LAS SPECIALIZED CURRICULUM IN PHYSICS

E-mail: undergrad-info@physics.illinois.edu

Degree Title: Bachelor of Science in Physics

General Education: Students must complete the Campus General Education (https://courses.illinois.edu) requirements including the campus general education language requirement.

Minimum hours required for graduation: 126

Departmental distinction: Graduation with distinctions awarded to students who complete 8 additional hours of 300- or 400-level physics courses or advanced courses in closely related technical subjects and who have attained cumulative grade point averages as follows: distinction, 3.5; high distinction, 3.8; highest distinction, 3.8 plus acknowledgement of truly outstanding work/research.

The LAS Specialized Curriculum in Physics is designed for students who plan to pursue graduate study in physics or a closely allied field. However, students who want to pursue a combined major and minor, a double major, or a double degree should consider the LAS Science and Letters Curriculum in Physics because of the greater flexibility it offers. Students in the Specialized Curriculum beyond the freshman year must maintain an overall grade point average of at least 2.5 and also a grade point average of 2.5 in all required mathematics and physics courses.

Entering freshmen typically take calculus, chemistry, rhetoric, and PHYS 110 during the first semester and begin the general physics sequence in the second semester. Students with advance placement in mathematics should begin the general physics sequence in the first semester. All students are strongly encouraged to take a Freshman Discovery Seminar during the first year fall semester and plan ahead to allow space in their programs for undergraduate research.

### Fixed Physics Core 38

- PHYS 110 Physics Careers
- PHYS 211 University Physics: Mechanics
- PHYS 212 University Physics: Elec & Mag
- PHYS 213 Univ Physics: Thermal Physics
- PHYS 214 Univ Physics: Quantum Physics
- PHYS 225 Relativity & Math Applications
- PHYS 325 Classical Mechanics I
- PHYS 326 Classical Mechanics II
- PHYS 435 Electromagnetic Fields I
- PHYS 436 Electromagnetic Fields II
- PHYS 427 Thermal & Statistical Physics
- PHYS 486 Quantum Physics I
- PHYS 487 Quantum Physics II

### Flexible Physics Core (Select two courses from the list below) 8-10

- PHYS 401 Classical Physics Lab
- PHYS 402 Light (with lab)
- PHYS 403 Modern Experimental Physics
- PHYS 404 Electronic Circuits
- PHYS 406 Acoustical Physics of Music

### Supporting Technical Courses 24-26

- MATH 221 Calculus I
- MATH 231 Calculus II
- MATH 241 Calculus III
- MATH 285 Intro Differential Equations or MATH 286 Intro to Differential Eq Plus
- MATH 415 Applied Linear Algebra
- CHEM 102 General Chemistry I
- CHEM 103 General Chemistry Lab I
- CS 101 Intro Computing: Engrg & Sci

### General Education - Students must complete the Campus Variable

General Education requirements.

Free Electives (No restrictions on these courses.) 15-35

Minimum Hours 85

1 MATH 220 may be substituted with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Information listed in this catalog is current as of 07/2017