

# ASSOCIATE IN ENGINEERING

## Course Selection Guide

Updated Summer 2025

### BS in Engineering Degrees

- [ECU](#)
- [NC A&T](#)
- [NC State](#)
- [UNC Charlotte](#)
- [Western Carolina](#)

For more detailed transfer information, refer to the [Transfer Guides](#).

### General Education – 45 SHC (“Semester Hours of Credit”) Universal General Education Transfer Component (UGETC) Courses (31-32 SHC)

#### English Composition (6 SHC)

AE / UGETC Requirement	ECU	NCA&T	NCSU	UNCC	WCU
ENG 111 Writing & Inquiry	ENG 111	ENG 111	ENG 111	ENG 111	ENG 111
ENG 112 Writing/Research in the Disciplines	ENG 112	ENG 112	ENG 112	ENG 112	ENG 112

#### Humanities/Fine Arts (H/FA) (6 SHC) — Select two courses from separate disciplines

AE / UGETC Requirement	ECU	NCA&T	NCSU	UNCC	WCU
Choose from ART 111, <b>COM 231</b> (Prereq: ENG 025)	Any	COM 231	COM 231	ART or MUS	COM 231
One course selected from ENG 231, ENG 232, ENG 241, ENG 242, PHI 215, <b>PHI 240</b> , REL 110 (see note below)	Any	Any	Any	Any	ENG

Note: REL 110 is not a UGETC course.

For UNCC Systems Engineering, take COM 231.

#### Social and Behavioral Sciences (S/BS) (6 SHC) — Select two courses from separate disciplines

AE / UGETC Requirement	ECU	NCA&T	NCSU	UNCC	WCU
ECO 251	ECO 251	ECO 251	ECO 251	ECO 251	ECO 251
One course selected from HIS 111, HIS 112, HIS 131, or HIS 132, POL 120, <b>PSY 150</b> , or SOC 210	HIS	Any	Any	Any	HIS

#### Mathematics (12 SHC) — Two courses selected from MAT 171, 172, 263, 271, 272

AE / UGETC Requirement	ECU	NCA&T	NCSU	UNCC	WCU
MAT 271 Calculus I	MAT 271	MAT 271	MAT 271	MAT 271	MAT 271
MAT 272 Calculus II	MAT 272	MAT 272	MAT 272	MAT 272	MAT 272
MAT 273 Calculus III (see note below)	MAT 273	MAT 273	MAT 273	MAT 273	MAT 273

Note: MAT 273 is not a UGETC course.

#### Natural Science (12 SHC)

AE / UGETC Requirement	ECU	NCA&T	NCSU	UNCC	WCU
CHM 151 General Chemistry I	CHM 151	CHM 151	CHM 151	CHM 151	CHM 151
PHY 251 General Physics I	PHY 251	PHY 251	PHY 251	PHY 251	PHY 251
PHY 252 General Physics II	PHY 252	PHY 252	PHY 252	PHY 252	PHY 252

## Other General Education Hours (3-4 SHC)

AE Requirement	ECU	NCA&T	NCSU	UNCC	WCU
Choose from BIO 111, CHM 152, COM 231, ECO 252, GEL 111, <b>HUM 110</b> , PHI 240	BIO 111	Any	Any	Any	Any

For Civil and Systems Engineering at UNCC, GEL 111 or BIO 111 is recommended.

## Other Required Hours (14-15 SHC)

AE Requirement	ECU	NCA&T	NCSU	UNCC	WCU
ACA 122 (This course should be taken in the student's first semester.)	ACA 122	ACA 122	ACA 122	ACA 122	ACA 122
EGR 150	EGR 150	EGR 150	EGR 150	EGR 150	EGR 150

## Additional course(s) to complete the 14-15 SHC requirement

BIO 111, CHM 152, CHM 251, CHM 252, COM 231, CSC 134, CSC 151; <b>DFT 170, EGR 220, HUM 110, MAT 280, MAT 285, PED 110</b>
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Below is only a partial list of engineering degrees each university offers. For others, use the university's [baccalaureate degree plans](#).

Concentration	ECU	NCA&T	NCSU	UNCC	WCU
Biomedical (Mechanical-Biomedical Concentration at UNCC)	CSC 134DFT 170 EGR 220 MAT 285	BIO 111 CHM 152 CHM 251 MAT 285	BIO 111 CHM 152 CHM 251 MAT 285	BIO 111 EGR 220 MAT 285	not offered
Chemical (Biochemical at ECU)	CHM 152 CSC 134DFT 170 EGR 220 MAT 285	BIO 111 CHM 152 CHM 251 MAT 285	CHM 152 CHM 251 MAT 285	not offered	not offered
Civil	not offered	BIO 111 DFT 170 EGR 220 MAT 285	DFT 170 EGR 220 MAT 280	CSC 134 or 151 EGR 220 DFT 170 MAT 285	not offered
Computer – Electrical at ECU and UNCC	CSC 134 DFT 170 EGR 220 MAT 285	CSC 134 or 151 MAT 285	EGR 220	CSC 134 or 151 DFT 170 MAT 280 MAT 285	MAT 285
Electrical	CSC 134 DFT 170 EGR 220 MAT 285	CSC 134 or 151 EGR 220 MAT 285	EGR 220	CSC 134 or 151 DFT 170 MAT 280 MAT 285	CSC 134 MAT 285
Industrial and/or Systems	CSC 134 DFT 170 EGR 220 MAT 285	EGR 220 MAT 280	EGR 220 MAT 280	CSC 134 or 151 DFT 170 MAT 280 MAT 285	not offered
Mechanical	CSC 134 DFT 170 EGR 220 MAT 285	DFT 170	CSC 134 DFT 170 EGR 220 MAT 285	CSC 134 or 151 DFT 170 EGR 220 MAT 280 MAT 285	CSC 134 DFT 170 EGR 220 MAT 280 MAT 285

NC State recommends students take CSC 134 as close to transferring as possible to prepare for a required placement project.

## Suggested Two-Year Plan Associate in Engineering Students

For more detailed information from specific universities, consult the [Transfer Guides](#). Some students may need to complete developmental co- or prerequisites; others may place out of coursework based on transfer credit, AP/IB credit, or previous foreign language experience. Shaded boxes indicate pre-major coursework. See chart above for specific Engineering Concentration course recommendations.

Year 1 at Durham Technical Community College					
Semester 1		Semester 2		Summer	
ACA 122	1	ENG 112	3		
ENG 111	3	CHM 151	4		
EGR 150	2	MAT 272	4		
MAT 271	4	PHY 251	4		
COM 231	3				
HUM 110	3				
TOTAL HOURS	16	TOTAL HOURS	15		

Year 2 at Durham Technical Community College					
Semester 3		Semester 4		Summer	
MAT 273	4	ECO 251	3		
PHY 252	4	PHI 240	3		
DFT 170 or Engineering Concentration Course	3	EGR 220 or Engineering Concentration Course	3		
MAT 280 or Engineering Concentration Course	3	MAT 285 or Engineering Concentration Course	3		
		PSY 150	3		
TOTAL HOURS	14	TOTAL HOURS	15		

Total hours required for the degree: 60.