

# PHYSICS, BACHELOR OF SCIENCE

Offered by Department of Physics and Astronomy (<https://catalog.unk.edu/undergraduate/departments-programs/physics-astronomy/>)

Code	Title	Credit Hours
<b>General Studies</b>		
<i>Foundational Requirements (LOPERs 1-4)</i>		14
Including:		
LOPER 4: Mathematics, Statistics, and Quantitative Reasoning		
MATH 115	Calculus I with Analytic Geometry <sup>1</sup>	
<i>Broad Knowledge Requirements (LOPERs 5-8)</i>		11
Take any one course in LOPER 5, LOPER 6, or LOPER 7 that satisfies a Dispositional Requirement (LOPER 9 or LOPER 10) and a Broad Knowledge Requirement. The courses that meet these criteria are listed at <a href="https://catalog.unk.edu/undergraduate/general-studies/courses-satisfy-broad-knowledge-dispositional">https://catalog.unk.edu/undergraduate/general-studies/courses-satisfy-broad-knowledge-dispositional</a> ( <a href="https://catalog.unk.edu/undergraduate/general-studies/courses-satisfy-broad-knowledge-dispositional/">https://catalog.unk.edu/undergraduate/general-studies/courses-satisfy-broad-knowledge-dispositional/</a> ). See advisor for assistance.		
LOPER 8: Natural Science		
PHYS 275	General Physics I (Calculus)	
PHYS 275L	General Physics I (Calculus) Laboratory	
<i>Dispositional Requirements (LOPERs 9-10)</i> <sup>2</sup>		6
<i>Wellness (LOPER 11) Optional</i>		0
<b>BS Science-related course requirements</b>		8
MATH 202	Calculus II with Analytic Geometry	
MATH 305	Differential Equations	
<b>Program Specified Requirements</b>		5
PHYS 276	General Physics II (Calculus)	
PHYS 276L	General Physics II (Calculus) Laboratory	
<b>Major Option</b>		
Complete all required courses		36
<b>Minor or 2nd Major</b>		
Complete all required courses <sup>3</sup>		24
<b>Unrestricted Electives</b>		
Needed to reach 120 credit hour minimum		16
Total Credit Hours		120

## Major Option

Code	Title	Credit Hours
<b>Physics Requirements</b>		
PHYS 123	Freshman Physics Seminar	3
PHYS 346	Modern Physics I	4
PHYS 410	Mathematical Techniques in Physics I	3
PHYS 420	Advanced Physics Laboratory	3
<b>Physics Electives</b>		
Select 14 credit hours from the following:		14

PHYS 402	Analytic Mechanics	
PHYS 407	Electricity & Magnetism	
PHYS 419	Quantum Mechanics	
PHYS 430	Optics	
PHYS 435	Solid State Physics	
PHYS 440	Thermodynamics and Statistical Mechanics	
PHYS 495	Research in Physics	
<b>Physics Math Requirements</b>		
MATH 260	Calculus III	5
<b>Physics Chemistry Requirements</b>		
CHEM 160	General Chemistry	3
CHEM 160L	General Chemistry Laboratory	1
Total Credit Hours		36

<sup>1</sup> Students without sufficient preparation will also need to take the following courses, increasing the total credit hours needed:

- MATH 102
- MATH 103

<sup>2</sup> Designated courses with the appropriate content approved to satisfy one of the Broad Knowledge requirements plus LOPER 9 or a Broad Knowledge requirement plus LOPER 10. Some courses approved satisfy LOPER 9 or LOPER 10 alone. Choosing a course that satisfies the Broad Knowledge requirement **AND** LOPER 9 or the Broad Knowledge Requirement **AND** LOPER 10 will reduce the total general studies hours.

<sup>3</sup> A minor or second major is required for a complete degree program. The number of required electives needed to reach 120 total credit hours overall will depend upon the specific program chosen