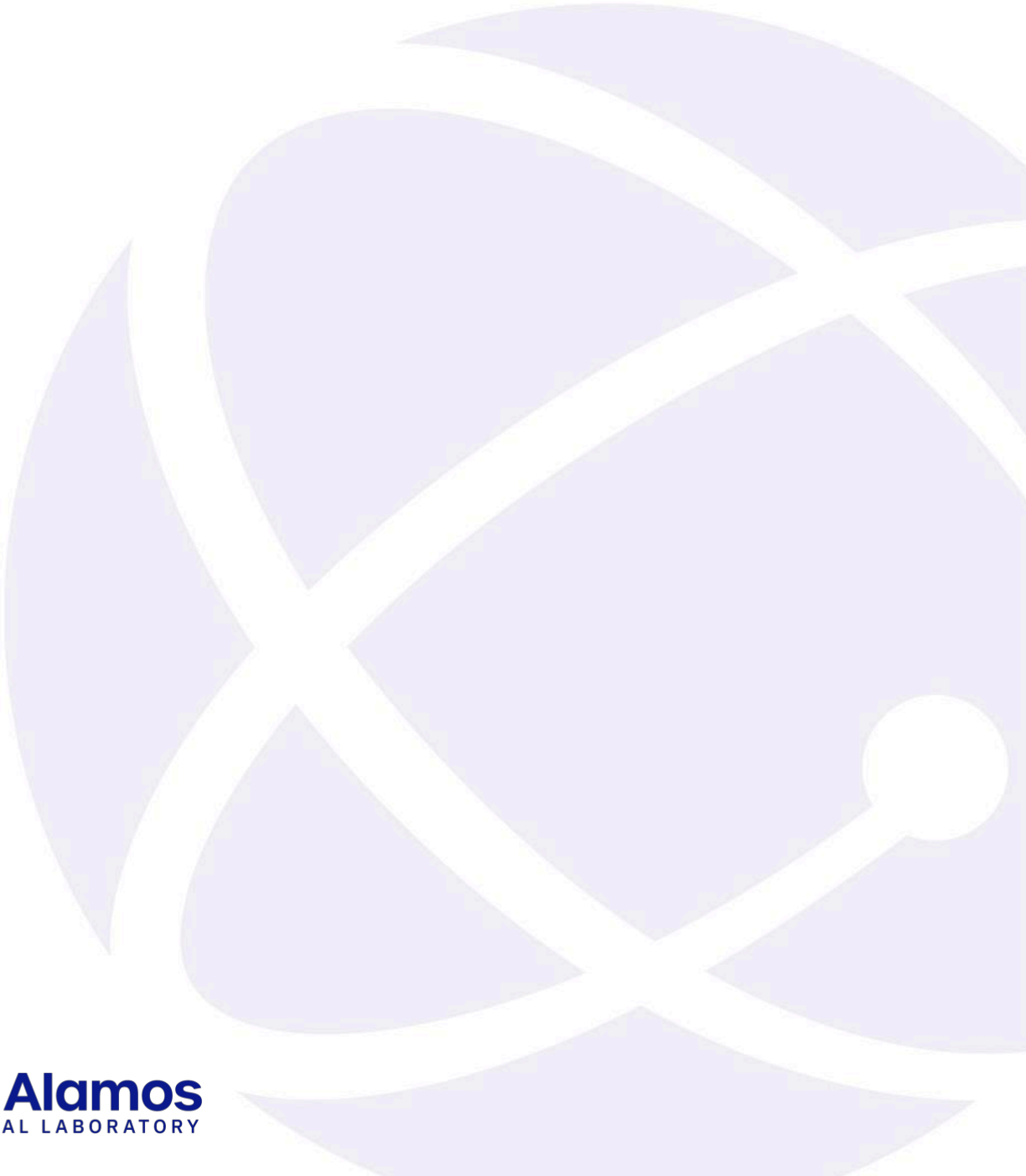
High School Internship Program

Summer 2026 Projects



Los Alamos
NATIONAL LABORATORY

Introduction:

Thank you for your interest in a high school internship at Los Alamos National Laboratory (LANL). LANL's internship programs are mentor-driven. This project description book provides a list of all project options to begin a High School Internship in Summer 2026.

Applicants should read through the project descriptions to find up to three projects that seem like a good fit for their skills and interests, then specify those projects on the internship application. External websites are linked (if available) and are a great resource for you to learn about the work done in these areas.

Application Period:

- Opens: January 12, 2026
- Closes: April 15, 2026

Eligibility Requirements:

- Senior status at the time of internship (junior at the time of application)
- 16 years of age
- 2.75 GPA
- Attend a New Mexico High School
- Pass a new employment drug test

Required Materials:

- Current Transcript
- Resume
- Personal Statement
- Letter(s) of Recommendation (optional)

For more information about the high school internship program, application guidance and FAQs, please visit the Student Programs Office (SPO) High School webpage.

If you have any questions, feel free to email SPO at studentprograms@lanl.gov

ALDW PROGRAM OFFICE (ALDW-PO)

Mentor:
Dana Dattelbaum, danadat@lanl.gov

Project Description:
Data archiving in digital databases and data analysis

Length of Internship:
6-8 weeks

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only

Age Requirement:
16 years old

APPLIED ELECTRODYNAMICS (AOT-AE)

Mentor:
Quinn Marksteiner

Project Description:
The student will characterize the electromagnetic properties of a device in the lab. This will involve using a tool called a Vector Network Analyzer. The intern will have to carefully scan parameters of the device and then record and present the results.

Length of Internship:
2-3 months

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only or year-round (fall, spring, and summer)

Age Requirement:
16 years old

INSTRUMENTATION & CONTROLS (AOT-IC)

Mentor:
Alexander Scheinker

Project Description:
The student will learn basics of python and will get an introduction to particle accelerators and charged particle beams to then run some beam simulations related to LANSCE. After some data is generated will also explore some introductory AI/ML.

Length of Internship:
2.5 months

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only

Age Requirement:
16 years old

INSTRUMENTATION & CONTROLS (AOT-IC)

Mentor:
Anthonette Martinez, anthonettem@lanl.gov

Project Description:
Provide student with hands on experience in office administration and organizational operations. Student will support daily administrative functions while developing essential workplace skills such as communication, organization, time management, and professionalism. Student will assist administrative staff with tasks including filing and record management, scheduling support, basic correspondence. They may help organize events, maintain digital records, and support community facing activities as appropriate. This project emphasizes exposure to real-world office environments, ethical workplace behavior, and the importance of accuracy and confidentiality in administrative work. The student will learn how administrative supports the overall mission and efficiency of LANL while gathering experience using common office tools and technology.

Length of Internship:
1 year

Internship Location:
Onsite

Expected Start Date:
5/4/2026

Internship Period:
Year-round (fall, spring, and summer)

Age Requirement:
16 years old

Other Information:
By the end of the internship, the student will have a better understanding of administrative career pathways, improved professional skills, and practical experience that prepares them for further academic and career opportunities.

RF ENGINEERING (AOT-RFE)

Mentor:
Javier Vega, javierv@lanl.gov

Project Description:

- Learn basic electronics skills: Practice hands-on tasks such as wiring, identifying components, using basic tools, and safely working with simple circuits.
- Explore basic engineering principles: Help with simple design, troubleshooting, and step-by-step problem-solving activities that show how engineers approach real tasks.
- Build introductory physics understanding, including RF concepts: Learn how electricity, energy, and motion apply to real systems, and receive a beginner-friendly introduction to radio frequency (RF) concepts such as how signals travel, how RF is used in equipment, and why shielding and safety matter.
- Participate in hands-on, high-school-level projects: Tasks may include assembling small devices, testing equipment, recording results, and supporting team members with basic project work.
- Assist with inventory tasks: Help track parts, label components, restock supplies, and understand why accurate inventory is essential for smooth operations.
- Learn how the facility operates: Gain an overview of different areas of the facility, understand the workflow of projects, and see how each team contributes to keeping everything running properly.
- Work with mentors and follow safety practices: Receive guidance from staff, ask questions, and learn proper procedures for working safely and effectively.

Length of Internship:
1 year

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only, year-round (fall, spring, and summer)

Age Requirement:
16 years old

Other Information:

We encourage applicants who have basic skills in Word, Excel, and PowerPoint, as these tools will be used throughout the internship for simple documentation and presentations. Most importantly, we are looking for students who bring a positive attitude and a strong willingness to learn! No advanced technical background is required just curiosity, reliability, and an interest in hands-on engineering and physics activities.

MICROBIAL AND BIOME SCIENCES (B-IOME)

Mentor:

Ramesh Jha, rjha@lanl.gov

Project Description:

Proteins can be engineered for pre-determined functions. The intern will use computational methods including AI-driven protein design tools to engineer proteins for novel functions, such as new enzymatic reaction for biomanufacturing or bioremediation, biosensing a contaminant or binding to a metal of interest. With the help of the senior members in the group, the intern will be able to have the designed protein tested in the lab.

Length of Internship:

10 weeks

Internship Location:

Onsite

Expected Start Date:

6/1/2026

Internship Period:

Summer only

Age Requirement:

16 years old

Other Information:

Prior exposure to computer science course (preferable AP computer Science). For wet lab work, the minimum age is 18 years. If the intern qualifies, there is a possibility of getting a hands-on experience, beyond computational work.

BIOCHEMISTRY & BIOTECHNOLOGY AND CENTER FOR NONLINEAR STUDIES (B-TEK & CNLS)

Mentor:

Daniel Burns, dcburns@lanl.gov

Project Description:

Desire to learn Python for scientific applications. Student will apply coding skills to model biomolecules.

Length of Internship:
4 weeks

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only

Age Requirement:
16 years old

BIOCHEMISTRY & BIOTECHNOLOGY (B-TEK)

Mentor:
Phillip Mach, mach@lanl.gov

Project Description:

Preparation of biological samples for protein, lipid, and metabolite measurements via mass spectrometry. We look at differences in control samples and exposed samples, and measure changes in the metabolism, enzymatic function, and other biochemical pathways.

Length of Internship:
8-12 weeks

Internship Location:
Onsite

Expected Start Date:
5/18/2026

Internship Period:
Summer only

Age Requirement:
18 years old

NUCLEAR & RADIOCHEMISTRY (C-NR)

Mentor:
Danielle Roybal, danir7@lanl.gov

Project Description:
Student will assist with Inventory Management Project which will include physically conducting item inventories, labeling inventory, stocking inventory, data management as well as smaller project management tasks.

Length of Internship:
Summer of 2026 with potential for extension through the Fall 2026

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only, year-round (fall, spring, and summer)

Age Requirement:
18 years old

TECHNICAL EDITING AND COMMUNICATIONS (CEA-TEC)

Mentor:
Sarah Williams, sarahwilliams@lanl.gov

Project Description:
The student will be involved in writing, editing, interviewing experts, image processing and working within the content management system to assist in creating and posting communications for the Laboratory.

Length of Internship:
1 year

Internship Location:
Hybrid

Expected Start Date:
6/1/2026

Internship Period:
Summer only

Age Requirement:
16 years old

COMMUNITY PARTNERSHIPS (CP-DO)

Mentor:

Monica Martinez-Archuleta, m.archuleta@lanl.gov

Project Description:

The Community Partnerships Office (CPO) is seeking a motivated and community-minded high school intern to support a Community Outreach Specialist focused on K–12 STEM education. This internship provides hands-on experience in community engagement, educational programming, and public outreach while supporting initiatives that expand STEM learning opportunities for students across northern New Mexico, particularly in rural and Title I schools. The intern will assist with day-to-day outreach activities, program coordination, event support, and data collection, gaining exposure to how large organizations partner with schools and communities to strengthen education and workforce pathways.

Key Responsibilities

- Under the guidance of a Community Outreach Specialist, the intern will:
  Program & Event Support
- Assist with planning, preparing for, and supporting STEM outreach activities and events, including workshops, science fairs, career fairs, school visits, and community meeting
- Help organize materials, set up event spaces, and support event logistics
- Participate in outreach activities as a student ambassador when appropriate

Community Engagement

- Support relationship-building efforts with K–12 schools, educators, students, and community partners
- Assist in communicating program information to schools and community members
- Observe and learn professional engagement with community leaders, educators, and Laboratory staff

Data & Reporting Assistance

- Help collect participation data, feedback, and basic metrics from outreach programs and events
- Assist with organizing information for monthly or annual reports
- Support basic evaluation activities to help measure program impact

Administrative & General Support

- Assist with scheduling, tracking outreach activities, and maintaining program files
- Help prepare outreach materials, presentations, or displays
- Provide general administrative support to the Community Outreach Specialist as needed

Learning Opportunities

- Through this internship, students will:
  - Gain exposure to STEM education, community partnerships, and nonprofit/public-sector outreach
  - Develop professional communication, teamwork, and organizational skills
  - Learn how outreach programs are designed, implemented, and evaluated
  - Explore potential career pathways in STEM, education, communications, or community engagement

Required Qualifications

- Currently enrolled high school senior
- Interest in STEM, education, community service, or public engagement
- Strong communication and interpersonal skills
- Ability to work collaboratively with diverse groups of people
- Basic computer skills (Microsoft: Word, Excel, Teams; Google Drive: sheets, Documents, Forms, etc.)

- Dependable, organized, and willing to learn

Preferred Qualifications

- Interest in education, public service, or community outreach careers
- Familiarity with local schools or community organizations in northern New Mexico

Work Environment

- Mix of office-based work and community/school-based events
- May include occasional local travel with supervision
- Supportive, mentoring-focused environment designed for student learning

Time Commitment

- Part-time during the school year and/or summer
- Flexible schedule coordinated with school commitments

Length of Internship:
Summer May-August can be extended

Internship Location:
Hybrid

Expected Start Date:
5/18/2026

Internship Period:
Year-round (Fall, spring, and summer)

Age Requirement:
16 years old

DETONATOR PRODUCTION - DIVISION OFFICE (DP-DO)

Mentor:
Santana Rael, srael@lanl.gov

Project Description:
The Infrastructure Planning Office is seeking a motivated high school summer student intern to support project specialists with equipment project planning and the transition of projects into daily operations across the division. This position provides hands-on exposure to the full project life cycle, including learning how project scope, schedules, and budgets are developed, tracked, and managed.

The student will apply problem-solving and critical-thinking skills while gaining experience with project tracking tools, including the Microsoft Office Suite (Word, Excel, Visio, PowerPoint, Project, and Teams), to monitor project activities and support planning efforts.

The intern will also assist with improving the tracking and coordination of vendor on-site equipment installations and maintenance activities. Through mentorship and practical, real-world experience, the student will gain valuable insight into project coordination, teamwork, safety expectations, and effective communication within a mission-

focused manufacturing environment. This internship will help build confidence and provide a strong foundation for pursuing future education or careers in engineering, project management, or other technical fields.

Length of Internship:
Summer (3 months), may be extended

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer-only, or year-round (fall, spring, and summer)

Age Requirement:
16 years old

Other Information:
Work schedule is onsite, Monday to Thursday, 6:30 a.m. to 5:00 p.m.

ENERGY AND NATURAL RESOURCES SECURITY (EES-16)

Mentor:
Hari Viswanathan, viswana@lanl.gov

Project Description:
The student will learn to use agentic workflow to improve end to end materials discovery problems that are being studied on the LDRD Director's Initiative Artemis. Specifically, the student will work either composite materials or high entropy alloys. The student is expected to be proficient in python.

Length of Internship:
Summer (3 months)

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Year-round (fall, spring, and summer)

Age Requirement:
16 years old

Other Information:
The applicants are encouraged to read up on materials failure and foundation models.

ENGINEERING SERVICES - SCIENCE PROJECT DELIVERY (ES-SPD)

Mentor:
Emma Starrett, ejstarrett@lanl.gov

Project Description:
This placement would be with facility design engineers and architects. We typically work on small facility modification projects involved with installing new items of equipment. The team is comprised of civil and structural engineers, and architects. The tasks that would be assigned would be related to the projects that we are undertaking at the time of placement. We would expect the intern to help us with locating information on building record drawings, helping to establish what design inputs we might need, carrying out some simple calculations, learning to draw simple engineering drawings using AutoCAD and REVIT and attending site walkdowns with engineers to facilitate construction activities.

Length of Internship:
4 weeks

Internship Location:
Hybrid

Expected Start Date:
6/8/2026

Internship Period:
Summer only

Age Requirement:
18 years old

Other Information:
This internship will have several mentors available to the student

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RICHARD P. FEYNMAN CENTER FOR INNOVATION (FCI-BE)

Mentor:
Tyler Zollinger, tylerz@lanl.gov

Project Description:
The Richard P. Feynman Center for Innovation (FCI), Technology Transfer Office, is seeking a motivated high school intern to assist with licensing and compliance support activities. This internship provides hands-on experience with real-world business, technology, and compliance processes that support the licensing of scientific and software innovations.

Key Responsibilities:

- Assist with organizing and reviewing license records and supporting documents

- Help track progress reports and financial deliverables from licensees
- Support invoice and deliverable tracking using spreadsheets and internal systems
- Perform data checks to ensure records are accurate and complete
- Assist with projects related to expiring agreements and compliance tracking

Projects You May Work On:

- License and deliverable tracking spreadsheets
- Organization of compliance and reporting records
- Review of expiring license data for accuracy
- Helping organize financial and progress report submissions by license number and date
- Deliverable past-due notification/follow-up

Qualifications:

- Strong attention to detail and organizational skills
- Comfortable working with spreadsheets, basic data entry, and email
- Interest in business, law, science, or technology

Length of Internship:
9 weeks

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer Only

Age Requirement:
16 years old

INNOVATIVE CUSTOMER EXPERIENCE DIVISION (ICE-DO / ICE-EIT)

Mentor:
Anna Vargas Gutierrez, annavg@lanl.gov

Project Description:
We invite students who are pursuing a career in information and technology to apply to this project! Selected interns will work on-site with the ICE-EIT storefront and/or hardware team to develop essential customer service and communication skills while performing a range of technical duties related to computer and phone hardware.

Key responsibilities include:

- Providing front-line customer service at storefront locations
- Processing sales transactions and registering technical hardware accordingly
- Educating / assisting customers in selecting technical hardware based on specifications and needs
- Supporting the creation of LANL specific network accounts
- Offering basic technical troubleshooting for LANL standard hardware, software, and mobile applications
- Receiving and managing daily inventory deliveries; maintaining accurate records using an
- inventory management system and updating counts on the EIT website

- Assisting customers with credential updates, caching, and troubleshooting credential-related issues
- Supporting the deployment of account tokens (e.g., Crypto cards and YubiKeys)
- Participating in warehouse inventory and delivery logistics across various LANL sites
- Transporting hardware between warehouse and service locations
- Assisting in bulk deployments of computers and monitors
- Supporting the imaging and setup processes
- Participating in the intake process for incoming computer hardware
- Supporting with monthly wall-to-wall inventory audits to ensure accurate hardware tracking

Length of Internship:
1 year

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only

Age Requirement:
18 years old

MPA-QUANTUM (MPA-Q)

Mentor:
Nicholas A. Dallmann

Project Description:
Explore the value of a multiple-aperture interferometric telescope viewing distant astronomical objects. Goal is to generate figures with information on the relative value of different aperture separations for different astronomical objects at different distances. This will probably require the development of a Python simulation.

Length of Internship:
10 weeks

Internship Location:
Onsite

Expected Start Date:
6/8/2026

Internship Period:
Summer only

Age Requirement:
16 years old

MATERIALS SYNTHESIS AND INTEGRATED DEVICES (MPA-11)

Mentor:
Yu Seung Kim, yskim@lanl.gov

Project Description:
Hands on experiment of making electrochemical hydrogen pump and testing. Supporting with monthly wall-to-wall inventory audits to ensure accurate hardware tracking.

Length of Internship:
8+ weeks

Internship Location:
Onsite

Expected Start Date:
5/25/2026

Internship Period:
Year-round (fall, spring, and summer)

Age Requirement:
16 years old

MATERIALS SYNTHESIS AND INTEGRATED DEVICES (MPA-11)

Mentor:
Cortney Kreller, ckreller@lanl.gov

Project Description:
This internship focuses on building and testing miniature fuel cell stacks as power sources for low power applications. Day to day work involves material preparation, stack building, and stack quality verification. Student will work alongside scientists, technicians and other students as part of a team developing and testing various fuel cell stack designs. There is also the opportunity to develop programming and CAD skills if interested.

Length of Internship:
1 Year

Internship Location:
Onsite

Expected Start Date:
7/15/2026

Internship Period:
Year-round (fall, spring, and summer)

Age Requirement:
16 years old

CENTER FOR INTEGRATED NANOTECHNOLOGIES (MPA-CINT)

Mentor:
Demosthenes Morales

Project Description:
This project involves the tracking of fluorescent quantum dots in filamentous fungi to determine mechanisms of metal mobilization in complex biological systems. This project will introduce the principles of nanoparticle synthesis and application. Student will be responsible for performing reagent preparation tasks, will assist in synthesis supervised by a senor lab member, and will observe integration within biological systems. Independent tasks include data analysis and data communication.

Length of Internship:
5-10 weeks

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only

Age Requirement:
16 years old

CENTER FOR INTEGRATED NANOTECHNOLOGIES (MPA-CINT)

Mentor:
Eric Bowes, bowes@lanl.gov

Project Description:
The student will conduct dip-pen nanolithography (DPN) and polymer pen lithography (PPL) to integrate quantum emitters into prefabricated devices. This work is non-hazardous and involves operating instruments remotely from a desktop workstation. This work will actively support user projects by integrating visible and infrared single photon emitters into devices for a variety of applications. The student will maintain experimental records, analyze results, and contribute to data interpretation for research and development efforts. This work will play a crucial role in advancing quantum optics research, supporting the development of single-photon sources for applications in quantum computing, sensing, and communication.

Length of Internship:
8-12 weeks (extension possible)

Internship Location:
Onsite

Expected Start Date:
5/1/2026

Internship Period:
Summer Only

Age Requirement:
16 years old

CENTER FOR INTEGRATED NANOTECHNOLOGIES (MPA-CINT)

Mentor:
Saryu Fensin, saryuj@lanl.gov

Project Description:
We are seeking a motivated and detail-oriented high school student to assist in a materials science laboratory. This position is well suited for a student interested in science, engineering, or hands-on laboratory work and provides exposure to real-world research and laboratory practices.

Primary Responsibilities:

- Archive, organize, and digitize legacy mechanical testing data (both electronic and paper records) Label, catalog, and maintain testing records to ensure accuracy and traceability
- Assist with basic metallography laboratory tasks, including sample mounting, grinding, and polishing for microscopy
- Maintain a clean and organized work environment
- Follow laboratory safety procedures and documentation protocols

Length of Internship:
2-3 months

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only

Age Requirement:
18 years old

MPA-QUANTUM (MPA-Q)

Mentor:
Raymond Newell, raymond@lanl.gov

Project Description:
Student will join a team developing quantum network technology for electric grid security. We have opportunities for hands-on laboratory work in analog and digital electronics, optical systems, software development and algorithm design.

Length of Internship:
8-10 weeks

Internship Location:
Onsite

Expected Start Date:
6/8/2026

Internship Period:
Summer only

Age Requirement:
16 years old

NUCLEAR AND PARTICLE PHYSICS AND APPLICATIONS (P-3)

Mentor:
Mark Makela, makela@lanl.gov

Project Description:
This internship is to work with the UltraCold Neutron (UCN) Team at the Los Alamos Neutron Scatter Center (LANSCE). The team does fundamental and applied experimental research using UCN. The intern can expect to learn skills used to setup experiments and analyze data. The work can vary from hands on mechanical setup to computer control and simulation. Our internships are setup on a case-by-case basis to meet the needs of the project and the intern. An intern needs to be 18 years old to have full access to our program; applicants 18 years old or turning 18 during an internship are preferred.

Length of Internship:
The length will depend on the interest level of the intern and could continue for a second year

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Year-round (fall, spring, and summer)

Age Requirement:
16 years old

PHYSICS (P-DO)

Mentor:
Cynthia Tils, dzmitry@lanl.gov

Project Description:
Administrative support of Division Office

Length of Internship:
3 months

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only

Age Requirement:
16 years old

THERMONUCLEAR PLASMA PHYSICS (P-4)

Mentor:
Justin Jorgenson, jjorgenson@lanl.gov

Project Description:
The student will learn how to correctly model parts and assemblies using SolidWorks and learn the basics of mechanical drafting and Geometric Dimensioning and Tolerancing (GD&T). They will use this knowledge to generate design documentation and then have parts fabricated or procured and then assembled to complete the project.

Length of Internship:
2.5 months

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only

Age Requirement:
16 years old

NDE & INSPECTION (PT-7)

Mentor:
Sebastian Story, sjstory@lanl.gov

Project Description:
Support in testing robotic arm. Supporting procedure development. Support engineers with designing fixtures and equipment. Documentation of testing completed.

Length of Internship:
2 months

Internship Location:
Onsite

Expected Start Date:
6/8/2026

Internship Period:
Summer only

Age Requirement:
16 years old

Other Information:
We are an engineering team that performs Non-destructive testing and evaluation. This is a great opportunity to work with engineers to determine future career paths.

PHYSICS AND CHEMISTRY OF MATERIALS (T-1)

Mentor:
Yu Zhang, zhy@lanl.gov

Project Description:
This project will simulate “quantum materials inside a light cavity,” where electrons in a material can strongly interact with photons (particles of light) and potentially undergo new kinds of phase transitions. The student will help implement and test a powerful simulation method called Auxiliary-Field Quantum Monte Carlo (AFQMC), which uses smart random sampling to study quantum systems that are too complex to solve exactly. Because these simulations are computationally intensive, the code will be designed to run fast on many CPU cores at the same time using parallel programming ideas. The work will focus on programming, debugging, running test cases, and making plots that show how the material’s behavior changes as we vary key parameters. No prior quantum physics background is required—curiosity, willingness to learn, and basic coding/math skills are most important. By the end, the student should be able to run parallel simulations and summarize results that help us understand how light can change the properties of quantum materials.

Length of Internship:
12 weeks

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only

Age Requirement:
16 years old

PHYSICS AND CHEMISTRY OF MATERIALS (T-1)

Mentor:
Christian Negre, cnegre@lanl.gov

Project Description:
Statistical machine-learning modeling for molecular dynamics

Length of Internship:
2-3 months

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only

Age Requirement:
16 years old

Other Information:
Previous experience in machine learning techniques are preferred.

APPLIED MATHEMATICS AND PLASMA PHYSICS (T-5)

Mentor:
Russell Bent

Project Description:

We are seeking a motivated student to support research and development of agentic AI workflows that accelerate scientific discovery, engineering system design, and data-driven surrogate modeling. The student will work with research staff to build, evaluate, and refine AI-driven computational pipelines that integrate machine learning models with simulation, optimization, and automated reasoning tools.

This position is well-suited for students who enjoy programming, problem-solving, and exploring the intersection of AI and the physical sciences. The student will gain experience with modern ML methods, autonomous AI agents, scientific modeling workflows, and high-performance computing resources.

Key Responsibilities

- Develop components of agentic AI systems, including task-planning, tool-use pipelines, and model orchestration.
- Assist in creating surrogate models for scientific or engineering simulations (e.g., regression models, neural networks, or physics-informed ML).
- Prototype and test AI-driven workflows for automated experimentation, parameter exploration, optimization, or model calibration.
- Write Python scripts and notebooks to integrate ML models with scientific data sources and computational tools.
- Help evaluate model performance, document results, and produce visualizations and analyses.
- Collaborate with research staff to identify workflow improvements and new AI capabilities.
- Follow laboratory best practices for code quality, reproducibility, and data stewardship.

Required Qualifications

- Foundational programming experience in Python, gained through a high school computer science course, dual-credit coursework, or equivalent self-directed learning.
- Familiarity with machine learning concepts and tools, such as:
- Using pretrained models,
- Applying regression or classification methods,
- Basic knowledge of libraries such as NumPy, SciPy, pandas, scikit-learn, or PyTorch/TensorFlow (coursework or self-study acceptable).
- Demonstrated ability to learn new computational tools and work through technical problems.
- Strong analytical, organizational, and communication skills.
- Ability to work both independently and collaboratively in a research setting.

Length of Internship:

3 months, with possibility to extend

Internship Location:

Onsite

Expected Start Date:

5/15/2026

Internship Period:

Summer only, year-round (fall, spring, and summer)

Age Requirement:

16 years old

APPLIED MATHEMATICS AND PLASMA PHYSICS (T-5)

Mentor:

Alexander Kaltenborn, markaltenborn@lanl.gov

Project Description:

The student will support a computational modeling project focused on terrestrial and stellar explosion physics, using LANL codes to simulate the fireball and downstream effects. The student can expect to perform tasks such as preparing input files, running simulations, and doing basic analysis of outputs like pressure waves, temperature evolution, and energy deposition. The student will also help turn results into clear plots and short written summaries. The student will work closely with a mentor to learn good computational research practices, keep organized documentation, and finish with a presentation of their work.

Length of Internship:

2.5 months

Internship Location:

Onsite

Expected Start Date:

6/1/2026

Internship Period:

Summer only

Age Requirement:

16 years old

THEORETICAL BIOLOGY AND BIOPHYSICS (T-6)

Mentor:

Jennifer Mamrosh, mamrosh@lanl.gov

Project Description:

The student will work with our group to help improve LANL's HIV Databases, a public website providing information on HIV viral sequences and immune responses to HIV. Our website is used by HIV researchers around the world. Key responsibilities include helping extract information on immune responses to HIV from scientific literature and helping our group update webpages.

Length of Internship:

10 weeks (with opportunities to extend internship past summer)

Internship Location:

Onsite

Expected Start Date:

6/1/2026

Internship Period:

Summer only, year-round (fall, spring, and summer)

Age Requirement:
16 years old

TECHNICAL TRAINING CENTER (TTC-DO)

Mentor:
Ryan Chavez, ryancha@lanl.gov

Project Description:
Training facility project support, training facilitation and group/division administrative activities

Length of Internship:
10 weeks

Internship Location:
Onsite

Expected Start Date:
5/18/2026

Internship Period:
Summer only

Age Requirement:
18 years old

REINVESTMENT & MODERNIZATION (UI-RM)

Mentor:
Shannon Blair and John Howard, snblair@lanl.gov

Project Description:
The UI-RM Projects team leads the execution of utility projects (water, wastewater, energy efficiency and electricity, natural gas, transportation) across the LANL campus. The selected student will support the UI projects team with day-to-day tasks including meeting note taking and transcribing, project tracking and updates, project documentation, and general project support. The student can expect to learn about utility projects and project execution.

Length of Internship:
Summer or year round

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only, year-round (fall, spring, and summer)

Age Requirement:
16 years old

REINVESTMENT & MODERNIZATION (UI-RM)

Mentor:
Tala, tala@lanl.gov

Project Description:
Work with the Efficiency, Conservation, and Optimization (ECO) Team, focusing on water and energy efficiency.
• The student will oversee the Smart Office Certification Program within ECO, which entails outreach to different organizations and emailing various people within those organizations. Streamline the existing processes and forms related to the program, as well as develop new systems to optimize the process.
• Document engagements and work projects.
• Work closely with the water manager to do water and light assessments on buildings, as well as coordinate with building managers and operations managers to ensure timely and efficient assessments

Length of Internship:
Year-round

Internship Location:
Onsite or Hybrid

Expected Start Date:
5/18/2026

Internship Period:
Year-round (fall, spring, and summer)

Age Requirement:
18 years old

REINVESTMENT & MODERNIZATION (UI-RM)

Mentor:
John Howard, jchoward@lanl.gov

Project Description:
The UI-RM Projects team leads the execution of utility projects (water, wastewater, energy efficiency and electricity, natural gas, transportation) across the LANL campus. The selected student will support the UI projects team with day-to-day tasks including meeting note taking and transcribing, project tracking and updates, project documentation, and general project support. The student can expect to learn about utility projects and project execution.

Length of Internship:
Year-round

Internship Location:
Onsite

Expected Start Date:
5/25/2026

Internship Period:
Year-round (fall, spring, and summer)

Age Requirement:
18 years old

W4 W88 (W-4)

Mentor:
Corey Gerving and Justine Davidson, csgerving@lanl.gov and jdavidson@lanl.gov

Project Description:
Engineering Support to Weapons Production

Length of Internship:
2-3 months

Internship Location:
Onsite

Expected Start Date:
5/18/2026

Internship Period:
Summer only

Age Requirement:
16 years old

VERIFICATION AND ANALYSIS (XCP-8)

Mentor:
Greg Salvesen

Project Description:
The structures that channel gas onto a black hole roughly divide into two components: a “corona” and a “disk”. The corona illuminates the disk, which responds sometime later (like an echo). Recently, astronomers discovered that the duration of this “light echo” is much longer than they predicted. Our hypothesis to explain this long-time delay is

that the light gets "stuck" bouncing around in the disk atmosphere; our rough calculations suggest that this effect may be significant.

To test this hypothesis, two students will team up: one focused on multi-physics modeling and one focused on X-ray observations. The modeling thrust entails computing the time delay using radiation-hydrodynamics simulations. The observational thrust entails computing the time evolution of the "coherence spectrum" using data from the NICER X-ray Timing Instrument. Together, these approaches offer complementary tests of our hypothesis to explain the long-time delays.

Length of Internship:
10 weeks

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only

Age Requirement:
16 years old

XTD INTEGRATED DESIGN & ASSESSMENT (XTD-IDA)

Mentor:
Dylan Gatlin, dgatlin@lanl.gov

Project Description:
In this role, you will apply your expertise in the Python programming to the development of the Common Modeling Framework (CMF), a LANL-built framework that houses modeling strategies and experimental setups for computational work performed in the Weapons Physics Directorate. Many weapons physics user communities depend on CMF for collaboration, version control, consolidation of problem setups, and access to several common modeling strategies used for diverse weapons program applications. In this role you will provide CMF development and user support in the Integrated Design and Assessment group as part of the Thermonuclear Applications Validation and Verification (TAV&V) project.

New developers will be trained in the use and capabilities of CMF, and do not need prior familiarity with the framework. Job duties will include developing Python infrastructure, improving test coverage, writing and maintaining documentation, and providing user support and training. As part of this effort, you will learn to run our multi-physics codes and our high-performance computer systems.

After you are trained, contributing to the development and support of the Common Modeling Framework entails the following job activities:

- Develop and maintain CMF infrastructure
- Collaborate with CMF developers in other groups to improve and expand shared CMF infrastructure
- Collaborate with subject matter experts to develop CMF capabilities and provide simple user interfaces across the setup, execution, and post-processing of an experiment
- Expand test coverage and documentation of existing infrastructure

- Provide CMF support for users in XTD-IDA and expand user-training programs
- Add new experiments to the CMF and perform scientific analysis on their results

Length of Internship:
10 weeks

Internship Location:
Onsite

Expected Start Date:
6/1/2026

Internship Period:
Summer only

Age Requirement:
18 years