

## Course Sequence For Physics Bachelor's Degrees

2009/2010 Catalog

YEAR	FALL	WINTER	SPRING
1	<b>P121(4) Physics w/Calculus I</b> <b>M124 (5) Calculus I</b> <b>CS140 (4) Comp. Prog. (C++) or →</b>	<b>P122 (4) Physics w/Calculus II</b> <b>M125 (5) Calculus II</b> <b>CS140 (4) Comp. Prog. (C++)</b>	<b>P123 (4) Electricity &amp; Magnetism</b> <b>M224 (5) Multivariate Calculus I</b>
2	<b>P223+P233 (3+1) Waves&amp;Optics+Lab</b> <i>P219 (3) Relativity</i>	<b>P224 (4) Modern Physics I</b> <b>P322 (4) Fund. of Electronics</b> <b>M203 (4) Lin Alg &amp; Diff Eqns</b>	<b>P225 (3) Modern Physics II</b> <i>P323 (4) A &amp; D Electronics</i> <b>M303 (4) Lin Alg &amp; Diff Eqns II</b>
3	<b>P326 (2) Tools &amp; Data Analysis</b> <b>P363 (4) Classical Mechanics</b> <i>P339+P349 (3+1) Optics+Lab</i> <i>A315 (4) The Solar System</i>	<b>P391 (2) Junior Lab I</b> <b>P368 (4) Electromagnetism I</b> <b>P335 (3) Stat/Thermal Physics I</b> <i>A316 (4) Stars &amp; Galaxies</i>	<b>P392 (2) Junior Lab II</b> <b>P369 (3) Electromagnetism II</b> <i>P336 (3) Stat/Thermal Physics II</i> <i>A320 (4) Cosmology</i>
4	<b>P455 (3) Quantum Mechanics I</b> <b>P485 (3) Mathematical Physics</b>	<b>P456 (3) Quantum Mechanics II</b> <i>P475 (3) Solids &amp; Materials I</i> <i>A416 (3) Astrophysics</i>	<i>P472 (3) Elementary Particles</i> <i>P476 (3) Solids &amp; Materials II</i> <i>P486 (3) Computational Physics</i> <b>P419 (3) Writing for Physicists (WP)</b>
	Students may substitute at least two credits of senior project for P419 with permission of the chair:  P491 (1-3) Senior Project in Experimental Physics (WP) P492 (1-3) Senior Project in Theoretical Physics (WP) *** A493 (1-3) Senior Project in Astronomy (WP) ***		

Courses shown in **bold** are core requirements that must be taken by all students. Students must also choose six of the electives shown in *italics* and listed here:

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| <i>P219 (3) Principles of Relativity</i><br><i>P323 (4) Analog &amp; Digital Electronics</i><br><i>P336 (3) Statistical/Thermal Physics II</i><br><i>P339+P349 (3+1) Optics + Lab</i><br><i>P475 (3) Physics of Solids &amp; Materials I</i><br><i>P476 (3) Physics of Solids &amp; Materials II</i> | <i>P486 (3) Computational Physics</i><br><i>A315 (4) The Solar System</i><br><i>A316 (4) Stars &amp; Galaxies</i><br><i>A320 (4) Cosmology</i><br><i>A416 (3) Astrophysics</i> |
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Students with no calculus background may wish to postpone P121 until winter quarter in order to complete one quarter of calculus (M124) before starting the physics sequence. Note that P122 and P123 will also be delayed such that P123 and P223 will need to be taken concurrently in fall of the sophomore year.

Recommended math courses that are of considerable value to physics majors are M225 Multivariate Calculus and Geometry, M226 Limits and Infinite Series, M430 Fourier Series and Partial Differential Equations, M432 Systems of Differential Equations, and M438 Introduction to Complex Variables.

\*\*\* Students interested in an astronomy senior project should take A316 in the sophomore or junior year. Students interested in a theoretical physics senior project should take P486 in the junior year.