

The University of South Dakota
Major Credit Hour count: 66
Major: Physics, B.S.

[2021-2022 Academic Catalog]

First Year - 1st Semester

SGR/Major Requirement	Cr Hrs	
ENGL 101 Composition I	SGR 1	3
PHYS 211/211L University Physics & Lab	SGR 6+M	5
MATH 123 Calculus*	SGR 5+BS+M	5
CMST 101 Fundamentals of Speech	SGR 2	3
Semester Credit Hours: 16		

Second Year - 1st Semester

SGR/Major Requirement	Cr Hrs	
PHYS 431 Intro to Modern Physics	Major	3
MATH 225 Calculus III	Major	4
Fine Arts	SGR 4	3
Advanced Composition	SGR 1	3
Humanities	SGR 4	3
Semester Credit Hours: 16		

Third Year - 1st Semester

SGR/Major Requirement	Cr Hrs	
PHYS 451 Classical Mechanics	Major	4
CHEM 112/112L General Chemistry & Lab	BS+Major	4
Additional Social Science/Humanities	BS	3
Electives		3
Semester Credit Hours: 14		

Fourth Year - 1st Semester

SGR/Major Requirement	Cr Hrs	
PHYS 441 Thermodynamics	Major	2
PHYS Elective, Upper-Division	Major	3
Electives		10
Semester Credit Hours: 15		

First Year - 2nd Semester

SGR/Major Requirement	Cr Hrs	
ENGL 210 Introduction to Literature	BS	3
PHYS 213/213L Univ. Physics II & Lab	SGR 6+M	5
MATH 125 Calculus II	Major	5
Social Science	SGR 3	3
Semester Credit Hours: 16		

Second Year - 2nd Semester

SGR/Major Requirement	Cr Hrs	
PHYS 332 Experimental Modern Phys	Major	2
MATH 321 Differential Equations	Major	3
CSC 155&Lab Computer Science I	Major	4
Social Science	SGR 3	3
Elective		3
Semester Credit Hours: 15		

Third Year - 2nd Semester

SGR/Major Requirement	Cr Hrs	
PHYS 421 Electromagnetism	Major	4
CHEM 114/114L Gen. Chem. II & Lab	BS+Major	4
PHYS Elective, Upper-Division	Major	3
Additional Social Science/Humanities	BS	3
PHYS 498 Undergraduate Research	Major	1
Semester Credit Hours: 15		

Fourth Year - 2nd Semester

SGR/Major Requirement	Cr Hrs	
PHYS 471 Quantum Mechanics	Major	4
Elective		8
MATH elective above 103	Major	1
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.