

BACHELOR OF SCIENCE–Physics Major Track D (B.S. Physics and B.S.E.E. in Electrical Engineering)

2019-2020 Old Dominion University Catalog (Catalog is official, this curriculum sheet is advisory)

NAME: _____

UIN: _____

Students earning the AS, AA, or AA&S (or university parallel) degree from a Virginia Community College automatically satisfy the lower division general education requirements. **Courses marked with * require a grade of C or better to transfer, even with the AS degree. The remaining lower division courses are automatically satisfied by the AS (including foreign language), regardless of the grade earned.** Additionally, courses in which a grade of "C-" or below were earned will not transfer. Therefore Community College degree holders may require additional credits to meet the 150 credit hour graduation minimum. **(AS=Associate degree)**

LOWER DIVISION GENERAL EDUCATION REQUIREMENTS

	grade/credit	<u>VCCS transfer equivalent</u>
<u>Written Communication–6 hours</u>		
ENGL 110C English Composition I	3	<u>AS/ENG 111</u>
ENGL 211C, 231C	3	<u>AS/ENG 112, 210, 115, or 131</u>

<u>Oral Communication–3 hours</u>	3	<u>CST 100, 105, 110, 111, 112, or 126</u>
COMM 101R, 103R, 112R		

<u>Mathematics-3 hours</u>		<u>satisfied in the major</u>
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<u>Language and Culture –0-6 hours</u>		<u>AS/HS/TOEFL</u>
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<u>Information Literacy–3 hours</u>		<u>satisfied in ECE major</u>
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<u>Human Creativity--3 hours</u>		
ARTH 121A, ARTS122A,	3	<u>AS/ART 101, 102, 111</u>
DANC 185A, MUSC 264A,		<u>112, 113, 114, 115;</u>
THEA 241A, COMM/THEA 270A		<u>MUS 121, 122; SPD130, 141, or 142</u>

<u>History--3 hours</u>		
HIST 100H, 101H, 102H, 103H,	3	<u>HIS 101, 102, 111, 112,</u>
104H, 105H		<u>121, 122, 201, 202, 203,</u>
		<u>204, 231, 232, 251, 252,</u>
		<u>253, or 254</u>

<u>Literature--3 hours</u>		
ENGL 112L, 114L, FLET 100L	3	<u>AS/ENG 112, 235, 237,</u>
		<u>241, 242, 246, 267, or 268</u>

<u>Philosophy and Ethics–3 hours</u>		
ENMA 480	3	

<u>Natural Science and Technology–8 hours</u>		<u>satisfied in the major</u>
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<u>Human Behavior–3 hours</u>	3	<u>AS</u>
ANTR 110S, CRJS 215S, ECON 200S, ECON 201S, ECON 202S,		
GEOG 100S, GEOG 101S, POLS 100S, POLS 101S, POLS 102S,		
PSYC 201S, PSYC 203S, SOC 201S, COMM 200S, WMST 201S,		
FIN 210S		

<u>The Impact of Technology–3 hours</u>		<u>satisfied in the major</u>
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Additional Graduation Requirements:

Passage of Exit Writing Exam	_____
Application for Graduation	_____
Passage of Physics Exit Exam	_____
Senior Assessment	_____

150 HOURS AND A 2.0 GRADE POINT AVERAGE IN PHYSICS, E.E. AND OVERALL ARE NEEDED TO GRADUATE.

Upper Division Gen Ed: Satisfied by E.E. Second Degree

<u>Common Course Requirements</u>	<u>grade/credit</u>	<u>Transfer/subs</u>
Approved Physics Seminar		<u>ENGN 110</u>
CHEM 121N/122N Chemistry I**	4	<u>CHM 111 or 113</u>
CHEM 123N/124N Chemistry II**	4	<u>CHM 112 or 114</u>
MATH 211 Calculus I*	4	
MATH 212 Calculus II	4	
MATH 312 Calculus III	4	<u>MATH 285</u>
MATH 307 Differential Equations	3	<u>MATH 280</u>
CS 150 Intro to Programming		<u>ENGN 150</u>
PHYS 261N University Physics I*	4	
PHYS 262N University Physics II*	4	

<u>Physics Course Requirements</u>	<u>grade/credit</u>	<u>Substitutions</u>
PHYS 355 Mathematical Methods	3	
PHYS 323 Modern Physics	3	
PHYS 319 Analytical Mechanics	3	
PHYS 425 Electromagnetism I	3	
PHYS 452 Quantum Mechanics I	3	
PHYS 303 Laboratory	3	<u>ECE 287</u>
PHYS 413 Methods of Exp. Physics	3	
PHYS 454 Thermal Physics	3	
PHYS 420 Computational Physics	3	
PHYS 453 Electromagnetism II	3	<u>or ECE 323</u>
PHYS 456 Quantum Mechanics II	3	
PHYS 499W* or 489W/490W Thesis*	3	
One from: PHYS 411, 415, 416, 417	3	

<u>Engineering Course Requirements</u>	<u>grade/credit</u>	<u>Transfer</u>
ENGN 110 Engin. & Tech. I	2	
ENGN 150 Programming	4	
ECE 111 Info Literacy for ECE	2	
ECE 201 Circuit Analysis I.*	3	
ECE 202 Circuit Analysis II.*	3	
ECE 287 Circuit Analysis*	2	
ECE 241 Fund. Comp. Engn.*	4	
ECE 302 Linear Systems*	3	
ECE 303 Intro. To Electrical Power	3	
ECE 313 Electronics Circuits	4	
ECE 332 Microelectr. Mat. & Proc.	3	
ECE 304 Prob. Stat. & Reliab.	3	
ECE 381 Intro to Disc-time Sig. Proc.	3	
ECE 387 Microelectronics Lab	3	
ECE 485W EE Design I	3	
ECE 486 ECE Design II: Prep	2	
ECE 487 ECE Design II	2	
ECE 4xx Tech Elective I	3	
ECE 4xx Tech Elective II	3	
ECE 4xx Tech Elective III	3	
ECE 4xx Tech Elective IV	3	

***A minimum grade of "C" is required in Math 211, PHYS 261, PHYS 262, PHYS 499W (or both PHYS 489W and PHYS 490W) and all ECE 2xx courses.**

**** (CHEM 137N/138N) or (CHEM 121N/122N/123N/124N)**

edited: May 23, 2019