

# Physics, B.S.

Department of Physics, 303-556-2454, North Classroom 3123  
School of Letters, Arts and Sciences

Catalog 13-14

This sheet applies to the 2013-14 catalog *only*. It does not replace the full catalog or departmental advising sheets as official statements of requirements. Students with declared majors *must* work with a faculty advisor on course selection and sequencing to ensure a timely graduation.

General Studies	38-41 hrs
Major courses	41
Required ancillary courses	16
Minor courses	18 min
Electives	4-7 hours
<b>Total to graduate (min. 40 hrs upper division)</b>	<b>120 min</b>

Students who have reached junior standing (60 hrs) should request a CAPP (graduation compliance report) and review it with a faculty advisor.

## \*TO BE COMPLETED WITHIN FIRST 30 COLLEGE-LEVEL CREDIT HOURS

### Written Communication

- \_\_\_ ENG 1010 (3 hrs) Composing Arguments\*  
**or** ENG 1008/1009 (6 hrs.) Freshman Comp: The Essay Part I & II\*  
 \_\_\_ ENG 1020 (3 hrs) Freshman English: Rsrch, Anly, & Documt  
 (1020 must be completed within 45 credit hours)

### Oral Communication\*

- \_\_\_ (3 hrs)

### Quantitative Literacy\*

- \_\_\_ MTH 1110 (4 hrs) or higher-level math  
 Do NOT take MTH 1112 because it is not in the calculus prerequisite sequence.

### Arts and Humanities

- \_\_\_ (3 hrs)  
 \_\_\_ (3 hrs)

### Historical

- \_\_\_ (3 hrs)

### Natural and Physical Sciences May not be PHY courses

- \_\_\_ CHE 1800 (4 hrs) *Recommended - see Physics Advisor*  
 \_\_\_ CHE 1810 (4 hrs) + CHE 1850 (2hrs) *Recommended - see Physics Advisor*

### Social and Behavioral Sciences I

- \_\_\_ (3 hrs)

### Social and Behavioral Sciences II

- \_\_\_ (3 hrs)

### Global Diversity may be satisfied within General Studies. May not be a PHY course.

- \_\_\_ (3 hrs)

- \_\_\_ **Multicultural Requirement** may be satisfied in Gen Studies, major, minor, or electives

## MAJOR COURSES (Please see a Physics Faculty Advisor)

*A grade of C- or better required in all courses in the program.*

- \_\_\_ \* PHY 2311 (4hrs) General Physics I  
 \_\_\_ \* PHY 2321 (1hr) General Physics I Lab  
 \_\_\_ \* PHY 2331 (4hrs) General Physics II  
 \_\_\_ \* PHY 2341 (1hr) General Physics II Lab  
 \_\_\_ PHY 2711 (3hrs) Vibrations and Waves  
 \_\_\_ PHY 2811 (4hrs) Modern Physics I  
 \_\_\_ PHY 3011 (3hrs) Modern Physics II  
 \_\_\_ PHY 3211 (4hrs) Analytical Mechanics  
 \_\_\_ PHY 3411 (3hrs) Thermal Physics  
 \_\_\_ PHY 3711 (2hrs) Physics Lab I  
 \_\_\_ PHY 3811 (3hrs) Quantum Mechanics I  
 \_\_\_ PHY 4331 (4hrs) Electricity and Magnetism  
 \_\_\_ PHY 4611 (2hrs) Computational Physics I  
 \_\_\_ PHY 4711 (2hrs) Advanced Physics I Lab  
 \_\_\_ PHY 4921 (1hr) Physics Senior Seminar (Senior Experience)

\*A one-year sequence of PHY 2010 - PHY 2020 - PHY 2030 - PHY 2040 may be substituted for the PHY 2311 - PHY 2331 - PHY 2321 - PHY 2341 requirements **with the consent of the Physics Department.**

**NOTE: Most of the above courses have math prerequisites. Check prerequisites in the current MSU Denver catalog before registering for the above courses.**

Required Ancillary Courses: *See catalog.msudenver.edu for course prerequisites*

- \_\_\_ MTH 1410 (4hrs) Calculus I      \_\_\_ MTH 2420 (4hrs) Calculus III  
 \_\_\_ MTH 2410 (4hrs) Calculus II      \_\_\_ MTH 3420 (4hrs) Differential Equations

**NOTES: Students are encouraged by the Physics department to complete one year of general chemistry and one year of electronics. See Physics faculty advisor for details.**

## MINOR (required)

## ELECTIVES