

# PHYSICS MINOR

## Program Description

When you minor in Physics, you study the changes, interactions, and properties of matter and energy. As a result, you learn how physics strongly influences humankind's understanding of nature and how engineers create new technology based on the principles first discovered by physicists, contributing to the social economics and changes.

## Entering and Completing the Minor

In order to earn a degree, you must complete at least one academic major. Minors are not required except for students in the Professional Studies (BA). SPU encourages students to explore various academic paths, including minors, so if you change your mind about a minor or want to include an additional minor, you are able to do so as outlined below.

Note that the University encourages you to enter your chosen minor(s) as soon as you have determined it and are eligible to join it, especially by the start of your junior year. Students who transfer as juniors and seniors should enter a minor within their first two quarters at SPU.

- If this is your first quarter at SPU, request entrance to your minor in Banner by following these instructions (<https://spu.atlassian.net/l/cp/Th4S0jCE/>).
- If you are an SPU student with an SPU cumulative GPA of 2.0 or better, follow these instructions (<https://spu.atlassian.net/l/cp/Th4S0jCE/>) to enter a minor in this department.
- The University requires a grade of C- or better in all classes that apply to a minor; however, programs may require higher minimum grades in specific courses. You may repeat an SPU course only once for a higher grade.
- To advance in this program, meet with your faculty advisor regularly to discuss your grades, course progression, and other indicators of satisfactory academic progress. If your grades or other factors indicate that you may not be able to successfully complete the minor, your faculty advisor can work with you to explore options, which may include choosing a different minor.
- You must complete the minor requirements that are in effect in the SPU Undergraduate Catalog for the year you enter the minor.

## Physics Minor

35 Credits Minimum, Including 15 Upper Division (UD)

Code	Title	Credits
<b>Physics Minor Core Requirements</b>		
Select one of the following Groups:		15
Group A:		
PHY 1101	General Physics	
PHY 1102	General Physics	
PHY 1103	General Physics	
Group B:		
PHY 1121	Physics for Science and Engineering	
PHY 1122	Physics for Science and Engineering	
PHY 1123	Physics for Science and Engineering	
PHY 2321	Intermediate Physics	5
Section Credits Required		20

### Physics Minor Core Upper Division Requirements

Select six credits of the following: <sup>1</sup>		6
PHY 3311	Experimental Methods I	
PHY 3312	Experimental Methods II	
PHY 4520	Preparing to Teach	
Section Credits Required		6
<b>Electives in Upper-Division Physics Courses</b>		
Select nine credits of the following: <sup>1</sup>		9
EGR 3611	Appropriate and Sustainable Engineering I: Alternative Energy Systems	
ME 3400	Dynamics	
ME 3500	Thermal Science I: Thermodynamics	
PHY 3211	Acoustics	
PHY 3315	Electricity and Magnetism I	
PHY 3341	Quantum Mechanics	
PHY 3401	Thermal and Statistical Physics	
PHY 4311	Optics and Lasers	
PHY 4315	Electricity and Magnetism II	
PHY 4898	Physics Capstone	
PHY 4900	Independent Study	
PHY 4940	Internship in Physics	
PHY 4950	Special Topics in Physics	
PHY 4970	Undergraduate Research	
Section Credits Required		9
<b>Total Credits</b>		<b>35</b>

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Courses not used for Core UD may count for UD Physics Electives.