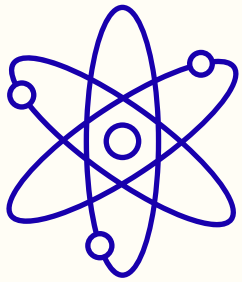
PHYSICS INSIGHT



WINTER 2025

Key Benefits of an Internship

Real-World Application:
Translate complex physics theories into practical solutions in labs, companies, or government agencies.

Career Exploration:
Test different physics sub-fields (like astrophysics, materials, or particle physics) and industry environments to find what you enjoy.

Professional Development:
Gain transferable skills in problem-solving, teamwork, adaptability, and professional communication.

Networking: Meet mentors, professors, and peers, building connections that can lead to future opportunities.

Resume Building: Add tangible work experience that makes you stand out to employers and graduate programs.

Increased Employability: Show initiative and prove you understand business/research needs, making you more attractive for entry-level roles.

Did You Know?

The first physics course was taught at UVA in 1827.

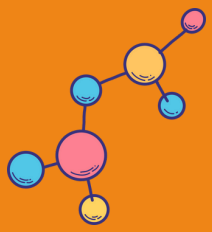
Resources Across Grounds

The Harrison Undergraduate Research Award:

Funds outstanding undergraduate research projects under the supervision of a UVA faculty mentor.

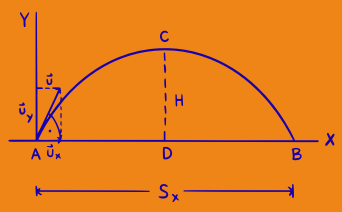
The Double Hoo Research Program:

Matches undergraduate students with a graduate student mentor's project during the summer.



Cavalier Fund:
Eligible students may receive up to $1,000 per academic year to support the cost of attending a scientific meeting or pre-professional conference.

USOAR:
Matches eligible undergraduate students who do not have previous research experience with a paid Federal Work Study research position in Charlottesville



UVA Internship Placement Program:

Receive a customized, rewarding internship experience that develops skills for future opportunities and much more!

Transformative Federal Works Study Internship Program:

Enhanced paid internship experiences on Grounds for eligible students.

What Will You Learn?

Technical Skills: Hands-on experience with research methods, data analysis, software, or instrumentation.

Industry Insights: Understand corporate culture, project management, and commercial awareness.

Self-Discovery: Confirm if a research career, tech job, or another path in physics is right for you.

Key Internship Search Terms

Core Physics Fields: Quantum Mechanics, Astrophysics, Nuclear Physics, Condensed Matter, Optics, Plasma Physics

Specific Techniques/Software: Python, MATLAB, C++, Simulation, Data Analysis, CFD, FEM

Job Titles: Research Intern, Lab Technician, Data Scientist, Engineer

Stand Out & Be Competitive!

1. Be prepared. Do not wait until the last minute to submit your application.
2. Ask for strong letters of recommendation - particularly from a professor who's familiar with the field and also knows who you are as a scholar.
3. Write a clear and specific personal statement. Avoid fluff!
4. Follow the application instructions.
5. Be persistent. Don't get discouraged by initial rejections; follow up politely to the appropriate contacts.

List of Potential Internships

Argonne National Laboratory: Science Undergraduate Laboratory Internship

The Science Undergraduate Laboratory Internship (SULI) program encourages undergraduate students to pursue science, technology, engineering, and mathematics (STEM) careers by providing research internships at one of 17 DOE laboratories. Under the guidance of laboratory staff scientists or engineers, students perform research on projects supporting the Department of Energy (DOE)‘s mission. **Application deadline: January 7, 2026!** *Website: https://www.anl.gov/education/science-undergraduate-laboratory-internship*

Argonne National Laboratory: Seasonal Internship Program

Argonne’s Seasonal Internship program encourages undergraduate students to pursue science, technology, engineering, and mathematics (STEM) careers by providing research internships. Students will spend the first week of their Argonne experience with an Argonne staff member devising a research strategy and attending mandatory safety classes. For the next few weeks, the supervisor will provide considerable program assistance and guidance to implement the research plan. Subsequently, the student will be required to give a poster presentation at the end of their appointment. **The application deadline is February 6, 2026!** *Website: https://www.anl.gov/education/seasonal-internship-program*

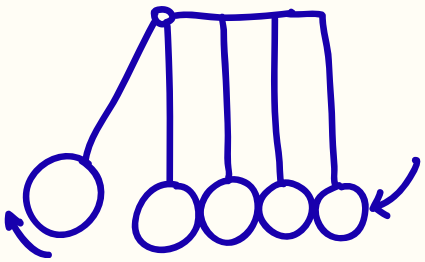
Commonwealth Fusion Systems

The world’s largest and leading commercial fusion energy company. Multiple internships based on-site in Devens, Massachusetts. Deadlines vary based on opportunity.
Website: https://jobs.lever.co/cfsenergy?commitment=Internship

List of Potential Internships

Department of Defense STEM Opportunities (DoD STEM)
Build robots, solve real world problems, and work at the cutting edge of technology. DoD STEM has opportunities for students of all ages, educators, and professionals. Check out these STEM programs, internships, scholarships, and more! Various deadlines. *Website: https://www.dodstem.us/participate/opportunities/?type=Internship%20or%20Apprenticeship*

Fermilab: Advancing Scholars in Physics and Innovative Research in Engineering (ASPIRE)
Students are invited to participate in paid immersive learning experiences to design and develop world-leading particle accelerators at Fermilab. Under the guidance of an assigned mentor, ASPIRE Fellows acquire in-demand engineering skills and establish professional networks within the U.S. accelerator science and technology community. Upon successful completion of the program, Fellows will have gained accelerator engineering skills that inform their future careers and/or post-graduate work in the case of undergraduate participants. *Website: https://internships.fnal.gov/https-fermilab-wd5-myworkdayjobs-com-en-us-fermilabcareers-details-aspire-fellowship_r_007434qaspire/*



List of Potential Internships

Fermilab: Quantum Computing Internship for Physics Undergraduates Program (QCIPU)

Undergraduate physics students interested in quantum computing for the simulation of physics participate in this three-week program to gain hands-on Python and Qiskit programming experience. Daily lectures on the fundamentals of quantum mechanics and quantum computing are additional program components. The program culminates with participants running their own code on an IBM quantum computer. QCIPU is a training platform that supports the next generation of scientific research and engineering professionals. *Website: https://internships.fnal.gov/quantum-computing-internship-for-physics-undergraduates-program/*

Fermilab: Undergraduate Research Summer Internship (FURSI)

The URA-Fermilab Undergraduate Research Summer Internship (FURSI) engages undergraduate students in STEM to conduct research at Fermilab that in the areas of particle physics, high-energy physics, accelerator science, computational physics, engineering and emerging technologies in support of the following projects: LBNF/DUNE US, PIP-II, HL-LHC AUP & CMS, Mu2e, Superconducting Quantum Materials and Systems (SQMS). Interns spend 12 weeks at Fermilab performing hands-on research under the direct leadership, guidance, and supervision of Fermilab scientists, engineers, computing professionals, technicians, and staff across all laboratory directorates performing hands-on research. **Applications are due January 15, 2026!** *Website: https://internships.fnal.gov/fursi/*

List of Potential Internships

Fermilab: US CMS Undergraduate Internship Program

The US CMS Summer Undergraduate Research Internship Program is a 10-week paid internship program, which offers undergraduate students an opportunity to perform a project under the mentorship of scientists working at the frontier of Physics at one of the *50+ institutions in the US*. The internship program is open to students pursuing physics, engineering, computer science, math, chemistry, or related majors.
Website: https://internships.fnal.gov/u-s-cms-undergraduate-internship/

Homeland Security Professional Opportunities for Student Workforce to Experience Research Program (HS-POWER)

Every June, students from across the U.S. and its territories are invited by the Department of Homeland Security to attend a ten-week HS-POWER internship program that is geared toward undergraduate and graduate students in the science, technology, engineering and mathematics fields and political and social sciences. *Website: https://www.dhs.gov/science-and-technology/homeland-security-professional-opportunities-student-workforce-experience-research-program-hs-power*

IBP Pathways to Science Resource Database

A database of various internships and fellowships offered at universities and labs across the U.S. and globally.
Website: https://www.pathwaystoscience.org/Discipline.aspx?sort=ENG-Physics_Physics#Undergraduate%20Students

Johns Hopkins Applied Physics Lab Database

Various internship opportunities at Johns Hopkins University. *Website: https://careers.jhuapl.edu/internships/*

List of Potential Internships

Mitchell Summer Scholarship

The Mitchell Summer Scholarship is a competitive UVA-based opportunity awarded annually by the Physics Department to rising third and fourth year students. The application will **open in early 2026.** The award amount will be ~$600 per week for up to 10 weeks for full-time research (to a maximum of $6,000). *Website: https://www.phys.virginia.edu/Announcements/Mitchell/*

National High Magnetic Field Laboratory Research Experiences for Undergraduates (REU)

The MagLab's Research Experiences for Undergraduates (REU) is an exciting summer program for college students interested in a science career by giving them the chance to work with MagLab scientists on an in-depth research project. This program is funded by the National Science Foundation. Opportunities available at Florida State University or University of Florida. **Application deadline in January 2026!** *Website: https://nationalmaglab.org/education/college-students/reu/*

NIST Summer Undergraduate Research Fellowship (SURF)

NIST summer interns have improved MRI technology, studied medications, and more. Spend your summer with us for 11 weeks of hands-on lab experience with world-class mentors in one of NIST's six labs or other offices. **Application due January 26, 2026!** *Website: https://www.nist.gov/surf*

NSF Research Experience for Undergraduates (NSF REU)

Explore existing U.S. National Science Foundation Research Experiences for Undergraduates Sites. Search by research area, desired location and keyword. Various deadlines. *Website: https://www.nsf.gov/funding/initiatives/reu/search?f%5B0%5D=reu_research_area%3A25744*

List of Potential Internships

Oak Ridge National Lab

ORNL undergraduate research opportunities address ORNL's scientific mission: materials, neutron sciences, energy, high-performance computing, systems biology, and national security. All internships come with a stipend. Explore the opportunities and apply today for a high-impact internship experience! Application deadlines vary by program.

Website: https://education.ornl.gov/undergraduate/

Additional Resources:
https://virginia.box.com/s/xwwp8x1zsopq0ealq122psu0sdx0e3am

Sandia National Laboratory Institute Programs

Housed at both our New Mexico and California sites, these technical institutes provide interns challenging work experience in multiple disciplines critical to Sandia's mission, including cybersecurity, computer and computational science, predictive simulation, remote-sensing technologies, electrical and mechanical engineering, the physical sciences, and software engineering.

Website: https://www.sandia.gov/careers/careers/students-and-postdocs/internships-co-ops/institute-programs/

Sandia National Laboratory Internships Database

Many of our internships can be experienced through Sandia's Intern Institute Program, which encompasses a range of disciplines, including business, cyber security, energy surety, engineering design, and software development. Each institute provides a team to guide and mentor interns in projects aligned with their major or area of particular technical interest. Professional development and social activities supplement project work to create an even more rewarding experience.

Website: https://www.sandia.gov/careers/careers/students-and-postdocs/internships-co-ops/

List of Potential Internships

Science Undergraduate Laboratory Internships (SULI)

When you join SULI, you'll be part of a Department of Energy (DOE) team that's working together to advance scientific impact and discovery. Expand your skills and knowledge at a DOE national laboratory using state-of-the-art facilities and advanced scientific instruments. Interested in the Summer 2026 term? **Applications are due January 7, 2026!** *Website: https://science.osti.gov/wdts/suli*

SLAC LCLS Summer Internships

The LCLS Summer Internship Program at Stanford is an opportunity for students to gain novel, hands-on experience while being a part of the visionary science and engineering at a national laboratory and to interact with scientists, engineers and professionals at SLAC working in many different areas. Interns are matched with mentors whose work aligns with their interests and talents. *Website: https://lcls.slac.stanford.edu/internships*

Summer Schools at Los Alamos National Lab

A database of summer educational programs and fellowships for students seeking the opportunity to work with scientists on research projects that address emerging challenges in national security. Current opportunities are hosted by Los Alamos National Laboratory and its partners. *Website: https://www.lanl.gov/engage/collaboration/internships/summer-schools*

TIP: Did you know that UVA has a Science & Technology Career Advisor and Newsletter?

List of Potential Internships

Summer Undergraduate Research Experience at CERN

The University of Michigan - CERN Summer Research Experience for Undergraduates Program (UM-CERN REU) provides undergraduate students from around the United States an opportunity to conduct nine weeks of summer research with some of the world's leading physicists at CERN in different research fields. CERN Summer Program is on site at CERN in Geneva, Switzerland. *Website: https://cern-reu.physics.lsa.umich.edu/*

Who Am I?

Thomas Jefferson

Dustin Henderson

Sir Elton John

Sir Isaac Newton

Sir Isaac Barrow

ADDITIONAL RESOURCES

Spring 2026 UVA Career Fairs

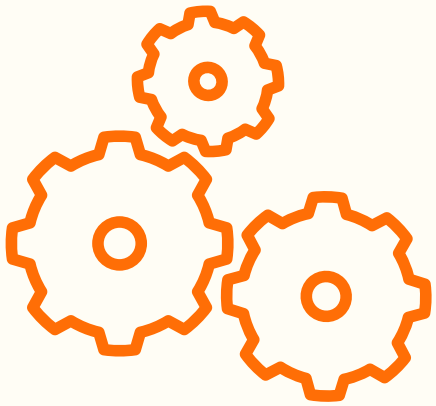
January 28 & 29
Spring Job and Internship Fair: All Industries and Engineering

February 25
Data Science and Analytics Fair

March 18
Consulting and Strategy Recruiting Fair and Networking Night

April TBD
Spring Job, Internship and Graduate School Fair

https://career.virginia.edu/Employers/AnnualCalendar



Internships on Employment Sites

Indeed
https://www.indeed.com/q-undergraduate-physics-summer-internship-jobs.html

LinkedIn
https://www.linkedin.com/jobs/physics-intern-jobs/

Pathways to Science
https://www.pathwaystoscience.org/Discipline.aspx?sort=ENG-Physics_Physics#Undergraduate%20Students