

**BACHELOR OF SCIENCE—Physics Major Track A (Research)**

2000-2002 Old Dominion University Catalog

NAME \_\_\_\_\_

Student ID# \_\_\_\_\_

TELEPHONE \_\_\_\_\_

EMAIL \_\_\_\_\_

SIGNATURE/DATE \_\_\_\_\_

Students earning the AS, AA, or AA&S (or university parallel) degree from a Virginia Community College automatically satisfy the lower division general education requirements. **Courses marked with \* require a grade of C or better to transfer, even with the AS degree. The remaining lower division courses are automatically satisfied by the AS (including foreign language), regardless of the grade earned.** Additionally, courses in which a grade of "C-" or below were earned will not transfer. Therefore Community College degree holders may require additional credits to meet the 120 credit hour graduation minimum. **(AS=Associate degree)**

**Entrance Writing Sample Placement Test:** \_\_\_\_\_**LOWER DIVISION GENERAL EDUCATION REQUIREMENTS****A. Skills** grade/credits VCCS transfer equivalent

Composition—6 hours  
ENGL 110C English Composition I \_\_\_\_\_ 3 AS/ENG 111  
ENGL 111C, 131C, HIST 111C,  
PHIL 111C \_\_\_\_\_ 3 AS/ENG 210, 115, or 131

Oral Communication—3 hours  
COMM 101R, 103R, 112R \_\_\_\_\_ satisfied in the major by  
Phys 499W

Mathematics—3 hours  
MATH 162M \_\_\_\_\_ Satisfied in the major

Foreign Language Skills—0-6 hours \_\_\_\_\_ AS/HS/TOEFL  
(BS students' competence must be at the 102 level—see reverse for exemptions) Consult transfer guide for all equivalencies.

Computer Skills—3 hours  
CS 149D \_\_\_\_\_ satisfied in the major by  
or higher \_\_\_\_\_ CS 150 or 155

**B. Perspectives**

Fine and Performing Arts—3 hours  
ART 121A, 122A, DANC 185A \_\_\_\_\_ 3 AS/ART 101, 102, 111,  
112, 113, 114, 115;  
MUS 121, 122; SPD130,  
141, or 142

History—6 hours  
HIST 101H, 102H, 103H, 104H \_\_\_\_\_ 3 AS/Choose two from  
\_\_\_\_\_ 3 HIS 101, 102, 111, 112,  
121, 122, 201, 202, 203,  
204, 231, 232, 251, 252,  
253, or 254

Literature—3 hours  
ENGL 112L, 144L, FLET 100L \_\_\_\_\_ 3 AS/ENG 112, 235, 237,  
241, 242, 246, 267 or  
268

Philosophy—3 hours  
PHIL 110P, 120P, 150P \_\_\_\_\_ 3 AS/PHI 100, 101, 102,  
211, 212, 220, REL 230  
231, or 232

Natural Science and Technology—11 to 12 hours  
Eight credit hours of Natural Science with labs in sequence. Additionally, 3-4 credit hours of Natural Science or Technology are required. See transfer guide for specific transfer equivalencies.

AS \_\_\_\_\_ AS \_\_\_\_\_ Met in the majorSocial Science—6 hours

I. Social Science \_\_\_\_\_ 3 AS  
Must be two separate disciplines \_\_\_\_\_ 3 AS  
(Consult Transfer Guide for equivalencies)

<u>Physics Course Requirements</u>	<u>grade/credit</u>	<u>Transfer</u>
MATH 211 Calculus I	_____ 4	_____ *
MATH 212 Calculus II	_____ 4	_____ *
MATH 312 Calculus III	_____ 4	_____
MATH 307 Differential Equations	_____ 3	_____
MATH 316, 401, 421, or 422	_____ 3	_____
CHEM 115N College Chemistry I	_____ 4	<u>CHM 111 or 113</u> *
CHEM 116N College Chemistry II	_____ 4	<u>CHM 112 or 114</u> *
CS 150 Intro to Programming	_____ 4	or CS 155
PHYS 231N University Physics I	_____ 4	_____ *
PHYS 232N University Physics II	_____ 4	_____ *
PHYS 323 Modern Physics	_____ 3	_____
PHYS 319 Analytical Mechanics	_____ 3	_____
PHYS 320 Electricity & Magnetism	_____ 3	_____
PHYS 352 Intro. Quantum Mechanics	_____ 3	_____
PHYS 403 Analog Electronics Lab	_____ 3	_____
PHYS 413 Methods of Exp. Physics	_____ 3	_____
PHYS 404, 414, or 420	_____ 3	_____
PHYS 453 Radiation & Optics	_____ 3	_____
PHYS 454 Thermal Physics	_____ 3	_____
PHYS 456 Inter. Quantum Mech	_____ 3	_____
PHYS 499W Senior Thesis	_____ 3	_____
Approved Physics Seminar	_____ 1	_____
Two courses from: Phys 313, 350, 411, 415, 416	_____ 3	_____
with at least three credits 4xx	_____ 3	_____
_____	_____ 3	_____

**Physics majors must earn a grade of "C" or better in the following courses to be applied towards the degree: CHEM 115N-116N, Math 211, 212, CS 150.**

**UPPER DIVISION GENERAL EDUCATION**

Satisfied by any University approved 2<sup>nd</sup> major, minor, or cluster.  
Total Minimum Credits to Graduate: 120 (including 12 upper division credits in minor)

**120 HOURS AND A 2.0 GRADE POINT AVERAGE IN THE MAJOR, MINOR, AND OVERALL ARE NEEDED TO GRADUATE.**

**Additional Graduation Requirements:**

Passage of Exit Writing Exam : \_\_\_\_\_

Application for Graduation: \_\_\_\_\_

Physics Exit Exam \_\_\_\_\_

Senior Assessment: \_\_\_\_\_

**PHYSICS MINOR: (12 credits at 300-400 level)**

PHYS 231-232	_____ 8	_____
PHYS 319	_____ 3	_____
PHYS 320	_____ 3	_____
Six additional credits at 300-400 level	_____ 3	_____
_____	_____ 3	_____