

2019 - 2020. 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)

General Education and Major Coursework:

ENGL 110C
MATH 211 (4 credits)
ENGN 110 (2 credits)
Language and Culture I
(May be waived, see catalog for details)
Oral Communication: COMM 101R preferred

VCCS Equivalency:

ENG 111*
MTH 173, 263 or 273*
EGR 120*
Transfer Guide
CST 100, 105 or 110*

SPRING SEMESTER (16 credits)

General Education and Major Coursework:

ENGL 231C
MATH 212 (4 credits)
Human Creativity
Language and Culture II
(May be waived, see catalog for details)
Human Behavior

VCCS Equivalency:

ENG 115 or 131*
MTH 174, 264, or 274*
Transfer Guide
Transfer Guide
Transfer Guide

YEAR 2 - (32 CREDITS)

FALL SEMESTER (16 credits)

General Education and Major Coursework:

CHEM 121N and 122N (4 credits)
MATH 312 or 285 (4 credits)
PHYS 261N (4 credits)
CS 150 (4 credits)

VCCS Equivalency:

CHM 111*
MTH 265 or 277*
See note below*
CSC 201 or EGR 126*

SPRING SEMESTER (16 credits)

General Education and Major Coursework:

CHEM 123N and 124N (4 credits)
MATH 307 or 280
PHYS 262N (4 credits)
ECE 201
ECE 111 (Meets Information Literacy Requirement)

VCCS Equivalency:

CHM 112*
MTH 267 or 279*
See note below*
EGR 260 or 271*

Dept. approval upon Admission

YEAR 3 - JUNIOR (30 CREDITS)

FALL SEMESTER (15 credits)

Major Coursework:

PHYS 323
ECE 202
ECE 287 (2 credits)
ECE 241 (4 credits)
Literature

VCCS Equivalency:

EGR 261 or 272*
EGR 262*
EGR 270 or 277*
Transfer Guide

SPRING SEMESTER (15 credits)

Major Coursework:

PHYS 319
PHYS 425
PHYS 413
ECE 332
PHY 355

VCCS Equivalency:

YEAR 4 - SENIOR (31 CREDITS)

FALL SEMESTER (15 credits)

Major Coursework:

PHYS 454
PHYS 452
PHYS 420
ECE 302
ECE 387

SPRING SEMESTER (16 credits)

Major Coursework:

PHYS 453 or ECE 323**
ECE 313 (4 credits)
PHYS 499W or 489W & 490W**
ECE 303
ECE 381

VCCS Equivalency:

YEAR 5 - (34 CREDITS)

FALL SEMESTER (17 credits)

Major Coursework:

ECE Technical Elective I**
ECE Technical Elective II**
ENMA 480 (Meets Philosophy and Ethics requirement)
ECE 485W
ECE 486 (2 credits)
ECE 304

VCCS Equivalency:

SPRING SEMESTER (17 credits)

Major Coursework:

PHYS 456
ECE 487 (2 credits)
ECE Technical Elective III**
ECE Technical Elective IV**
PHYS 411, 415, 416, or 417**
Interpreting the Past

VCCS Equivalency:

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.