



Baccalaureate Degree Plan

NCCCS Associate in Arts **or** Associate in Science
transfer to
 East Carolina University, **BS Software Engineering**

The Software Engineering, BS is designed to provide students with practical knowledge, skills, and professional practices needed to succeed as a software engineer. The program also prepares students to pursue further graduate work in software engineering leading to a master's or doctoral degree.

Transfer students should email an Academic Advisor as soon as possible, cetadvising@ecu.edu. To be eligible for the Software Engineering major, transfer students must have

- A 2.5 cumulative transfer GPA
- Eligibility for MATH 2119 or 2171

Transfer students should expect to need extended time to complete this degree. Reverse transfer is the preferred option. For more about Reverse Transfer, [click here](#).

An example of how to plan your first 2 years of the traditional 4 years of study is included at the end of this document. However, depending on when you transfer and how many recommended courses you take at the community college, it may take longer than 4 years to complete any degree at ECU.

Recommended courses to take at a North Carolina Community College

COM 231	ENG 111 ENG 112	HEA 110	MAT 171 MAT 263*	Choose 12 hours from:	BIO 111 BIO 112 CHM 151 CHM 152 PHY 251* PHY 252*
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*Completion of PHY 251 and 252 at the community college will require students to take MAT 172, 271, **and** 272 instead of MAT 263.

- Other courses to complete an AA or AS are student's choice; no other current department recommendations. Other equivalent courses may be listed in the degree requirements.
- Completion of an approved NCCCS AA or AS waives the General Education requirement. For more information about the waiver, [click here](#).
- For more information about General Education Core Requirements at ECU, and a list of specific course options, click [here](#).
- You do not have to complete all NCCCS equivalents or recommended courses before transferring. However, taking minimal recommendations may prolong your time to degree at ECU.

Degree Requirements

General Education Core Requirements

40 semester hours credit required; completion of an approved AA or AS waives this requirement, with the exception of Health Promotion and Health-Related Physical Activity.

Competency	Semester Hour Credits Required	Notes
Written Communication	6	<i>ENG 111 and ENG 112 should be taken at the community college to satisfy this competency.</i>
Humanities & Fine Arts	9	<i>At least one class should be labeled as Humanities (HU) and one should be labeled as Fine Arts (FA).</i>
Social Sciences	9	<i>NCCCS HIS courses are not considered a social science at ECU.</i>
Natural Sciences	7	<i>One course must include a lab.</i>
Mathematics	3	<i>Choose MAT 171.</i>
Health Promotion and Health-Related Physical Activity	3	<i>HEA 110 should be taken at the community college to satisfy this competency.</i>

Specific General Education Courses	<p>As part of the required 40 hours, please include:</p> <p>COMM 2020 - Fundamentals of Speech Communication or COMM 2410 - Public Speaking</p> <p>PHIL 2274 - Business Ethics or PHIL 2275 - Professional Ethics</p> <p><u>Note:</u> Seven (7) s.h. of cognates in the natural science competency count towards the general education requirement for this degree. At least one of the courses must require laboratory work. See section 3. Cognates.*</p>	<p><i>NCCCS Equivalents</i></p> <p style="text-align: center;">COMM 2410</p>
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Core	<p>Complete 36 hours</p> <p>ITEC 3290 - Technical Writing SENG 1000 - Software Engineering Foundations and Practice SENG 1010 - Discrete Structures for Software Engineers SENG 1020 - Data Structures for Software Engineers SENG 2000 - Advanced Data Structures and Algorithms SENG 2010 - Requirements Engineering SENG 3000 - Software Architecture and Design SENG 3010 - Software Construction SENG 3020 - Software Verification and Validation SENG 3700 - Database Design and Development SENG 4500 - Software Engineering Capstone Project I SENG 4510 - Software Engineering Capstone Project II</p>	<p style="text-align: center;"><i>These courses will be completed at ECU.</i></p> <p><i>Certain AAS courses may transfer. Email cetadvising@ecu.edu for information about transferring with an AAS.</i></p>
Cognates	<p>Complete 18 hours.</p> <p>a. Math (6 s.h.)</p> <p>MATH 2119 - Elements of Calculus</p> <p>MATH 2228 - Elementary Statistical Methods I or</p>	<p><i>NCCCS Equivalents</i></p> <p style="text-align: center;">MAT 263</p> <p style="text-align: center;">MAT 152</p>

MATH 2283 - Statistics for Business	b. Natural Sciences (12 s.h.)	
	Choose from the following:	
	BIOL 1100 - Principles of Biology I and BIOL 1101 - Principles of Biology Laboratory I	<i>BIO 111</i>
	BIOL 1200 - Principles of Biology II and BIOL 1201 - Principles of Biology Laboratory II	<i>BIO 112</i>
	CHEM 1150 - General Chemistry I and CHEM 1151 - General Chemistry Laboratory I	<i>CHM 151</i>
	CHEM 1160 - General Chemistry II and CHEM 1161 - General Chemistry Laboratory II	<i>CHM 152</i>
	PHYS 2350 - University Physics I and PHYS 1251 - General Physics Laboratory I	<i>PHY 251</i>
PHYS 2360 - University Physics II and PHYS 1261 - General Physics Laboratory II	<i>PHY 252</i>	
Note:		
* Seven (7) s.h. of cognates in the natural science competency area from one of the above options may count towards the general education requirement for this degree. At least one of the courses must require laboratory work.		

Concentrations	Complete 9 hours by choosing one of the following areas of concentration.	
Data Science Concentration	CSCI 4120 - Machine Learning CSCI 4140 - Natural Language Processing CSCI 4180 - Big Data Analytics	<i>To be completed at ECU.</i>
Mobile and Web Development	CSCI 4170 - Cloud Computing CSCI 4540 - Mobile Computing CSCI 4710 - Web Applications	<i>To be completed at ECU.</i>

SENG or CSCI Electives	Complete 24 hours of SENG or CSCI electives above 2999. Note: CSCI 3030, CSCI 4230, and CSCI 4231 are excluded.
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Potential 2 Year Map for BS, Software Engineering

An example of courses to take at your community college.

First Semester at NCCCS Institution

NCCCS Course	ECU Transfer Equivalent
ENG 111	ENGL 1100
MAT 171	MATH 1065
Social Behavioral Science course	
HEA 110	HLTH 1000/KINE 1000
ACA 122	COAD 1XXX (elective credit)

Second Semester at NCCCS Institution

NCCCS Course	ECU Transfer Equivalent
COM 231	COMM 2410
BIO 111	BIOL 1100, 1101
Social Behavioral Science course	
MAT 152	MATH 2228/2283
Additional General Education course	

Third Semester at a NCCCS Institution

NCCCS Course	ECU Transfer Equivalent
ENG 112	ENGL 2201
MAT 263 (or 172)	MATH 2119 (1083)
Humanities/Fine Arts course	
Social Behavioral Science course or Additional General Education course	
BIO 112	BIOL 1200, 1201

Fourth Semester at a NCCCS Institution

NCCCS Course	ECU Transfer Equivalent
Humanities/Fine Arts course or Elective course	
CHM 151	CHEM 1150, 1151
Elective course	
Elective course	
Elective course (if needed)	

- Schedule at ECU will depend on courses completed at the community college and semester of entry (fall or spring).
- You should email cetadvising@ecu.edu as soon as possible for more specialized advising.
- This schedule is dependent on taking full-time course loads; however, it may not be realistic to take a full-time course load if you are working full-time or part-time, are a caregiver, or have other obligations. ***Ask your advisor how you can be most successful.***