciation	3
MUS	112	Introduction to Jazz	3

Social/Behavioral Sciences (6 SHC)

Students must take the following **required** course:

ECO	251	Principles of Microeconomics	3

Students must **select one (1) additional** course from the following courses:

HIS	111	World Civilizations I	3
HIS	112	World Civilizations II	3
HIS	131	American History I	3
HIS	132	American History II	3
POL	120	American Government	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3

Mathematics (12 SHC)

Calculus I is the ***lowest*** *level math course that will be accepted by the engineering programs for transfer as a math credit. Students who are not calculus-ready will need to take additional math courses.*

Students **must take the following three (3) courses**.

MAT	271	Calculus I	4
MAT	272	Calculus II	4
MAT	273	Calculus III	4

Natural Sciences (12 SHC)

Students **must take the following three (3) courses**:

CHM	151	General Chemistry I	4
PHY	251	General Physics I	4
PHY	252	General Physics II	4

Total General Education Hours Required 42 SHC

OTHER REQUIRED HOURS Total of 18 SHC

Academic Transition

Student must take the following **required** course:

ACA	122	College Transfer Success	1

Students must complete ACA 122 within the first 30 hours of enrollment.

Pre-Major Elective

Students must take the following **required** course:

EGR	150	Introduction to Engineering	2

Other General Education and Pre-major Elective Hours (15 SHC)

Other General Education and Pre-major Elective Hours (15 SHC)

Students **must choose 15 SHC** from the following courses classified as pre-major, elective, or general education courses within the Comprehensive Articulation Agreement. *(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.)*

Students should choose courses appropriate to the specific university and engineering major requirements.

BIO	111	General Biology I	4
CHM	152	General Chemistry II	4
COM	110	Introduction to Communication	3
CSC	134	C++ Programming	3
CSC	151	JAVA Programming	3
DFT	170	Engineering Graphics	3
ECO	252	Principles of Macroeconomics	3
EGR	210	Intro to Electrical/Computer Engineering Lab	2
EGR	212	Logic System Design I	3
EGR	215	Network Theory I	3
EGR	216	Logic and Network Lab	1
EGR	220	Engineering Statics	3
EGR	225	Engineering Dynamics	3
EGR	228	Introduction to Solid Mechanics	3
HUM	110	Technology and Society	3
MAT	280	Linear Algebra	3
MAT	285	Differential Equations	3
PED	110	Fitness and Wellness for Life	2

Total Semester Hours Credit in the Associate in Engineering Program 60

DEVELOPMENTAL COURSE REQUIREMENTS*

DRE	098	Integrated Reading Writing III 3
DMA	DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 065 (MAT 171) 7	
MAT	MAT 001 (MAT 171) 1	

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, and mathematics. Please refer to the Course Description section for prerequisite course information.