

**2022 - 2023 Old Dominion University Catalog**  
**Bachelor of Science in Physics**  
**Concentration A - Research (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 - FRESHMAN (29 CREDITS)**

**FALL SEMESTER (14 credits)**

General Education and Major Coursework:

MATH 211 (4 credits)  
 ENGL 110C  
 CHEM 121N/122N\* (4 credits)  
 Oral Communication

VCCS Equivalency:

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

General Education and Major Coursework:

MATH 212 (4 credits)  
 PHYS 261N (4 credits)  
 CHEM 123N/124N\* (4 credits)  
 Philosophy and Ethics

**SPRING SEMESTER (15 credits)**

VCCS Equivalency:

MTH 174, 264 or 274\*  
 See note below\*  
 CHM 112\*  
[Transfer Guide](#)

**YEAR 2 - SOPHOMORE (34-35 CREDITS)**

**FALL SEMESTER (17 credits)**

General Education and Major Coursework:

ENGL 211C or 231C

MATH 312 or 285 (4 credits)

PHYS 262N (4 credits)  
 Information Literacy and Research: CS 120G or CS 121G  
 or OEAS 130G  
 Interpreting the Past

VCCS Equivalency:

ENG 112, 210, 115 or 131\*  
 MTH 265 or 277\*  
 See note below\*  
[Transfer Guide](#)  
[Transfer Guide](#)

**SPRING SEMESTER (17-18 credits)**

General Education and Major Coursework:

MATH 307 or 280

CS 150 (4 credits)

PHYS 319  
 PHYS 120 or PHYS 309 or ECE 111\*\* (1-2 credits)  
 Human Creativity  
 Impact of Technology

VCCS Equivalency:

MTH 267 or 279\*  
 EGR 126 or ITP 132 (all VCCS) or  
 CSC 201 (only accepted from TCC,  
 TNCC, PHCC or PDCCC)\*

[Transfer Guide](#)  
[Transfer Guide](#)

**YEAR 3 - JUNIOR (33 CREDITS)**

**FALL SEMESTER (15 credits)**

General Education and Major Coursework:

PHYS 355  
 PHYS 303  
 PHYS 323  
 Literature  
 Language and Culture I  
 (May be waived, see catalog for details)

VCCS Equivalency:

[Transfer Guide](#)  
[Transfer Guide](#)

**SPRING SEMESTER (18 credits)**

General Education and Major Coursework:

MATH 316, 401, 421 or 422\*\*  
 ASTP 313, PHYS 411, PHYS 415, PHYS 416 or PHYS 417\*\*  
 PHYS 413  
 PHYS 453  
 Language and Culture II  
 (May be waived, see catalog for details)  
 Human Behavior

VCCS Equivalency:

[Transfer Guide](#)  
[Transfer Guide](#)

**YEAR 4 - SENIOR (30 CREDITS)**

**FALL SEMESTER (15 credits)**

General Education and Major Coursework:

PHYS 425  
 PHYS 452  
 PHYS 420  
 PHYS 489W or PHYS 499W\*\*  
 Upper Division Gen. Ed. Coursework:  
 300-/400-level course (Option D)

VCCS Equivalency:

**SPRING SEMESTER (15 credits)**

General Education and Major Coursework:

PHYS 454  
 PHYS 456  
 ASTP 414, PHYS 411, PHYS 415, PHYS 416 or PHYS 417\*\*  
 PHYS 490W or PHYS 499W\*\*  
 Upper Division Gen. Ed. Coursework:  
 300-/400-level course (Option D)

VCCS Equivalency:

\*\* Consult catalog, Degree Works, and with advisor.

Upper division general education (minor) has other options, see catalog for requirements.

Concentration A (Research) is designed primarily for students preparing to do graduate study in physics and related fields or for students preparing to work professionally upon completion of the B. S. degree in various technical fields requiring the strongest preparation in physics.

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 four-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.