



Colorado Community College to UNC Transfer Guide*
Physics B.S. – Engineering Physics 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: 13 credits | |
| PHYS 320 Mathematical Methods I | 3 credits | PHYS 420 Mathematical Methods II | 3 credits |
| PHYS 341 Electricity and Magnetism I | 3 credits | PHYS 343 Electronics | 3 credits |
| PHYS 347 Optics | 4 credits | PHYS 342 Electricity and Magnetism II | 3 credits |
| PHYS 355 Computer Applications in Physics | 3 credits | PHYS 321 Elementary Modern Physics | 3 credits |
| University-wide Elective | 3 credits | PHYS 301 Seminar in Physics | 1 credit |
| YEAR 4 – FALL: 16 credits | | YEAR 4 – SPRING: 15 credits | |
| PHYS 440 Thermodynamics and Stat Physics | 4 credits | PHYS 445 Quantum Mechanics II | 3 credits |
| PHYS 345 Quantum Mechanics I | 3 credits | PHYS 360 Laboratory Physics | 2 credits |

| YEAR 4 – FALL (continued) | | YEAR 4 – SPRING (continued) | |
|---|-----------|--|-----------|
| PHYS 323 Elementary Modern Physics Lab | 1 credit | PHYS 470 Research II | 1 credit |
| PHYS 370 Research 1 | 1 credit | PHYS 457 Solid State Physics (recommended) | 3 credits |
| CS 160 Structured Programming (recommended) | 3 credits | University-wide Electives | 6 credits |
| PHYS 340 Mechanics | 4 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.