**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.

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

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### 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)

#### 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

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### 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  

  * OR **PHY 2321 (1hr)** General Physics I Lab  

- **PHY 2331 (4hrs)** General Physics II  

  * OR **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.

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### NOTES:

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 2410 (4hrs)** Calculus II  

- **MTH 1420 (4hrs)** Calculus III  

- **MTH 2420 (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.

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### MINOR (required)

**ELECTIVES**