

A.S. PHYSICS

Department: Physical Sciences

Total credits: 60

COLLEGE REQUIREMENTS**CREDITS**

- Successful completion of CUNY Tests in Reading and Writing and the COMPASS Math Skills Test with passing examination scores or developmental courses may be required.
- One (1) Writing Intensive course in any discipline from any category below is required. Participation in a Learning Community that includes ENG 1200 or 2400 also satisfies this requirement.
- Two (2) Civic Engagement experiences—satisfied by CE-Certified or CE-Component courses or approved outside activity. See Graduation Requirements in this catalog.

CUNY CORE

Courses approved at the time of this catalog's publication for CUNY Flexible Core, Groups A-D, are listed in the *General Education: CUNY Pathways* section on page 43, and identified in the Course section, beginning on page 99.

REQUIRED CORE:

ENG 1200	3
ENG 2400	3
Mathematical & Quantitative Reasoning: MAT 1500√ or MAT 1600√	4
Life and Physical Sciences: CHM 1100 or CHM 1200 or PHY 1300 or PHY 1400 or EPS 3300 or EPS 3500 or EPS 3600	4

FLEXIBLE CORE: ◇

One course from each Group A – E plus an additional course from any Group. **No more than two courses in the same discipline.** 20

A. World Cultures and Global Issues

B. U.S. Experience In Its Diversity

C. Creative Expression

D. Individual & Society

E. Scientific World: MAT 1500√ or MAT 1600√ or CHM 1100 or CHM 1200 or PHY 1300 or PHY 1400 or EPS 3300 or EPS 3500 or EPS 3600 (if not taken for Required Core)

Plus another course selected from any Group E list above (if not taken for Required or Flexible Core)

DEGREE REQUIREMENTS §

If not taken for the CUNY Required Core or Flexible Core, the following are required:

Calculus I and II (MAT 1500√ and MAT 1600√)	8
General Chemistry I and II (CHM 1100 and CHM 1200)	8
Advanced General Physics I and II (PHY 1300 and PHY 1400)	8
Advanced Electives, choose:	8-11
Either MAT 5500√ or MAT 5600√ (choose only <u>one</u>) or Either EGR 2200 or EGR 2300 (choose only <u>one</u>) or Either EPS 3300 or EPS 3500 or EPS 3600 (choose only <u>one</u>) or PHY 81XX	

ELECTIVES: 7-10 credits sufficient to meet the required total 60 credits for the degree. 7-10

§ Consultation with the Department Advisor is required.

√ COMPASS scores of 45 on Part I, 55 on Part II, 60 on Part III and 51 on Part V or pre-requisite courses required.

◇ This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

§ Consultation with the Department Advisor is required.

STUDENT LEARNING OUTCOMES

Students will be able to understand the fundamental laws, theories, and ideas of Physics (and related Mathematics & Physical Sciences).

CHM 11 & CHM 12, PHY 11 or 13, PHY 12 & 14.

Students will be able to evaluate and express empirical evidence supporting the fundamental laws, theories, and ideas of Physics (and related Mathematics & Physical Sciences)

CHM 11 & CHM 12, PHY 11 or 13, PHY 12 & 14.

Students will be able to apply the fundamental laws, theories, and ideas of Physics (and related Mathematics & Physical Sciences) to analyze problems or questions.

CHM 11 & CHM 12, PHY 11 or 13, PHY 12 & 14.

Students will be able use the tools and methods of Physics (and related Mathematics & Physical Sciences) to gather, analyze, and interpret data.

CHM 11 & CHM 12, PHY 11 or 13, PHY 12 & 14.

Students will be able to express themselves effectively in written exams and laboratory reports using the terminology, notations, and symbols of Physics (and related Mathematics & Physical Sciences).

CHM 11 & CHM 12, PHY 11 or 13, PHY 12 & 14.

Students will be able to understand the basic principles of Physics (and related Mathematics & Physical Sciences) underlying technological developments, scientific discovery, and matters of public policy & concern.

CHM 11 & CHM 12, PHY 11 or 13, PHY 12 & 14.