



## PHYSICS

### Associate in Science Degree

Physics is the science of matter and its motion, the science that deals with concepts such as force, energy, mass and charge. As an experimental science, the goal in understanding physics is to understand the natural world. In one form or another, physics is one of the oldest academic disciplines; through its modern subfield of astronomy, it may be the oldest of all. Advances in physics often translate to the technological sector, and sometimes influence the other sciences, as well as mathematics and philosophy. The physics program at Oxnard College offers the Associate in Science (A.S.) degree and the Associate in Science for Transfer (AS-T). The courses in this program may prepare students for technician-level jobs or university transfer to Bachelor of Arts or Bachelor of Science degree programs in physics. University of California Limitation on Transfer of Physics Courses. The UC will give credit for only one Physics series: PHYS R101/L & R102/L or PHYS R121 & R122 or PHYS R131, R132, and R133. For more information, contact: Justin Miller (805) 678-5094 [jwmiller@vcccd.edu](mailto:jwmiller@vcccd.edu).

Required Core Courses		Units
CHEM R120	General Chemistry I <i>* Prerequisites: CHEM R110 and MATH R015 or MATH R005 or MATH R014 or MATH R033 or placement as determined by the college's multiple measures assessment process</i>	5.0
MATH R120	Calculus with Analytic Geometry I <i>* Prerequisites: MATH R115 or MATH R116 or MATH R117 or placement as determined by the college's multiple measures assessment process</i>	5.0
MATH R121	Calculus with Analytic Geometry II <i>* Prerequisites: MATH R120</i>	5.0
MATH R122	Calculus with Analytic Geometry III <i>* Prerequisites: MATH R121</i>	5.0
MATH R134	Linear Algebra <i>* Prerequisites: MATH R121</i>	3.0
MATH R143	Differential Equations <i>* Prerequisites: MATH R121</i>	3.0
PHYS R131	Physics for Scientists and Engineers 1 <i>* Prerequisites: MATH R120</i>	5.0
PHYS R132	Physics for Scientists and Engineers 2 <i>* Prerequisites: MATH R121 and PHYS R131</i>	5.0
PHYS R133	Physics for Scientists and Engineers 3 <i>* Prerequisites: MATH R122 and PHYS R132</i>	5.0
<b>Total Required Major Units</b>		<b>41.0</b>
Oxnard College General Education		37-39
Double-Counted Units		-(6)
Free Electives Required		+ 0.0
<b>Total units required for the A.S. Degree</b>		<b>72-74</b>

*\*Note: University of California Santa Barbara requires both CHEM R120 and CHEM R122 (General Chemistry I and II) for either the B.A. in Physics or the B.S. in Physics. CHEM R122 is offered fall and spring semesters at Oxnard College.*

<b>YEAR 1:</b>	<b>Fall Semester:</b>	<b>Spring Semester:</b>
	MATH R120 CHEM R120	MATH R121 PHYS R131
<b>YEAR 2:</b>	<b>Fall Semester:</b>	<b>Spring Semester:</b>
	MATH R122 PHYS R132	MATH R134 & MATH R143 PHYS R133