

Four-Year Schedule for Most Physics Majors

Fall Freshman Year:

PHY 203 Physics I for Physicists

MAT 127 Calculus A

FSP – (Liberal Learning, or LL 1)

Foreign Language

PHY 99 (0 credit orientation course)

Spring Freshman Year:

PHY 204 Physics II for Physicists

MAT 128 Calculus B

CSC 215 or 220: Introductory Computer Science

Foreign Language or other Liberal Learning

PHY 290 or PHY 291 Learning Assistant Program (0.5 credit course)

Fall Sophomore Year:

PHY 321 Modern Physics

PHY 306 Mathematical Physics

CSC 215 or 220 if not taken earlier

Liberal Learning or complete Foreign Language Requirement (LL 2)

PHY 290 or PHY 291 Learning Assistant Program (0.5 credit course)

PHY 299 Research Fundamentals (0.25 credit)

Spring Sophomore Year:

PHY 356 Thermal Physics (previously PHY 416)

MAT 326 Differential Equations

[**PHY 401 Classical Mechanics** (only if doing very well in PHY 321 & 306 in the fall and taking MAT 326 as a corequisite); otherwise LL 2

Specialization Course, e.g., PHY 220, PHY 261, PHY 311*, PHY 316; PHY 370/371. Note that these courses are taught every other year, so some may not be available and would need to be taken in the junior year. Some of these are mid-level writing intensive courses: one of those is must be taken by the end of your 3rd year.

[**PHY 299 Research Fundamentals** (0.25 credit – if not taken earlier)]

Fall Junior Year:

PHY 421 Electromagnetic Theory I

PHY 431 Quantum Mechanics

Math course (e.g. MAT 205) by advisement OR Option or Specialization Course, e.g., PHY 370, PHY 411 Optics*, PHY 413

Liberal Learning LL3 or Option or Specialization Course

PHY 393 Independent Study I (for 0.5 credit)

[**PHY 299 Research Fundamentals** (0.25 credit – if not taken earlier)]

Spring Junior Year:

PHY 401 Classical Mechanics (this is the normal time to take this course) or Physics

Option/Specialization (if taken earlier)

PHY 422 Electromagnetic Theory II (if available that year; otherwise take as senior)

[*PHY 451* Advanced Lab* (if available that year, but preferably take as senior – this is a capstone course)]

LL 4 or Specialization Course

PHY 393 Independent Study I (for 0.5 credit or 1.0 credit in lieu of another class)

[**PHY 299 Research Fundamentals** (0.25 credit – if not taken earlier)]

Fall Senior Year:

PHY 493 Independent Research II (preferable in fall if planning on grad school but also good as a capstone course in the spring)

[PHY 431 Quantum Mechanics (if not taken as a junior)]

Option or Specialization Course

Option or Specialization Course

LL 5 or LL4

Spring Senior Year:

PHY 451 Advanced Lab* (if not available as a junior and better for seniors)

[PHY 422 Electromagnetic Theory II (if not available as a junior)]

Option or Specialization Course: MAT 370 (when taught as Partial Differential Equations, is strongly recommended); MAT 320, Complex Analysis, would also be a good choice for those aiming for graduate school.

Option or Specialization Course, e.g. PHY 436, 466 (or LL 5)

LL 6

Courses in bold are required core and correlate courses.

*Courses marked with asterisks (PHY 311, Electronics; PHY 411, Optics; PHY 451, Advanced Lab) are upper-level laboratory courses. All Physics majors matriculating in Fall 2015 or after must take at least two of them; Physics Secondary-Ed or 7-Year Physics BS/MD students must take at least one of them. Note that these lab courses are normally offered only every other year; PHY 220, PHY 311 and PHY 345 may be taken by sophomores but the others are reserved for juniors and seniors.

Courses in italics are writing-intensive Capstone courses. At least one must be taken, preferably in the senior year.

[Brackets indicate required, strongly advised or capstone courses when they are offered or taken at an alternative, but non-preferred, time.]