

## 2020 - 2021 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)

Language and Culture I  
(May be waived, see catalog for details)

###### VCCS Equivalency:

MTH 173, 263 or 273\*  
ENG 111\*  
CHM 111\*

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##### SPRING SEMESTER (15 credits)

###### General Education and Major Coursework:

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

Language and Culture II  
(May be waived, see catalog for details)

###### VCCS Equivalency:

MTH 174, 264 or 274\*  
See note below\*  
CHM 112\*

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#### 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\*

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##### 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  
Oral Communication

###### VCCS Equivalency:

MTH 267 or 279\*  
CSC 201 or EGR 126 \*

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#### YEAR 3 - JUNIOR (30 CREDITS)

##### FALL SEMESTER (15 credits)

###### General Education and Major Coursework:

PHYS 355  
PHYS 303  
PHYS 323  
Literature  
Impact of Technology

###### VCCS Equivalency:

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##### SPRING SEMESTER (15 credits)

###### General Education and Major Coursework:

MATH 316, 401, 421 or 422\*\*  
PHYS 499W or PHYS 489W & PHYS 490W\*\*  
PHYS 413  
PHYS 453  
Human Behavior

###### VCCS Equivalency:

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

##### FALL SEMESTER (15 credits)

###### General Education and Major Coursework:

PHYS 425  
PHYS 452  
PHYS 420  
PHYS 313, PHYS 411, PHYS 415, PHYS 416 or PHYS 417\*\*  
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  
PHYS 313, PHYS 411, PHYS 415, PHYS 416 or PHYS 417\*\*  
Philosophy and Ethics  
Upper Division Gen. Ed. Coursework:  
300-/400-level course (Option D)

###### VCCS Equivalency:

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\*\* 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.