



Colorado Community College to UNC Transfer Guide*

Physics B.S. – Astronomy Concentration

2023-2024 Catalog
Degree Requirements – 120 Credits

*Guide for students transferring to the University of Northern Colorado from a Colorado community college for the purpose of completing a bachelor's degree. Courses marked as **(*bold)** are UNC equivalent courses (if applicable) upon transfer. UNC Liberal Arts Curriculum (LAC) is waived with completion of AA/AS degree (if an AA/AS degree is not completed, additional liberal arts courses may be required). This guide is based on UNC degree and Colorado general education requirements from the above catalog term.

This four-year plan is a **recommended schedule** and not reflective of every student's individual academic context. Some requirements may vary by college. Some degrees have Statewide Transfer Articulation Agreements in place; please see <https://cdhe.colorado.gov/transfer-degrees> for details. This guide is for planning purposes only. Students should consult with their academic advisor for course sequence guidance.

COMMUNITY COLLEGE – 60 Credits			
YEAR 1 – FALL: 14 credits		YEAR 1 – SPRING: 14 credits	
ENG 1021 English Composition I (GT-CO1) (*ENG 122 College Composition)	3 credits	ENG 1022 English Composition II (GT-CO2) (*ENG 123 College Research Paper)	3 credits
CHE 1111 Gen College Chemistry with lab (GT-SC1) (*CHEM 111/111 L Principles of Chemistry I)	5 credits	MAT 2410 Calculus I (GT-MA1) (*MATH 131 Calculus I)	5 credits
Arts & Humanities (GT-AH1; AH2; AH3; AH4)	3 credits	Arts & Humanities (GT-AH1; AH2; AH3; AH4)	3 credits
Social & Behavioral Sciences (GT-SS1; SS2; SS3)	3 credits	History (GT-HI1)	3 credits
YEAR 2 – FALL: 17 credits		YEAR 2 – SPRING: 15 credits	
PHY 2111 Physics: Calculus-based I w/Lab (GT-SC1) (*PHYS 240 General Physics I)	5 credits	PHY 2112 Physics: Calculus-based II w/Lab (GT-SC1) (*PHYS 241 General Physics II)	5 credits
MAT 2420 Calculus II (GT-MA1) (*MATH 132 Calculus II)	5 credits	MAT 2430 Calculus III (GT-MA1) (*MATH 233 Calculus III)	4 credits
CSC 1060 Computer Science (*Substitute for CS 120 Intro to Programming)	4 credits	Arts & Humanities (GT-AH1; AH2; AH3; AH4)	3 credits
Elective (*UNC Elective)	3 credits	MAT 2560 Differential Equations (GT-MA1) (*MATH 335 Differential Equations I)	3 credits
UNIVERSITY OF NORTHERN COLORADO – 60 Credits			
YEAR 3 – FALL: 16 credits		YEAR 3 – SPRING: 14 credits	
PHYS 320 Mathematical Methods I	3 credits	PHYS 420 Mathematical Methods II	3 credits
PHYS 355 Computer Applications in Physics	3 credits	AST 310 Observational Techniques	4 credits
PHYS 347 Optics	4 credits	PHYS 342 Electricity and Magnetism II	3 credits
PHYS 341 Electricity and Magnetism I	3 credits	PHYS 321 Elementary Modern Physics	3 credits
AST 303 Galaxy Formation and Cosmology	3 credits	PHYS 301 Seminar in Physics	1 credit
YEAR 4 – FALL: 16 credits		YEAR 4 – SPRING: 14 credits	
PHYS 440 Thermodynamics and Stat Physics	4 credits	PHYS 445 Quantum Mechanics II	3 credits
PHYS 340 Mechanics	4 credits	PHYS 360 Laboratory Physics	2 credits

YEAR 4 – FALL (continued)		YEAR 4 – SPRING (continued)	
PHYS 345 Quantum Mechanics I	3 credits	PHYS 448 Nuclear and Particle Physics	3 credits
PHYS 323 Elementary Modern Physics Lab	1 credit	AST 302 Stars and the Milky Way	3 credits
AST 301 Classical Astronomy and the Solar System	3 credits	PHYS 470 Research II	1 credit
PHYS 370 Research I	1 credit	University-wide Elective	2 credits

Every UNC student must meet the following requirements in order to graduate with a bachelor's degree: earn a minimum of 120 semester credit hours; possess a minimum of a 2.00 cumulative grade point average; meet all degree requirements in the student's major field of study. Each major and/or concentration may have additional requirements necessary for graduation. Students must consult with their major advisor to receive information on any additional graduation requirements. View the [UNC Undergraduate Catalog](#) for current degree requirements.

Contact Information –

Department of Physics and Astronomy; Ross Hall 0232; (970)351-2961
www.unco.edu/nhs/physics-astronomy/

Program Admission Requirements –

Academic Good Standing.

For information about admission to the University of Northern Colorado, please visit <https://www.unco.edu/admissions/>.

Notes –

Students who need more preparation in mathematics should start in MAT 1340 College Algebra or MAT 1420 College Trigonometry.

Many of the upper-level major courses at UNC are offered every other year, so the courses taken in years 3 and 4 depend on whether a student enters UNC in an even or odd year. Consultation with a UNC advisor is necessary in determining the year 3, fall semester schedule.

A minimum 2.0 cumulative grade point average is required in PHYS prefix courses for graduation.