

Applied Physics, BS

LSAPHYBS

Advancements at the intersection of physics, engineering and technology create a need for interdisciplinary training and research experience. This program aims to meet these needs by producing forward-thinking students.


Program description

By pairing fundamental physics with practical applications, the BS program in applied physics serves students who have a wide range of interests, from engineering applications to research in fundamental physics. The degree program combines physics, computer science and applied mathematics to tackle complex problems in physics, material sciences, engineering, chemistry and related fields.

This degree program is delivered by dedicated faculty with expertise in modeling of physical systems, materials science, modern numerical techniques and fundamental physics. Given the importance of hands-on experience, the degree program offers rigorous courses and elements of project-based research.

The growing presence of high-tech companies in the metro Phoenix area, including the East Valley, presents a unique opportunity for students to establish connections with industry.

At a glance

- **College/School:** [College of Integrative Sciences and Arts](#)
- **Location:** [Polytechnic](#)
- **Second language requirement:** No
- **First required math course:** MAT 265 - Calculus for Engineers I
- **Math intensity:** Substantial 

Required courses (Major Map)

[2024 - 2025 Major Map](#)

Concurrent program options

Students pursuing concurrent degrees (also known as a "double major") earn two distinct degrees and receive two diplomas. Working with their academic advisors, students can create their own concurrent degree combination. Some combinations are not possible due to high levels of overlap in curriculum.

Admission requirements

General university admission requirements:

All students are required to meet general university admission requirements.

[First-year](#) | [Transfer](#) | [International](#) | [Readmission](#)

Tuition information

When it comes to paying for higher education, everyone's situation is different. Students can learn about [ASU tuition and financial aid](#) options to find out which will work best for them.

Change of Major Requirements

A current ASU student has no additional requirements for changing majors.

Students should visit the [Change of Major form](#) for information about how to change a major to this program.

Transfer options

ASU is committed to helping students thrive by offering tools that allow personalization of the transfer path to ASU. Students may use [MyPath2ASU®](#) to outline a list of recommended courses to take prior to transfer.

ASU has [transfer partnerships](#) in Arizona and across the country to create a simplified transfer experience for students. These pathway programs include exclusive benefits, tools and resources, and they help students save time and money in their college journey.

Global opportunities

Global experience


By studying abroad, students majoring in applied physics gain valuable hands-on experience tailored to their unique interests and skill sets, personal enrichment, heightened cultural competency, and leadership and critical thinking skills that will be an advantage in their careers.

With more than 300 [Global Education programs](#) available, whether in a foreign country, in the U.S. or online, students build communication skills, are challenged to adapt and persevere, are exposed to differences across the world, and increase their ability to work with diverse groups of people.

Career opportunities

Graduates apply their knowledge in high-performance and scientific computing, biophysics, condensed matter physics, chemistry, material science, electrodynamics and radar physics. This knowledge is vital for employment in chemical and pharmaceutical companies, environmental management agencies and firms specializing in scientific software. Graduates are also prepared to continue their studies in graduate programs in physics and chemistry.

Example job titles and salaries listed below are not necessarily entry level, and students should take into consideration how years of experience and geographical location may affect pay scales. Some jobs also may require advanced degrees, certifications or state-specific licensure.

Career	*Growth	*Median salary
<u>Astronomer</u> 	4.6%	\$128,330
<u>Fuel Cell Engineer</u> 	10.0%	\$96,310
<u>Health Sciences Manager</u> 	4.8%	\$144,440
<u>Materials Engineer</u> 	5.1%	\$100,140
<u>Materials Scientist</u> 	5.1%	\$104,380
<u>Nanosystems Engineer</u>	3.3%	\$104,600
<u>Operations Research Analyst</u> 	22.5%	\$85,720
<u>Photonic Engineer</u>	3.3%	\$104,600
<u>Physicist</u> 	4.7%	\$142,850
<u>Physics Professor</u>	3.8%	\$86,550

* Data obtained from the Occupational Information Network (O*NET) under sponsorship of the U.S. Department of Labor/Employment and Training Administration (USDOL/ETA).

 [Bright Outlook](#)

Contact information

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