2022 - 2023 Old Dominion University Catalog
Bachelor of Science in Physics and Electrical Engineering
Concentration D: Dual Degree Program with Electrical Engineering - 5 Year Plan (w/ VCCS Equivalencies)

Sample four year curriculum with a suggested ordering of courses. Students may re-order as needed.
** Indicates not automatically waived with transferrable associates degree, C or better required for transfer. Courses in green are waived by the completion of an Associate degree (Not eligible for Applied Associate degrees). Associate in Science recommended for ease of transfer.*

YEAR 1 - (31 CREDITS)

FALL SEMESTER (15 credits)		SPRING SEMESTER (16 credits)	
General Education and Major Coursework:	VCCS Equivalency:	General Education and Major Coursework:	VCCS Equivalency:
ENGL 110C	ENG 111*	ENGL 231C	ENG 115 or 131*
MATH 211 (4 credits)	MTH 173, 263 or 273*	MATH 212 (4 credits)	MTH 174, 264, or 274*
ENGN 110 (2 credits)	EGR 121 or 120*	Human Creativity	Transfer Guide
Language and Culture I (May be waived, see catalog for details)	Transfer Guide	Language and Culture II (May be waived, see catalog for details)	Transfer Guide
Oral Communication: COMM 101R preferred	CST 100, 105 or 110	Human Behavior	Transfer Guide

YEAR 2 - (32 CREDITS)

FALL SEMESTER (16 credits)		SPRING SEMESTER (16 credits)	
General Education and Major Coursework:	VCCS Equivalency:	General Education and Major Coursework:	VCCS Equivalency:
CHEM 121N and 122N (4 credits)	CHM 111*	CHEM 123N and 124N (4 credits)	CHM 112*
MATH 312 or 285 (4 credits)	MTH 265 or 277*	MATH 307 or 280	MTH 267 or 279*
PHYS 261N (4 credits)	See note below*	PHYS 262N (4 credits)	See note below*
ENGN 150 or CS 150	EGR 126 or ITP 132 (all VCCS) or CSC 201 (only accepted from TCC, TNCC, PHCC or PDCCC)*	ECE 201 ECE 111	EGR 260 or 271* EGR 122, or ITE 119

YEAR 3 - JUNIOR (30 CREDITS)

FALL SEMESTER (15 credits)		SPRING SEMESTER (15 credits)	
Major Coursework:	VCCS Equivalency:	Major Coursework:	VCCS Equivalency:
PHYS 323		PHYS 319	
ECE 202	EGR 261 or 272*	PHYS 425	
ECE 287 (2 credits)	EGR 262*	PHYS 413	
ECE 241 (4 credits)	EGR 270 or 277*	ECE 332	
Literature	Transfer Guide	PHY 355	

YEAR 4 - SENIOR (31 CREDITS)

FALL SEMESTER (15credits)		SPRING SEMESTER (16 credits)	
Major Coursework:		Major Coursework:	VCCS Equivalency:
PHYS 454		PHYS 453 or ECE 323**	
PHYS 452		ECE 313 (4 credits)	
PHYS 420		PHYS 499W or 489W & 490W**	
ECE 302		ECE 303	
ECE 387		ECE 381	

YEAR 5 - (34 CREDITS)

FALL SEMESTER (17 credits)		SPRING SEMESTER (17 credits)	
Major Coursework:	VCCS Equivalency:	Major Coursework:	VCCS Equivalency:
ECE Technical Elective I**		PHYS 456	
ECE Technical Elective II**		ECE 487 (2 credits)	
ENMA 480 (Meets Philosophy and Ethics requirement)		ECE Technical Elective III**	
ECE 485W		ECE Technical Elective IV**	
ECE 486 (2 credits)		PHYS 411, 415, 416, or 417**	
ECE 304		Interpreting the Past	Transfer Guide

**Please consult with your ODU advisor for elective coursework.

The Impact of Technology requirement is met with the ECE major.

The Upper Division General Education will be satisfied by completion of the dual majors.

Concentration D is a five-year, dual degree program in physics and electrical engineering. Students will receive a B.S. and B.S.E.E. upon graduation. Concentration D provides the highest level of preparation for both graduate school and positions in industry.

Requirements for graduation include a minimum cumulative grade point average of 2.00 overall and in the major, a grade of C or better in all courses required for the major, including prerequisite courses, 120 credit hours, which must include both a minimum of 30 credit hours overall and 12 credit hours in upper-level courses in the major program from Old Dominion University, completion of ENGL 110C, ENGL 211C or 221C or 231C, and a writing intensive (W) course in the major with a grade of C or better, and completion of Senior Assessment.

Note: PHYS 261N and 262N have no VCCS equivalency. However, if you must take Physics courses for the AS degree, you should take PHY 221, 231 or 241 and PHY 222, 232 or 242. These courses transfer as PHYS 231N and PHYS 232N. The Department will assess student's proficiency and substitute for PHYS 261N and 262N if eligible.

This five-year plan is a suggested curriculum to complete this degree program in four years. It is just one of several plans that will work and is presented only as broad guidance to students. Each student is strongly encouraged to develop a customized plan in consultation with their academic advisor. Additional information can also be found in Degree Works.