

APPLIED PHYSICS MAJOR (PHYSA.BS)

<u>Required Courses</u>		<u>Hrs.</u>	<u>Prereq.</u>	<u>Rec.Yr.</u>
PHYS 161	General Physics I w/Calculus	4	Pre or coreq MATH 161	Fr
PHYS 162	General Physics II w/Calculus	4	Pre or coreq MATH 161	Fr
PHYS 210	Light & Atomic Physics	3	MATH 161, PHYS 152 or 162; Coreq PHYS 211L	Soph
PHYS 211L	Light & Atomic Phys Lab	1	Coreq PHYS 210	Soph
PHYS 220	Nuclear Physics	3	PHYS 210; Coreq PHYS 221L	Soph
PHYS 221L	Nuclear Physics Lab	1	Coreq PHYS 220	Soph
PHYS 250	Electronics	3	PHYS 152 or 162, MATH 161 Coreq PHYS 251L	Soph
PHYS 251L	Electronics Lab	1	Coreq PHYS 250	Soph
PHYS 260	Digital Electronics	3	PHYS 152 or 162; Coreq PHYS 261L	Soph
PHYS 261L	Digital Electronics Lab	1	Coreq PHYS 260	Soph
PHYS 305L	Electro-Optics Lab	1	PHYS 210	Jr
PHYS 309	Engineering Mechanics	3	MATH 161, PHYS 152 or 162	Jr
PHYS 310	Analytical Mechanics	3	MATH 162, PHYS 151 or 161, PHYS 152 or 162	Jr
PHYS 311	Mechanics of Materials	3	MATH 162, PHYS 151 or 161, PHYS 152 or 162	Jr
PHYS 320	Materials Science	3	PHYS 152 or 162, MATH 161; Coreq PHYS 321L	Jr
PHYS 321L	Materials Science Lab	1	Coreq PHYS 320	Jr
PHYS 330	Solid State Physics	3	PHYS 152 or 162, MATH 162; Coreq PHYS 331L	Jr
PHYS 331L	Solid State Physics Lab	1	Coreq PHYS 330	Jr
PHYS 340	Engineering Thermodynamics	3	MATH 161, PHYS 151 or 161	Jr
PHYS 342	Quantum Mechanics	3	PHYS 152 or 162, MATH 162	Jr
PHYS 345L	Engineering Measure Lab	1	PHYS 309 or 340	Jr
PHYS 350	Fluid Mechanics	3	MATH 162, PHYS 151 or 161, PHYS 152 or 162	Jr
PHYS 360	Electromagnetic Theory	3	PHYS 151 or 161, 152 or 162; Pre or coreq MATH 230	Jr
^PHYS 497	Research Seminar I	1	Physics Major	Sr
^PHYS 498	Research Seminar II	1	PHYS 497	Sr
CHEM 161	Acc Gen Chem for Science Maj	3	HS Chemistry and proficiency or CHEM 105, 107L; Coreq CHEM 163L	Fr
CHEM 163L	Acc Gen Chem for Sci Maj Lab	1	Coreq CHEM 161	Fr
	<u>OR</u>			
CHEM 131	Gen Chemistry for Sci Majors I	3	*Coreq CHEM 133L	Fr
<i>*Prerequisite: Must have passed at least one year of high school chemistry or one semester of college chemistry equivalent to CHEM 105/107L or above AND at least one of the following: MATH ACT score of 20, MATH SAT score of 500, grade of C or better in one of the classes: MATH 103, 110, 112, 115, 130, 161.</i>				
CHEM 133L	Gen Chemistry for Sci Maj I Lab	1	Coreq CHEM 131	Fr
	<u>AND</u>			
CHEM 132	Gen Chemistry for Sci Majors II	3	C- or better in CHEM-131/133L; Coreq CHEM 134L	Fr
CHEM 134L	Gen Chemistry for Sci Maj II Lab	1	Coreq CHEM 132	Fr
CSCI 230	Scientific Programming	3	PHYS 152 or 162	Soph
MATH 161	Calculus I	4	C or better in MATH 130 or equiv. or placement	Fr
MATH 162	Calculus II	4	C (2.0) or better in MATH 161; Coreq MATH 163	Fr
MATH 163	Technology for Calculus	1	Coreq MATH 162	Fr
MATH 223	Calculus III	4	C (2.0) or better in MATH 162; Coreq MATH 163	Soph
MATH 230	Differential Equations	4	MATH 162; Pre or coreq MATH 163	Soph
MATH 301	Adv Engineering Math	3	MATH 223	Jr

84 total hours

^Satisfies advanced writing requirement

B.S. Degree: Applied Physics Major (for students entering in Fall 2019/Spring 2020)

In the "WHAT" column, enter the specific course number when applicable--e.g. HIST 121. In the "WHEN" column, enter the term and year in which the requirement is satisfied--e.g., sp '00.

General Education		Applied Physics Major	
WHAT	WHEN	WHAT	WHEN
_____	ENGL 101/INDS 106* w/ C (2.0) [3 hrs]	_____	PHYS 161 [4 hrs]
_____	ENGL 102/INDS 102* w/ C(2.0)* [3 hrs]	_____	PHYS 162 [4 hrs]
_____	COMM 211/INDS 103 w/ C(2.0) [3 hrs]	_____	PHYS 210 [3 hrs]
	Dept senior seminar/writing course	_____	PHYS 211L [1 hr]
	Met by: _____ PHYS 497 [1 hr]	_____	PHYS 220 [3 hrs]
	_____ PHYS 498 [1 hr]	_____	PHYS 221L [1 hr]
_____	BIOL/CHEM/ENVS/PHSC/PHYS w/ lab	_____	PHYS 250 [3 hrs]
	[3 hrs]/INDS 112 [4 hrs]	_____	PHYS 251L [1 hr]
_____	BIOL/CHEM/ENVS/PHSC/PHYS w/ lab	_____	PHYS 260 [3 hrs]
	[3 hrs]/INDS 112 [4 hrs]	_____	PHYS 261L [1 hr]
_____	MATH (except 112,141,203,205)/	_____	PHYS 305L [4 hrs]
	BIOL 215/PSYC 230/INDS 114 [3-4 hrs]	_____	PHYS 309 [3 hrs]
_____	RELG/INDS 111 [3-4 hrs]	_____	PHYS 310 [3 hrs]
_____	PHIL [3 hrs]/INDS 110 [4 hrs]	_____	PHYS 311 [3 hrs]
_____	INDS 120 [3 hrs]/INDS 116 [4 hrs]	_____	PHYS 320 [3 hrs]
_____	Any literature course/INDS 113[3 hrs]	_____	PHYS 321L [1 hr]
	Fine Arts	_____	PHYS 330 [3 hrs]
	_____ ART (except 265)/	_____	PHYS 331L [1 hr]
	DANC/MUSC/THRE/ENGL 213/	_____	PHYS 340 [3 hrs]
	INDS 107 [3-4 hrs]	_____	PHYS 342 [3 hrs]
	OR	_____	PHYS 345L [1 hr]
	_____ MUSC/THRE [2 hrs]	_____	PHYS 350 [3 hrs]
	_____ same discipline [1 hr]	_____	PHYS 360 [3 hrs]
	OR	_____	PHYS 497 [1 hr]
	_____ MUSC/THRE [1 hr]	_____	PHYS 498 [1 hr]
	_____ same discipline [1 hr]	_____	CHEM 161 [3 hrs]
	_____ same discipline [1 hr]	_____	CHEM 163L [1 hr]
_____	HIST 100 or 200 level except HIST 201/	_____	OR
	or INDS 117 [3-4hrs]	_____	CHEM 131/133L [4 hrs] +
_____	CJUS/ECON/GEOG/GNST/POLS/PSYC/	_____	CHEM 132/134L [4 hrs]
	SOCI [3hrs]/INDS 104 [4 hrs]	_____	CSCI 230 [3 hrs]
_____	US Cultural Studies [3 hrs]/INDS 109 [4 hrs]	_____	MATH 161 [4 hrs]
_____	Non-Western Cultural Studies [3 hrs]/	_____	MATH 162 [4 hrs]
	INDS 108 [4 hrs]	_____	MATH 163 [1 hr]
_____	EXSC 110/120/121/130/201/240	_____	MATH 223 [4 hrs]
	[3 hrs]/INDS 105 [4 hrs]	_____	MATH 230 [4 hrs]
		_____	MATH 301 [3 hrs]
		_____	84 semester hours
_____	120 semester hours		

*Enter NA (not applicable) if waived upon admission or if completing the honors program.

➤ Applied Physics majors may count up to 57 hours in Physics toward graduation. Three hours over the limit may count to accommodate an internship in the discipline.

➤ Only six hours of any minor may overlap with the required credit hours of a student's chosen major. The overlap constraint is not applicable to courses that majors or minors MUST take in others departments.