

Physics Major: Foundation

(August 2017)

For students enrolling in Math 110, 114, or above in the fall of the first year

	<u>Fall</u>	<u>Spring</u>
Year 1:	Physics 110 CSP Seminar Core Distribution (Math 110, 114) CS 165 ^{*†}	Physics 117 CSP Seminar Core Distribution (Math 120, 128) CS 165 ^{*†}
Year 2:	Physics 120 Foreign Language 1 Core Distribution (Math 212, 214) [‡]	Physics 240 Foreign Language 2 CS 131 [#] (Math 212, 214) [‡]

See *Physics Major: Options* for required and suggested coursework in Years 3 and 4

*Students are strongly encouraged to take this course by the end of their sophomore year.

†Two-credit course

‡These courses may be taken in either order.

(...) One of the courses given in parentheses should be taken.

Recommended, but not required for the Major.

1. Students who wish to take courses without the prerequisites must petition the Physics Department.
2. If language proficiency is met with fewer courses than shown, additional electives may be chosen.

Physics Major: Options

(August 2017)

Note: All Options require Senior Seminar: Physics 490 and 491 (two credits each)

Physics: *Physics 310, 315[†], 316[†], 320, 330, 340, 350; one Selective**

Year 3: Physics 310 Physics 320	Physics 330 Physics 340
Year 4: Physics 315 [†] Physics 350 Physics 490 [†]	Physics 316 [†] [Physics Selective*] Physics 491 [†]

Mathematics: *Physics 310, 320, 350; one Selective;* 8 units in both Physics and Math/CS above 300*

Year 3: Physics 310 {Physics 320/Math-CS}	[Physics Selective*] {Physics 330 [‡] / Math-CS}
Year 4: {Math-CS/Physics 320} Physics 315 ^{‡†} Physics 350 Physics 490 [†]	{Math-CS/Physics 340 [‡] } Physics 316 ^{‡†} [Physics Selective*] Physics 491 [†]

Chemistry: *Physics 310, 320; 330 or 350; 340 or Chem 305; Chemistry 120 or 130; 220, 221, and 240*

Year 3: Physics 310 Chem I {Physics 320}	{Physics 330} Chem II
Year 4: Chem III Physics 490 [†] {Physics 320} (Physics 350/Physics 330)*	Chem IV Physics 491 [†] (Physics 340/Chem 305) (Physics 330/Physics 350)*

Geology: *Physics 310; 320 or 330; one Selective* ; Geo 105, 225, 235; 245 or one 300-level Geo course*

Year 3: Physics 310 [Physics 320] Geology 105	[Physics 330] [Physics Selective*] Geology 235
Year 4: [Physics 320] Physics 490 [†] Geology 225 [Geology 245]	[Physics Selective*] Physics 491 [†] [Geology 300-level]

Education: *Physics 320, three Selectives* ; Ed 201, 205, one 300-level Education course*

Year 3: Physics 320 Ed 201	[Physics Selective*] Ed 205
Year 4: [Ed 314 [#]] Physics 490 [†] [Physics Selective*]	Ed 300-level Physics 491 [†] [Physics Selective*]

*A "Physics Selective" is a course from the 260/360 series, or any 300-level physics course not otherwise required for the Option.

[†]A two-credit course.

[‡]Recommended courses for the eight Physics units above 300 required for the Math Option.

*Physics 350 is only offered in the fall; Physics 330 is only offered in the spring

[#] Strongly recommended course, but not required for the Option.

(...) Only one of the courses given in parentheses is required for the Option.

{...} Course sequences listed in curly brackets may be taken in either junior or senior year.

[...] A course listed in square brackets may be taken at any time.

Combined Plan (3-2 Program)
Physical Sequence
(August 2017)

Note: *Prospective 3-2 students must place into Math 110, 114 or above*

	<u>Fall</u>	<u>Spring</u>
Year 1:	CSP Seminar Core Distribution (Math 110, 114) Physics 110	CSP Seminar Core Distribution (Math 120, 128) Physics 117
Year 2:	Core Distribution Physics 120 (Math 212, 214) [#] (Foreign Language 1/Chem 120)	Physics 240 CS 131 (Math 212, 214) [#] (Foreign Language 2/Elective)
Year 3:	Physics 310 Physics 320 (Chem 120/Foreign Language 1) [Physics Selective [*]]	{Physics 330/340} (CS 229/Math 341/Math 342) (Elective/Foreign Language 2) [Physics Selective [*]]

Notes:

1. Econ 101 is required to qualify for Columbia's guaranteed admission.
2. Students are encouraged to take Math 341: Ordinary Differential Equations.
3. Students considering Electrical or Biomedical Engineering should take Physics 262: Electronics.

All interested students are urged to meet with the 3-2 Liaison Officer before the end of sophomore year.

^{*}A course from the 260/360 series, or any 300-level physics course not otherwise required for the 3-2 Program.

[†]Two-credit course

[‡]Students should complete both these courses by the end of sophomore year.

[#]These courses may be taken in either order.

(...) One of the courses given in parentheses should be taken.

{...} Courses in curly brackets are not actually required of 3-2 students, but are strongly recommended since they allow for an easy transition into the physics major should the student decide not to continue in the 3-2 program.