UNCW Physics & NC State Electrical Engineering 3+2 Double Major Curriculum

NC State Department Resource: https://ece.ncsu.edu/ugrad/ee/

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

UNCW Department Resource: https://uncw.edu/phy/

First Year: UNC Wilmington							
Fall Semester			*Credits*	*Spring Semester*			*Credits*
CHM	101	General Chemistry I	3	CHM	102	General Chemistry I	3
CHML	101	General Chemistry Lab I	1	CHML	102	General Chemistry Lab I	1
EGN	101	Introduction to Engineering (GEP-IP)*	2	E	115	Introduction to Computing Environments (DE)*	1
MAT	161	Calculus with Analytical Geometry I	4	ECE	109	Introduction to Computer Systems (DE)*	3
PHY	201	General Physics I	4	MAT	162	Calculus with Analytical Geometry II	4
UNI	102	First Year Seminar - Engineering (US-FYS)*	1	PHY	202	General Physics II	4
WPA	101	Wellness & Physical Activity	1				
WPAL	101	Wellness & Physical Activity Lab	1				
		Semester Total:	17			*Semester Total:*	16
Second Year: UNC Wilmington							
Fall Semester			*Credits*	*Spring Semester*			*Credits*
ECE	200	Introduction to Signals, Circuits & Sys (DE)*	4	ECE	211	Electrical Circuits (DE)*	4
ECE	209	Computer Systems Programming (DE)*	3	ECN	221	Microeconomics (US-HIB; GEP-SS)*	3
ENG	101	College Writing & Reading I	3	ENG	201	College Writing & Reading II	3
MAT	261	Multivariate Calculus	4	MAT	361	Differential Equations*	3
PHY	335	Modern Physics	4	PHY	311	Mathematical Physics*	4
		Semester Total:	18			*Semester Total:*	17
Third Year: UNC Wilmington							
Fall Semester			*Credits*	*Spring Semester*			*Credits*
PHY	321	Classical Dynamics I*	3	PHY	314	Introduction to Computational Physics	3
PHY	400	Advanced Lab	2	PHY	322	Classical Dynamics II*	3
PHY	411	Electricity & Magnetism I*	3	PHY	412	Electricity & Magnetism II*	3
PHY	444	Quantum Theory	4	PHY	455	Thermal Physics*	3
***	201	Foreign Language (US-WLC)*	3	PHY	495	Physics Seminar	3
		Semester Total:	15			*Semester Total:*	15
Fourth Year: NC State University							
Fall Semester			*Credits*	*Spring Semester*			*Credits*
COM	110	Public Speaking	3	ECE	380	Engineering Profession for EE (or 383)	1
ECE	212	Fundamentals of Logic Design*	3	ECE	3**	ECE Foundation Elective*	3
ECE	301	Linear Systems	3	ECE	3**	ECE Foundation Elective*	3
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
				SOC	***	Sociology Elective* (US-HIB; GEP-SS, USD)	3
		Semester Total:	16			*Semester Total:*	16
Fifth Year: NC State University							
Fall Semester			*Credits*	*Spring Semester*			*Credits*
ECE	484	ECE Senior Design Project I	3	ECE	485	ECE Senior Design Project II	3
ECE	4**	EE Elective*	3	ECE	4**	ECE Elective*	3
ECE	4**	EE Elective*	3	ECE	4**	ECE Elective*	3
***	***	Elective (US-LIGS; GEP-IP, GK: IS 200)*	3	***	***	Ethics Elective (US-HPA; GEP-Hum)*	3
HI	***	History Elective (US-HPA; GEP-Hum)*	3	***	***	Elective (US-A; GEP-AB: THR 103)*	3
		Semester Total:	15			*Semester Total:*	15

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***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 200: This course counts as UNCW's PHY 300: Analog Circuits.

ECE 220: This course is satisfied through the combination of PHY 311: Mathematical Physics & MAT 361: Differential Equations.

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

ECE 303: UNCW's PHY 411 & 412: Electricity & Magnetism I & II count as NC State's ECE 303: Electromagnetics Fields, a required EE course.

Open/Technical Elective #1: UNCW's PHY 321: Classical Dynamics I & PHY 322: Classical Dynamics II count as NC State's MAE 208: Engineering Dynamics, an EE approved Open/Technical Elective.

Open/Technical Elective #2: UNCW's PHY 455: Thermal Physics counts as NC State's MAE 201: Engineering Thermodynamics, an EE approved Open/Technical Elective.

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

MAT 335: UNCW's Linear Algebra & Matrices course does not appear in this plan. PHY 311 will substitute for this course.

Last Modified: 11/11/2021