High School Internship Program

Fall 2025 Projects

LA-UR-25-28018

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 Fall 2025.

Applicants should read through the project descriptions to find up to 3 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: August 1, 2025
- Closes: September 30, 2025

Eligibility Requirements:

- Senior status at the time of internship
- 16 years of age
- 2.75 GPA
- Attend a NM High School
- Pass a new employment drug test

Required Materials:

- Current Transcript
- Resume
- Personal Statement
- Letter 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.

RADIO FREQUENCY ENGINEERING (AOT-RFE)

Mentor:
Tina (Christine) Hartzell

Project Description:
General office duties to support the current group administrator. Tasks will include (but not limited to):

- Updating org charts; several scanning projects
- Managing keys and sign out responsibilities
- Maintaining storeroom supplies, updating mail room and office signage; recycling and disposal of legacy materials
- Updating office name plates; updating / maintaining office phones; employee communication board updates
- Keeping group TEAMS site up-to-date
- Maintaining group reference binders; help with on-boarding new hires
- Being the POC / liaison for deployed group members; and creating and maintaining a user-friendly recycling process for the building

Length of Internship:
1 Year w/option to extend

Internship Location:
Onsite

Expected Start Date:
10/1/2025

Internship Period:
Year-round

Age Requirement:
16 years old

Other Information:
As time and experience allow, we will support career growth through institutional trainings, and we will assign "more important" projects. We value our students and encourage their growth. Our group hosts about 10 students every summer.

MICROBIAL AND BIOME SCIENCES (B-IOME)

Mentor:
Ramesh Jha

Project Description:
Perform bioinformatics study, computational protein engineering, machine learning for proteins with metal binding properties.

Length of Internship:
1 year, 2-4 hours per day of effort

Internship Location:
Onsite

Expected Start Date:
8/11/2025

Internship Period:
Year-round

Age Requirement:
16 years old

Other Information:
Our group works at the interface of computation and experimentation to address some key challenges in biotechnology. We develop biosensors and enzymes for biomanufacturing and bioremediation.

INORGANIC, ISOTOPE, AND ACTINIDE CHEMISTRY (C-IIAC)

Mentor:
Xiaokun Yang

Project Description:
- Running chemistry reactions to support renewable fuels and chemicals production, collecting analytical test data and write reports and make slides about your results
- Extracting data points from literature papers, using AI tools and provide data to train ML models

Length of Internship:
6 months to 1 year

Internship Location:
Onsite

Expected Start Date:
9/1/2025

Internship Period:
Year-round

Age Requirement:
18 years old

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

Mentor:
Anna Vargas Gutierrez

Project Description:
Selected Interns will work on-site with the ICE-EIT storefront and/or hardware team to develop essential customer service and communication skills, while also 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 / assist 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 EasyIT 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
- Aiding in monthly wall-to-wall inventory audits to ensure accurate hardware tracking

Length of Internship:
1 year

Internship Location:
Onsite

Expected Start Date:
10/1/2025

Internship Period:
Academic year (Fall and Spring)

Age Requirement:
18 years old

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

Mentor:
Jason Granger

Project Description:
ESH-RSO and ICE-FS Student Internship with the LANL Carlsbad Office Information Technology group.

- The primary responsibilities include providing technical support to the RSO staff on desktops, laptops, printers, etc.

Length of Internship:
18 months

Internship Location:
Onsite

Expected Start Date:
8/11/2025

Internship Period:
Year-round

Age Requirement:
16 years old

Other Information:
This internship is located in Carlsbad, NM.

CENTER FOR INTEGRATED NANOTECHNOLOGIES (MPA-CINT)

Mentor:
Jennifer Hollingsworth

Project Description:
- The student will conduct dip-pen nanolithography to integrate quantum emitters into hard-fabricated devices
- This work is non-hazardous and involves controlling a scanning-probe based instrument from a desktop workstation to deliver particles to a surface in controlled fashion
- This work will support our efforts to prepare visible and infrared-emitting single photon sources for additively manufactured microelectronics and materials for quantum information science and technology

Length of Internship:
Part-time 2025-2026 school year with possibility to extend to summer 2026 full-time

Internship Location:
Onsite

Expected Start Date:
8/15/2025

Internship Period:
Year-round

Age Requirement:
16 years old

Other Information:
Work will be conducted in the Center for Integrated Nanotechnologies, a dynamic environment for nanoscience research and multi-institution collaboration, as well as remotely at a LANL building in Santa Fe.

CENTER FOR INTEGRATED NANOTECHNOLOGIES (MPA-CINT)

Mentor:
Jennifer Hollingsworth

Project Description:
- The student will develop code to streamline and make more reproducible the analysis of quantum dot (nanocrystal semiconductor that emits light) "blinking" (fluorescence intermittency) and photobleaching data
- They will also develop code and automated procedures for quickly analyzing electron microscopy images for determining particle size, size dispersity, and shape characteristics

Length of Internship:
Part-time 2025-2026 school year with possibility to extend to summer 2026 full-time

Internship Location:
Hybrid

Expected Start Date:
8/15/2025

Internship Period:
Year-round

Age Requirement:
16 years old

Other Information:
Work will be conducted in the Center for Integrated Nanotechnologies, a dynamic environment for nanoscience research and multi-institution collaboration, as well as remotely at a LANL building in Santa Fe.

SCIENCE RESOURCE OFFICE (SRO-RL)

Mentor:
Michelle Mittrach

Project Description:

- Provide in person assistance to Research Library customers to help them identify and assess the library's extensive resources and collections
- Participation in library outreach initiatives and contribute to developing marketing materials and online resources such as information guides and FAQ pages
- Contribute to the ongoing and day to day operations of the Research, Outreach and Engagement team and cross-team efforts, including digitization and quality control and metadata creation on scanned reports

Length of Internship:
1 year

Internship Location:
Onsite

Expected Start Date:
8/15/2025

Internship Period:
Year-round

Age Requirement:
16 years old