



Community College of Aurora/UNC Transfer Guide*

PHYSICS B.S. - Mathematical Physics emphasis

2019-2020 Catalog

Degree Requirements – 120 credits

*Transfer guide for students transferring from Community College of Aurora to the University of Northern Colorado for the purpose of completing a bachelor's degree in Physics - Mathematical Physics emphasis. Courses marked as (***bold**) are UNC equivalent courses (if applicable) upon transfer to UNC. UNC Liberal Arts Core (LAC) is waived with completion of AA/AS degree. (Note: The four-year plan below is a recommended schedule and not reflective of every student's individual academic context. We encourage each transfer student to consult with their respective academic advisor for course sequence guidance.)

COMMUNITY COLLEGE OF AURORA – 60 Credits			
YEAR 1 – FALL: 14 credits		YEAR 1 – SPRING: 14 credits	
ENG 121 English Composition I (*ENG 122 College Composition)	3 credits	ENG 122 English Composition II (*ENG 123 College Research Paper)	3 credits
CHE 111 Gen College Chemistry with lab (*CHEM 111/111 L Principles of Chemistry I)	5 credits	MAT 201 Calculus I (*MATH 131 Calculus I)	5 credits
Arts and Humanities	3 credits	Arts and Humanities	3 credits
Behavioral and Social Sciences	3 credits	History	3 credits
YEAR 2 – FALL: 16 credits		YEAR 2 – SPRING: 16 credits	
PHY 211 Physics:Calculus-based I w/Lab (*PHYS 240 General Physics I)	5 credits	PHY 212 Physics:Calculus-based II w/Lab (*PHYS 241 General Physics II)	5 credits
MAT 202 Calculus II (*MATH 132 Calculus II)	5 credits	MAT 203 Calculus III (*MATH 233 Calculus III)	4 credits
Arts and Humanities	3 credits	CSC 160 Computer Science I	4 credits
Univ-wide electives or MAT 255 Linear Algebra	3 credits	MAT 265 Differential Equations (*MATH 335 Differential Equations I)	3 credits
UNIVERSITY OF NORTHERN COLORADO – 60 Credits			
YEAR 3 – FALL: 17 credits		YEAR 3 – SPRING: 14 credits	
PHYS 320 Mathematical Methods I	3 credits	PHYS 420 Mathematical Methods II	3 credits
PHYS 340 Mechanics	4 credits	PHYS 341 Electricity and Magnetism	4 credits
Physics elective	4 credits	PHYS 321 Elementary Modern Physics	4 credits
MATH 121 Linear Algebra or Univ-wide elective	3 credits	PHYS 301 Seminar in Physics	1 credits
University-wide elective	3 credits	PHYS 370 Research 1	2 credits
YEAR 4 – FALL: 15 credits		YEAR 4 – SPRING: 14 credits	
PHYS 440 Thermodynamics and Stat Physics	4 credits	PHYS 445 Quantum Mechanics II	3 credits
PHYS 345 Quantum Mechanics I	3 credits	PHYS 460 Laboratory Physics II	2 credits

YEAR 4 – FALL (continued)		YEAR 4 – SPRING (continued)	
PHYS 360 Laboratory Physics I	2 credits	MATH 460 Introduction to Complex Analysis	3 credits
MATH elective	3 credits	MATH elective	3 credits
University-wide elective	3 credits	PHYS 470 Research II	3 credits

This four-year plan is a recommended schedule to complete your bachelor's degree in 4 years. 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 emphasis may have additional requirements necessary for graduation. **Students must consult with their major advisor to receive information on any additional graduation requirements.**

Program Admission Requirements –

Admission to UNC.

Minor Required –

None.

Contact Information –

Department of Physics and Astronomy

Ross Hall 0232; (970)351-2961

<https://www.unco.edu/nhs/physics-astronomy/>

Notes –

Students who lack sufficient preparation in mathematics may need to start in MAT 121 College Algebra or MAT 122 College Trigonometry.

Some of the major courses at UNC are offered every other, 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.