

## UNCW Computer Science & NC State Computer Engineering 3+2 Double Major Curriculum

NC State Department Resource: <https://ece.ncsu.edu/ugrad/cpe/>

NC State Catalog: <http://catalog.ncsu.edu/undergraduate/engineering/electrical-computer/computer-engineering-bs/>

UNCW Wilmington Department Resource: <https://uncw.edu/csc/>

### First Year: UNC Wilmington

<i>Fall Semester</i>	<i>Credits</i>	<i>Spring Semester</i>	<i>Credits</i>
CSC 131 Introduction to Computer Science	4	CSC 133 Discrete Math Structures	3
EGN 101 Introduction to Engineering (GEP-IP)*	2	CSC 231 Introduction to Data Structures	4
ENG 101 College Writing & Reading I	3	ECN 221 Microeconomics (US-HIB; GEP-SS)*	3
MAT 161 Calculus with Analytical Geometry I	4	ENG 201 College Writing & Reading II	3
UNI 102 First Year Seminar - Engineering (US-FYS)*	1	MAT 162 Calculus with Analytical Geometry II	4
WPA 101 Wellness & Physical Activity	1		
WPAL 101 Wellness & Physical Activity Lab	1		
<i>Semester Total:</i>	16	<i>Semester Total:</i>	17

### Second Year: UNC Wilmington

<i>Fall Semester</i>	<i>Credits</i>	<i>Spring Semester</i>	<i>Credits</i>
CSC 242 Computer Organization	3	CHM 101 General Chemistry I	3
CSC 331 Object-Oriented Programming & Design	3	CHML 101 General Chemistry Lab I	1
PHY 201 General Physics I	4	CSC 340 Scientific Computing	3
MAT 261 Multivariate Calculus	4	CSC 342 Operating Systems	3
*** *** Elective (US-LIGS; GEP-IP, GK; INT 105)*	3	PHY 202 General Physics II	4
		*** *** Ethics Elective (US-HPA; GEP-Hum)*	3
<i>Semester Total:</i>	17	<i>Semester Total:</i>	17

### Third Year: UNC Wilmington

<i>Fall Semester</i>	<i>Credits</i>	<i>Spring Semester</i>	<i>Credits</i>
CSC 360 Formal Languages & Computability	3	CSC 434 Programming Languages	3
CSC 380 Design & Analysis of Algorithms	3	CSC 450 Software Engineering	3
CSC 385 Professional & Ethical Issues in CSC	3	CSC 455 Database Design & Implementation	3
ECE 200 Introduction to Signals, Circuits & Sys (DE)*	4	E 115 Introduction to Computing Environments (DE)*	1
*** 201 Foreign Language (US-WLC)*	3	ECE 211 Electrical Circuits (DE)*	4
		ECE 220 Analytical Foundations of ECE (DE)*	3
<i>Semester Total:</i>	16	<i>Semester Total:</i>	17

### Fourth Year: NC State University

<i>Fall Semester</i>	<i>Credits</i>	<i>Spring Semester</i>	<i>Credits</i>
COM 110 Public Speaking	3	ECE 306 Introduction to Embedded Systems	3
ECE 212 Fundamentals of Logic Design*	3	ECE 310 Design of Complex Digital Systems	3
ECE 301 Linear Systems	3	ECE 381 Engineering Profession for CPE (or 383)	1
ECE 302 Introduction to Microelectronics	4	ENG 331 Communication for Engineering & Tech.	3
ST 371 Intro to Probability & Distribution Theory*	3	ENG *** Lit. Elective (US-A, LIDN; GEP-Hum, USD)*	3
<i>Semester Total:</i>	16	<i>Semester Total:</i>	13

### Fifth Year: NC State University

<i>Fall Semester</i>	<i>Credits</i>	<i>Spring Semester</i>	<i>Credits</i>
ECE 484 ECE Senior Design Project I	3	ECE 485 ECE Senior Design Project II	3
ECE 4** CPE Elective*	3	ECE 4** ECE Elective*	3
ECE 4** CPE Elective*	3	ECE 4** ECE Elective*	3
*** *** Open/Technical Elective*	3	SOC *** Sociology Elective (US-HIB; GEP-SS, USD)*	3
HI *** History Elective (US-HPA; GEP-Hum)*	3	*** *** Elective (US-A; GEP-AB: THR 103)*	3
<i>Semester Total:</i>	15	<i>Semester Total:</i>	15

#### \*Notes

Distance Education (DE): Indicated courses will be taken through NC State's Distance Education Program.

NC State General Education Program (GEP) Graduation Requirements: <http://catalog.ncsu.edu/undergraduate/gep-category-requirements/>

UNCW University Studies (US) Graduation Requirements: <https://uncw.edu/uc/advising/unistudies.html>

Electives: Ideally, elective courses should double/triple count to satisfy multiple categories of US/GEP requirements. Consult the academic advisor for more information.

EGN 101: Transfers to NC State as E 102 and counts as a GEP-Interdisciplinary Perspectives course.

UNI 102: Transfers to NC State as E 101. UNI 102 taken in tandem with EGN 101 satisfies UNCW's UNI 101 First Year Seminar course required for all first semester freshmen.

ECE 109: CSC 242 is sufficiently similar to NC State's ECE 109: Introduction to Computer Systems. It may be possible to take ECE 109 in place of CSC 242, but that request should be reviewed by the CSC department chair.

ECE 209: CSC 231 and CSC 342 will count for NC State's ECE 209: Computer Systems Programming course.

ECE 309: CSC 331 will count for ECE 309: Object Oriented Programming, which is a CPE Foundation Elective. This should be confirmed with an academic advisor.

ECE 212: Not offered in the summer, but many ECE courses have summer offerings.

ST 371: Will satisfy the CSC requirement of STT 215 at UNCW.

Technical Electives: See NC State Catalog for list of approved Electives and consult ECE advisor.

CSC requires 9 additional hours of 300-400 level CSC courses to be approved by an advisor. Preferred NCSU courses include ECE 407: Intro to Computer Networking, ECE 466: Compiler Optimization & Scheduling

and/or ECE 470: Internetworking. The ECE 484 & 485 capstone course sequence may also be considered. The acting CSC dept. chair should confirm and approve these substitutions before the student takes a course.

Last Modified: 11/11/2021