

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: \_\_\_\_\_

Entrance Math Placement Test: \_\_\_\_\_

**LOWER DIVISION GENERAL EDUCATION REQUIREMENTS**

**A. Skills** grade/credit VCCS transfer equivalent

Written Communication–6 hours

ENGL 110C English Composition I \_\_\_\_\_ 3 AS/ENG 111  
ENGL 211C, 231C \_\_\_\_\_ 3 AS/ENG 112, 210, or 115, 131

Oral Communication–3 hours

COMM 101R, 103R, 112R \_\_\_\_\_ 3 CST 100, 105, 110, 111, 112, or 126

Mathematics–3 hours

MATH 162M \_\_\_\_\_ satisfied in the major

Language and Culture –0-6 hours

\_\_\_\_\_ AS/HS/TOEFL  
BS students' competence must be at the 102 or 111 level.  
Consult transfer guide for all equivalencies.

Information Literacy–3 hours

CS 120G, CS 121G, LIBS 120G, \_\_\_\_\_ 3 AS/ITE 119  
or ECE 111 + CS122

**B. Ways of Knowing**

Human Creativity--3 hours

ARTH 121A, ARTS122A, \_\_\_\_\_ 3 AS/ART 100–106, 111–114, —;  
DANC 185A, MUSC 264A, \_\_\_\_\_ MUS 121, 122, 125;  
THEA 241A, COMM/THEA 270 \_\_\_\_\_ CST 130, 141, 142, 151, 152, 231, 232, 250;

History--3 hours

HIST 100H, 101H, 102H, 103H, \_\_\_\_\_ 3 HIS 101, 102, 111, 121, 122, 203, 204, 231, 232, 253, 254  
104H, 105H

Literature--3 hours

ENGL 112L, 114L, FLET 100L \_\_\_\_\_ 3 AS/ENG 125, 236, 237, 241–246, 251–256, 267, or 268

Philosophy and Ethics–3 hours

PHIL 110P, 120P, 140P, 230E, \_\_\_\_\_ 3 AS/PHI 100, 101, 102, 111, 112, 115, 220, 442E, other 'E' or 'P' course  
REL 230, 231, or 232

Natural Science and Technology–8 hours Met in the major

Human Behavior–3 hours

\_\_\_\_\_ 3 AS AAST 100S  
ANTR 110S, CRJS 215S, ECON 200S, ECON 201S, ECON 202S, GEOG 100S, GEOG 101S, POLS 100S, POLS 101S, POLS 102S, PSYC 201S, PSYC 203S, SOC 201S, COMM 200S, WMST 201S, FIN 210S, ENTR 201S

The Impact of Technology–3 hours

\_\_\_\_\_ 3 AS EET 370T, CS300T, DNTH 440T, ENGL307T, GEOG 306T, HIST 300T, HIST 304T, HIST 314T, HIST 388T, HIST 389T, HIST 386T/SCI 302T, IT 360T, MUSC 335T, POLS 350T, STEM 110T, STEM 370T, WMST 390T, COMM 372T, PHIL 383T...other 'T' course

**Physics Course Requirements** grade/credit Transfer/Substitution

MATH 211Calculus I*	_____ 4	_____
MATH 212 Calculus II	_____ 4	_____
MATH 312 Calculus III	_____ 4	<u>MATH 285</u>
MATH 307 Differential Equations	_____ 3	<u>MATH 280</u>
MATH 316 or 401 or 421 or 422	_____ 3	_____
CHEM 121N/122N Chemistry I**	_____ 4	<u>CHM 111 or 113</u>
CHEM 123N/124N Chemistry II **	_____ 4	<u>CHM 112 or 114</u>
CS 150 Intro to Programming	_____ 4	_____
PHYS 261N University Physics I*	_____ 4	_____
PHYS 262N University Physics II*	_____ 4	_____
PHYS 303 Laboratory	_____ 3	_____
PHYS 323 Modern Physics	_____ 3	_____
PHYS 355 Math Methods	_____ 3	_____
PHYS 319 Analytical Mechanics	_____ 3	_____
PHYS 413 Methods of Exp. Physics	_____ 3	_____
PHYS 425 Electromagnetism I	_____ 3	_____
PHYS 452 Intro. Quantum Mechanics	_____ 3	_____
PHYS 454 Thermal Physics	_____ 3	_____
One course from:		
PHYS 420, 453, or 456	_____ 3	_____
PHYS 499W or 489W/490W Thesis*	_____ 3	_____
Approved Physics Seminar	_____ 1	_____
Two courses from:		
PHYS 313, 411, 415, 416, 417	_____ 3	_____
with at least three credits 4@@	_____ 3	_____

**\*Physics majors must earn a grade of "C" or better in**

**MATH 211, PHYS 261, PHYS 262 and PHYS 499W (or both PHYS 489W and PHYS 490W).**

**\*\* (CHEM 137N/138N) or (CHEM 121N/122N/123N/124N)**

**UPPER DIVISION GENERAL EDUCATION**

Satisfied by any University approved 2<sup>nd</sup> major, minor, cluster, or two upper-division courses (6 credits) outside of the College of Sciences, and not required by the major (Option D).

**Math Minor** requires courses above + MATH 317 + three additional credits 4@@.

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

**Additional Graduation Requirements:**

Application for Graduation \_\_\_\_\_  
Passage of Physics Exit Exam \_\_\_\_\_  
Senior Assessment \_\_\_\_\_

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

PHYS 319	_____ 3	_____
PHYS 323	_____ 3	_____
6 additional credits at 300-400 level	_____ 3	_____
	_____ 3	_____