

University of South Dakota
Major Credit Hour count: 66
Major: Physics- Applied Physics B.S.

[2021-2022 Academic Catalog]

<u>Year / Semester</u>	SGR/Major Requirement	Cr Hrs	<u>Year / Semester</u>	SGR/Major Requirement	Cr Hrs
<u>First Year - 1st Semester</u>			<u>First Year - 2nd Semester</u>		
ENGL 101 Composition I	SGR 1	3	ENGL 210 Introduction to Literature	BS	3
PHYS 211/211L University Physics & Lab	SGR 6+M	5	PHYS 213/213L Univ. Physics II & Lab	SGR 6+M	5
MATH 123 Calculus*	SGR 5+BS+M	5	MATH 125 Calculus II	Major	5
CMST 101 Fundamentals of Speech	SGR 2	3	Social Science	SGR 3	3
	Semester Credit Hours:	16		Semester Credit Hours:	16
<u>Second Year - 1st Semester</u>			<u>Second Year - 2nd Semester</u>		
PHYS 431 Intro to Modern Physics	Major	3	PHYS 332 Experimental Modern Phys	Major	2
MATH 225 Calculus III	Major	4	MATH 321 Differential Equations	Major	3
Fine Arts	SGR 4	3	CHEM 114/114L General Chemistry II/Lab	BS + M	4
Advanced Composition	SGR 1	3	Social Science	SGR 3	3
CHEM 112/L General Chemistry I/Lab	BS + M	4	Additional Social Science/Humanities	BS	3
	Semester Credit Hours:	17		Semester Credit Hours:	15
<u>Third Year - 1st Semester</u>			<u>Third Year - 2nd Semester</u>		
PHYS 451 Classical Mechanics	Major	4	PHYS 471 Quantum Mechanics	Major	4
CSC 155/155L Computer Science I	Major	4	PHYS 439 Solid State Physics	Specialization	3
Humanities	SGR 4	3	Additional Social Science/Humanities	BS	3
Electives		3	Electives		6
	Semester Credit Hours:	14		Semester Credit Hours:	16
<u>Fourth Year - 1st Semester</u>			<u>Fourth Year - 2nd Semester</u>		
PHYS 441 Thermodynamics	Major	2	PHYS 421 Electromagnetism	Major	4
PHYS 454/454L Semiconductor Materials: Fundamentals and Fabrication/Lab or PHYS 456/456L Radiation Detection/Lab	Specialization	4	MATH elective for minor OR credit by examination	Major	1
Electives		7	Electives		8
		0			0
	Semester Credit Hours:	13		Semester Credit Hours:	13
			Total Major Requirements 120		

Notes: *Students who have not taken a calculus class prior to enrollment in college may wish to delay University Physics until the sophomore year. Students pursuing this option should enroll in chemistry during the first year, and move PHYS 431 & 332 to the junior year. Students who complete the Physics major will have fulfilled the requirements for the Mathematics Minor and are not required to complete an additional minor, although they are welcome to add another minor.