### Senior Year

**First Semester**
- PHYS 4410 Electromagnetics I
- PHYS 4550 Quantum Physics I
- Arts and Humanities (Literature) Requirement
- Biophysics Requirement
- Physics Writing Requirement

**Second Semester**
- HIST 1720 The West and the World I or HIST 1730 The West and the World II
- PHYS 4420 Electromagnetics II
- PHYS 4560 Quantum Physics II
- Biophysics Requirement
- Social Science Requirement

123 Total Semester Hours

*See General Education Requirements. Three of these credit hours must also satisfy the Science and Technology in Society Requirement.

1Select from AVS 4140, 4800, ENR 4130 ENT 4000, 4150, 4560, 4690, ETOX 4300, GEN 4050, MCR 4140, PLPH 3400, WFB 3130, 4690, or any 2000–4000-level course in ASTR, BCHM, BICL, CH, GEOL, PHYS (except PHYS 2000, 2070, 2080, 2090, 2100)

2Select six credits from any 2000–4000-level BIOL course (except BIOL 2000, 2030); and ten additional credits from AVS 4140, 4800, BCHM 3010, 4150, 4230, 4400, 4450, BIOL 2030, 3020, 3200, 3700, BICL 4040, 110, 2050, 2060, 2100, 2200, 2230, any 3000–4000-level BIOL course, CH 2230, 2240, 3310, 3320, 4040, 4100, 4120, 4270, 4350, EES 4020, 4100, 4110, 4550, ENT 3020, 4000, 4150, 4360, 4690, 4692, 4693, ETOX 4300, GEN 3020, 3030, 4050, 4100, 4110, 4120, 4150, 4160, 4190, MATH 3020, 4020, 4340, 4350, 4360, 4450, PHYS 3260, 4100, 4120, 4320, PLPH 3400, STAT 3300, WFB 3130, 4690

*Students must complete through 2020 in a modern language. See Modern Languages Requirement at Clemson University statement on page 27.

### Freshman Year

**First Semester**
- PHYS 1220 Physics with Calculus I
- PHYS 1240 Physics Lab I
- PHYS 2210 Physics with Calculus II
- PHYS 2220 Physics with Calculus III
- PHYS 2230 Physics Lab. II

**Second Semester**
- MATH 1260 Calculus of Several Variables
- PHYS 2280 Physics III
- PHYS 2300 Introduction to Research
- PHYS 3250 Experimental Physics I
- PHYS 3260 Experimental Physics II
- Emphasis Area Requirement
- Physics Writing Requirement

16

### Sophomore Year

**First Semester**
- MATH 2060 Calculus of Several Variables
- PHYS 2220 Physics with Calculus III
- PHYS 3000 Introduction to Research
- PHYS 3250 Experimental Physics I
- Emphasis Area Requirement

**Second Semester**
- MATH 2080 Intro, to Ordinary Diff. Equations
- PHYS 3110 Intro. to Meth. of Theoretical Phys.
- PHYS 3260 Experimental Physics II
- Emphasis Area Requirement
- Physics Writing Requirement

16

### Junior Year

**First Semester**
- PHYS 3150 Intro. to Computational Physics
- PHYS 3210 Mechanics I
- Emphasis Area Requirement
- Modern Language Requirement
- Oral Communication Requirement

**Second Semester**
- PHYS 3220 Mechanics II
- PHYS 4650 Thermodynamics and Statistical Mechanics
- Emphasis Area Requirement
- Modern Language Requirement
- Science Requirement

16

### Senior Year

**First Semester**
- PHYS 4010 Senior Thesis
- PHYS 4410 Electromagnetics I
- PHYS 4550 Quantum Physics I
- Arts and Humanities (Literature) Requirement
- Emphasis Area Requirement

**Second Semester**
- HIST 1720 The West and the World I or HIST 1730 The West and the World II
- Emphasis Area Requirement
- Social Science Requirement

12

120 Total Semester Hours

Note: Student transcripts record a Bachelor of Science in Physics; the interdisciplinary emphasis area is not included on transcripts.

### Combined Bachelor’s/Master’s Plan

Under this plan, students may reduce the time necessary to earn both degrees by applying graduate credits to both undergraduate and graduate program requirements. Both BS/MS (Master of Science) and BS/MAT (Master of Arts in Teaching) plans are available. Students are encouraged to obtain the specific requirements for pursuing the combined degree from the Department of Physics and Astronomy (www.physics.clemson.edu) as early as possible in their undergraduate program. Enrollment guidelines and procedures can be found under Academic Regulations in this catalog.

### PREPROFESSIONAL STUDIES—PREPHARMACY

**Non-degree**

The Prepharmacy program requires 90 credits of general education requirements and typical prerequisites for PharmD programs. Upon completion of the necessary prerequisites, students will be eligible to apply to a school of pharmacy, typically at the conclusion of their second year at Clemson. Students who complete the 90-credit program at Clemson and a full year of coursework at an accredited school of pharmacy are eligible to apply for the Bachelor of Science in Preprofessional Studies for an August graduation at the earliest. The degree in Pharmacy is not awarded by Clemson. It is important for students to work closely with their advisor, as there are variations in courses required by pharmacy schools. For financial aid purposes, students in the Prepharmacy program are considered to be enrolled in a degree-seeking program.

Alternatively, students may also choose to enroll in a content-specific major while accommodating the prerequisite coursework of their particular pharmacy schools of interest. In this case, students would apply to a school of pharmacy at the conclusion of their third year at Clemson. Pharmacy schools typically specify only a few required courses to allow latitude for developing individualized undergraduate programs of study. Interested students are encouraged to consult with Health Professions advising, as well as the individual schools to which they hope to apply in order to identify the appropriate coursework. These schools are not as concerned about a student’s major as they are about academic performance in whichever curriculum.
the students chooses. Performance becomes critical as competition increases for the limited number of places available in pharmacy schools.

**First Year**

**First Semester**
- 3 - BIOL 1030 General Biology I
- 1 - BIOL 1050 General Biology Lab. I
- 4 - CH 1010 General Chemistry
- 4 - MATH 1060 Calculus of One Variable I
- 3 - PSYC 2010 Introduction to Psychology

**Second Semester**
- 3 - BIOL 1040 General Biology II
- 1 - BIOL 1060 General Biology Lab. II
- 4 - CH 1020 General Chemistry
- 3 - ENGL 1030 Composition and Rhetoric
- 3 - STAT 2300 Statistical Methods I
- 3 - Economics Requirement

**Second Year**

**First Semester**
- 4 - BIOL 2220 Human Anatomy and Phys. I
- 3 - CH 2230 Organic Chemistry
- 1 - CH 2270 Organic Chemistry Lab.
- 3 - PHYS 2070 General Physics I
- 1 - PHYS 2090 General Physics I Lab.
- 3 - Arts and Humanities (Non-Lit.) Requirement

**Second Semester**
- 4 - BIOL 2230 Human Anatomy and Phys. II
- 3 - CH 2240 Organic Chemistry
- 1 - CH 2280 Organic Chemistry Lab.
- 3 - COMM 1500 Intro. to Human Comm. or
- 3 - COMM 2500 Public Speaking or
- 3 - HON 2230 Studies in Communications
- 3 - PHYS 2080 General Physics II
- 1 - PHYS 2100 General Physics II Lab.

**Third Year**

**First Semester**
- 4 - MICR 3050 General Microbiology
- 3 - Arts and Humanities (Literature) Requirement
- 3 - Science and Tech. in Society Requirement
- 6 - Elective

**Second Semester**
- 12 - Elective

90 Total Semester Hours

1Pharmacy programs require BIOL 1030/1050 and BIOL 1040/1060. However, BIOL 1100 and 1110 may be substituted. The additional 1-2 credits will be subtracted from elective credits.

2ECON 2000, 2110, or 2120

3BIOL 3150 and 3160 may be substituted

4See General Education Requirements. Three of these credit hours must also satisfy the Cross-Cultural Awareness Requirement.

5Students planning to receive the Bachelor of Science in Preprofessional Studies degree are required to complete a year at an accredited pharmacy school.