2024 - 2025 Old Dominion University Catalog
Bachelor of Science in Physics with a Major in Physics and Electrical Engineering (BS) (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 - (30 CREDITS)

FALL SEMESTER (15 credits)		SPRING SEMESTER (15 credits)	
General Education and Major Coursework:	VCCS Equivalency:	General Education and Major Coursework:	VCCS Equivalency:
ENGL 110C	ENG 111*	COMM 101R	Transfer Equivalency Guide
MATH 211 (4 credits)	MTH 173, 263 or 273*	MATH 212 (4 credits)	MTH 174, 264, or 274*
ENGN 121	EGR 121 or 120*	PHYS 261N, 231N, or 226N	See note below*
CHEM 121N and 122N (4 credits)	CHM 111*	ENGN 122	

YEAR 2 - (33 CREDITS)

FALL SEMESTER (17 credits)		SPRING SEMESTER (16 credits)	
General Education and Major Coursework:	VCCS Equivalency:	General Education and Major Coursework:	VCCS Equivalency:
ENGL 211C or 231C	ENG 115 or 131*	MATH 312 or 285 (4 credits)	MTH 265 or 277*
ECE 201	EGR 260 or 271*	PHYS 319	
MATH 307 or 280	MTH 267 or 279*	ECE 241	EGR 270 or 277*
PHYS 262N, 232N, or 227N (4 credits)	See note below*	PHYS 262N (4 credits)	See note below*
CHEM 123N & 124N	Transfer Equivalency Guide	ECE 287 (2 credits)	EGR 262*
		ECE 202	EGR 261 or 272*

YEAR 3 - JUNIOR (30 CREDITS)

FALL SEMESTER (15 credits)		SPRING SEMESTER (16 credits)	
Major Coursework:	VCCS Equivalency:	Major Coursework:	VCCS Equivalency:
PHYS 323		PHYS 453 or ECE 323**	
PHYS 355		ECE 313 (4 credits)	
PHYS 425		ECE 381	
ECE 302		PHYS 411, 415, 416, or 417**	
ECE 303		Literature	Transfer Equivalency Guide

YEAR 4 - SENIOR (30 CREDITS)

FALL SEMESTER (15credits)		SPRING SEMESTER (15 credits)	
Major Coursework:		Major Coursework:	VCCS Equivalency:
ENMA 480 (Meets Philosophy and Ethics requirement)		PHYS 413	
PHYS 452		PHYS 456	
ECE 461		PHYS 499W or 489W & 490W**	
ECE 304		ECE 451	
ECE Technical Elective I**		Human Behavior	Transfer Equivalency Guide

YEAR 5 - (28 CREDITS)

FALL SEMESTER (15 credits)		SPRING SEMESTER (15 credits)	
Major Coursework:	VCCS Equivalency:	Major Coursework:	VCCS Equivalency:
PHYS 420		PHYS 454	
ECE Technical Elective II**		ECE 482	
ECE 481W		ECE Technical Elective III**	
ECE 332		ECE Technical Elective IV**	
Human Creativity	Transfer Equivalency Guide	Interpreting the Past	Transfer Equivalency 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.

5-year, dual degree program in physics and electrical engineering. Students will receive a B.S. and B.S.E.E. upon graduation. Major 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 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.