

2018 - 2019 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).

YEAR 1 - (31 CREDITS)

FALL SEMESTER (15 credits)

General Education and Major Coursework:

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

VCCS Equivalency:

MTH 173, 263 or 273*
 ENG 111*
[Transfer Guide](#)

SPRING SEMESTER (16 credits)

General Education and Major Coursework:

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

VCCS Equivalency:

ENG 115 or 131*
[Transfer Guide](#)
[Transfer Guide](#)
 MTH 174, 264, or 274*
[Transfer Guide](#)

YEAR 2 - (34 CREDITS)

FALL SEMESTER (16 credits)

General Education and Major Coursework:

CHEM 121N and 122N (4 credits)
 Literature
 ECE 111 (Meets Information Literacy Requirement) Dept. approval upon Admission
 ECE 201
 PHYS 261N (4 credits)

VCCS Equivalency:

CHM 111*
[Transfer Guide](#)
 See note below*
 EGR 260 or 271*
 See note below*

SPRING SEMESTER (18 credits)

General Education and Major Coursework:

CHEM 123N and 124N (4 credits)
 Interpreting the Past
 PHYS 262N (4 credits)
 ECE 202
 CS 150 (4 credits)

VCCS Equivalency:

CHM 112*
[Transfer Guide](#)
 See note below*
 EGR 261 or 272*
 CSC 201 or EGR 126*

YEAR 3 - JUNIOR (31 CREDITS)

FALL SEMESTER (16 credits)

Major Coursework:

MATH 312 or 285 (4 credits)
 MATH 307 or 280
 ECE 287 (2 credits)
 PHYS 319
 ECE 241 (4 credits)

VCCS Equivalency:

MTH 265 or 277*
 MTH 267 or 279*
 EGR 262*
 EGR 270 or 277*

SPRING SEMESTER (15 credits)

Major Coursework:

PHYS 323
 PHYS 425
 PHYS 413
 ECE 332
 MATH 316, 401, 421, or 422 or PHY 355

VCCS Equivalency:

YEAR 4 - SENIOR (31 CREDITS)

FALL SEMESTER (15credits)

Major Coursework:

PHYS 454
 PHYS 452
 PHYS 420
 ECE 381
 ECE 387

Major Coursework:

PHYS 453 or ECE 323
 ECE 313 (4 credits)
 PHYS 499W or 489W & 490W
 ECE 302
 ECE 303

SPRING SEMESTER (16 credits)

VCCS Equivalency:

YEAR 5 - (32 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:

Major Coursework:

PHYS 456
 ECE Technical Elective III
 ECE 487 (2 credits)
 Approved Physics Seminar (1 credit)
 PHYS 411, 415, 416, or 417
 Approved Elective

SPRING SEMESTER (15 credits)

VCCS Equivalency:

Language and Culture may be waived, see ODU catalog for exemptions.

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.