

**ASSOCIATE IN SCIENCE**  
**Study Track: ENGINEERING at ECU (East Carolina University)**

**Revised Spring Semester 2009**

*This template has been developed by ECU Engineering faculty and Durham Tech faculty for Durham Tech students. It is to be used as a blueprint for guiding students interested in majoring in Engineering at ECU in their course selections. Students who successfully complete this course of study and who meet the requirements for admission to ECU may be eligible to apply for admission to the major with junior standing. **This agreement is meant as a guide and the student should not assume that it addresses unique requirements set by his or her university of choice. It is the student's responsibility to become aware of individual requirements of the senior institution and to make course substitutions as warranted, within the requirements of the AS Plan-of-Study.***

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**General Education Core (44 SHC):** 44 semester hours of credit (SHC) in general education core courses are required as outlined by the North Carolina Community College Curriculum Standards for Associate in Science degree programs. Students who complete the General Education Core exclusively at public colleges and universities North Carolina or at private colleges that have signed on to the Comprehensive Articulation Agreement will be able to transfer the core as a package. The General Education core includes study in the areas of English composition, humanities and fine arts, social and behavioral sciences, natural sciences and mathematics.

**English Composition (6 SHC):**

- ENG 111 (3 SHC)—Expository Writing
- ENG 113 (3 SHC)—Literature-Based Research

**Humanities and Fine Arts (9 SHC):**

- One English literature course (3 SHC) selected from—ENG 231, 232, 233, 241, 242, 243, 251, 252, 261, 262
- \*FL 112 (3 SHC)—Elementary Foreign Language II (*Must be taken with the accompanying lab – see Other Required Hours below*)
- HUM 110 (3 SHC)—Technology and Society (*Offered fall only*)

*\*Foreign languages offered at Durham Tech include Arabic, French, German, Italian, Portuguese, and Spanish. Students must meet the pre-requisites for SPA 111.*

**Social and Behavioral Sciences (9 SHC):**

- One history course (3 SHC) selected from—HIS 111, 112, 121,122, 131, 132
- ECO 251 (3 SHC)—Principles of Microeconomics *or* ECO 252 (3 SHC)—Principles of Macroeconomics
- One course (3 SHC) selected from—ANT 210, 220; GEO 111, 112; POL 120, 220; PSY 150, 241, 281; SOC 210, 213, 220, 225

**Natural Sciences and Mathematics (20 SHC):**

**Natural Science (12 SHC):**

- CHM 151 (4 SHC)—General Chemistry I
- PHY 251 (4 SHC)—General Physics I (*Offered spring only*)
- PHY 252 (4 SHC)—General Physics II (*Offered fall only*)

**Mathematics (8 SHC):**

- MAT 271\*(4 SHC)—Calculus I (*Offered fall and spring only*)
- MAT 272 (4 SHC)—Calculus II (*Offered spring and summer only*)

*\*Students must demonstrate competency in or complete the prerequisites for MAT 271. See Natural Science/ Mathematics Electives below.*

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## ENGINEERING AT ECU, Continued

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**ELECTIVES:** To complete the Associate in Science degree in engineering a student must complete a total of 64-67 hours. Sixty-four credit hours are guaranteed to transfer. The transfer of credit hours beyond the 64<sup>th</sup> is not guaranteed. If the student completes the AS degree, then electives transfer as a package. If the degree is not completed then electives transfer on a course-by-course basis and it is the student's responsibility to address individual requirements at the university. We recommend that the additional 20 hours be distributed as follows:

**Natural Science/Mathematics Electives (14 SHC)**—Fourteen semester hours of math/science electives selected from the following:

- BIO 111 (4 SHC)—General Biology I
- CHM 152 (4 SHC)—General Chemistry II (*Offered spring and summer only*)
- MAT 273 (4 SHC)—Calculus III (*Offered Fall only*)
- MAT 285 (3 SHC)—Differential Equations

**For students who did not place into Calculus I:**

- MAT 171/171 A (4 SHC)—Pre-calculus Algebra and accompanying Lab
- MAT 172/172A (4 SHC)—Pre-calculus Trigonometry and accompanying Lab

**Other Elective Hours Required\* for Graduation (6-9 SHC):**

- CAPSTONE COURSE (*This course may be used to satisfy hours in the Natural Science/Mathematics Electives and is recommended by ECU Engineering*): BIO 140 (3 SHC)—Environmental Biology
- ACA 122 (1 SHC)—College Transfer Success
- Demonstration of computer competency by completion of CIS 110 (3 SHC)—Introduction to Computers *or* CIS 115—Introduction to Programming and Logic (*This course may be used to satisfy hours in the Natural Science/Mathematics Electives and is recommended by ECU Engineering*) *or* satisfactory score on computer competency test
- FL 182 (1 SHC)—Lab For Foreign Language II
- One physical education course (1 SHC) selected from—PED 111, 113, 120, 121, 128, 130, 139, 142, 143, 145, 148, 149, 162, 183, 186

*\*Students entering this pre-major must demonstrate competency in or complete the prerequisite for Foreign Language II and MAT 271.*

**Other Hours Recommended for the Major:**

Students may select one of the following two courses to complete the program of study:

- CSC 134 (3 SHC)—C++ Programming (*Offered fall only*) *or* CSC 151 (3 SHC)—Java Programming (*Offered fall only*)

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Universities allow, at most, 64 hours of credit to transfer. However, there are situations where more than 64 hours can be completed at the community college. Please consult with an advisor to find out what those situations are.

Durham Technical Community College awards the Transfer Core Diploma. The Transfer Core Diploma confirms that students have completed all their General Education Core requirements under an A.A. or A.S. degree program. Core completion certifies that a student has met all the lower-division General Education Requirements of the receiving senior institution and has met the Minimum Course Requirements (MCRs) for admission to the University of North Carolina System. Students need to apply for the Diploma once they have completed the Core of their respective Plan of Study. Forms are available in Admissions in the Wynn Center.