Community College Internship Program Application Assistance Workshop

U.S. DEPARTMENT OF ENERGY | Office of Science

Presenter: Dr. Brandi Toliver
CCI Program Manager

Breakthroughs at the DOE National Laboratories

▸ **Advanced Supercomputing**-The National Labs operate some of the most significant high performance computing resources available, including 32 of the 500 fastest supercomputers in the world. The Summit supercomputer at Oak Ridge National Laboratory is capable of 200 petaflops, or 200,000 trillion calculations per second.

▸ **Put the Jolt in Volt**- Chevy's Volt would not be able to cruise on battery power were it not for the advanced cathode technology that emerged from a National Lab (specifically, Argonne National Lab).

▸ **Decoded DNA**-In 1990, the National Labs joined with the National Institutes of Health and other laboratories to kick off the Human Genome Project, an international collaboration to identify and map all of the genes of the human genome.

▸ **Brought the web to the U.S.**-National Lab scientists, seeking to share particle physics information, were first to install a web server in North America, kick-starting the development of the worldwide web as we know it.

▸ **Unmasked a dinosaur killer**-Natural history's greatest whodunit was solved in 1980 when a team of National Lab scientists pinned the dinosaurs' abrupt extinction on an asteroid collision with Earth. Case closed.

▸ **World's First Video Game**- Before there was Atari or Nintendo, there was Tennis for Two, which may have been the first video game ever created, Brookhaven National Lab scientists built the pioneering system to entertain visitors to the Lab in 1958.

▸ **Launched the LED lighting revolution**-In the 1990s, scientists at a National Lab saw the need for energy-efficient solid-state lighting and worked with industry to develop white LEDs. Today, white LEDs are about 30 percent efficient, with the potential to reach 70 percent to 80 percent efficiency.

▸ **3D Printing Bigger and Better**-A large-scale additive manufacturing platform developed by a National Lab and an industry partner printed 3D components 10 times larger and 200 times faster than previous processes. So far, the system has produced a 3D-printed sports car, SUV, house, excavator and aviation components.

▸ **Discovered 22 elements** - To date the National Labs have discovered: technetium, promethium, astatine, neptunium, plutonium, americium, curium, berkelium, californium, einsteinium, fermium, mendelevium, nobelium, lawrencium, rutherfordium, dubnium, seaborgium, flerovium, moscovium, livermorium, tennessine and oganesson.

Office of Science at a Glance (https://science.osti.gov/)

▸ Lead federal agency supporting fundamental scientific research for energy and the largest supporter of basic research in the physical sciences in the United States

  ▸ FY 2023 Funding Requested: $7.799B

Largest Supporter of Physical Sciences in the U.S.
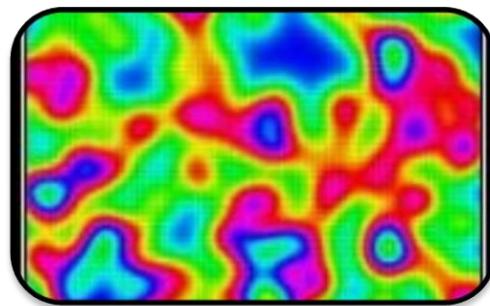

Funding at >300 Institutions, including 17 DOE Labs

~29,000 Researchers Supported

~34,000 Users of 28 SC Scientific Facilities

~35% of Research to Universities

Research: ~42.8%, $3.334B

Facility Operations: ~34.5%, $2.689B

Projects/Other: ~22.6%, $1.776B

DOE National Laboratories

▸ The 17 DOE National Laboratories comprise a preeminent federal research system, providing the Nation with strategic scientific and technological capabilities

▸ SC stewards 10 DOE laboratories that provide essential support to the missions of the SC science programs

Office of Science Laboratories

1. **Ames Laboratory**
   Ames, Iowa
2. **Argonne National Laboratory**
   Argonne, Illinois
3. **Brookhaven National Laboratory**
   Upton, New York
4. **Fermi National Accelerator Laboratory**
   Batavia, Illinois
5. **Lawrence Berkeley National Laboratory**
   Berkeley, California
6. **Oak Ridge National Laboratory**
   Oak Ridge, Tennessee
7. **Pacific Northwest National Laboratory**
   Richland, Washington
8. **Princeton Plasma Physics Laboratory**
   Princeton, New Jersey
9. **SLAC National Accelerator Laboratory**
   Menlo Park, California
10. **Thomas Jefferson National Accelerator Facility**
    Newport News, Virginia

Other DOE Laboratories

1. **Idaho National Laboratory**
   Idaho Falls, Idaho
2. **National Energy Technology Laboratory**
   Morgantown, West Virginia
   Pittsburgh, Pennsylvania
   Albany, Oregon
3. **National Renewable Energy Laboratory**
   Golden, Colorado
4. **Savannah River National Laboratory**
   Aiken, South Carolina

NNSA Laboratories

1. **Lawrence Livermore National Laboratory**
   Livermore, California
2. **Los Alamos National Laboratory**
   Los Alamos, New Mexico
3. **Sandia National Laboratory**
   Albuquerque, New Mexico
   Livermore, California

- ● Office of Science Laboratory
- ● Other DOE Laboratory
- ● NNSA Laboratory
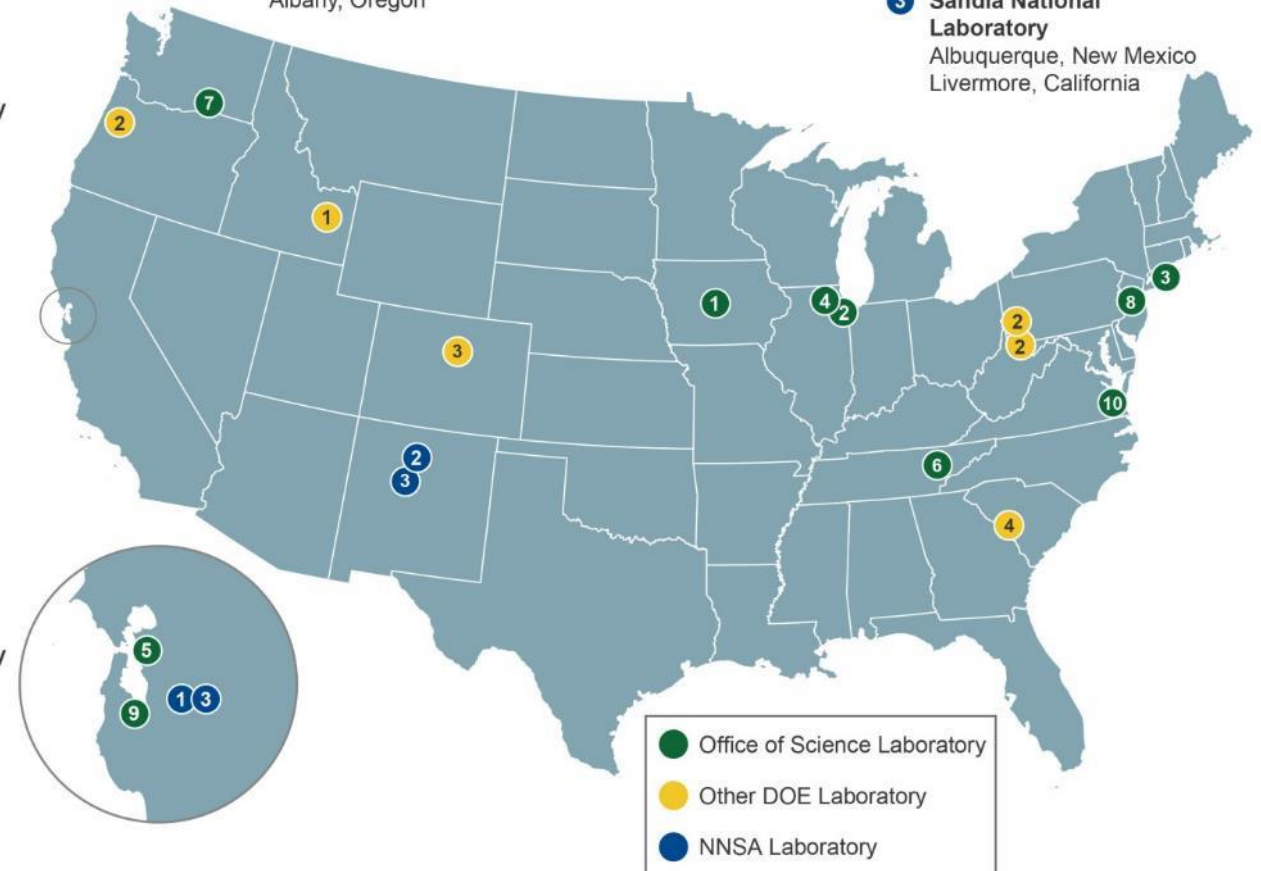
DOE Office of Science – Scientific User Facilities

FY 2023
28 scientific
user facilities
~34,000 users
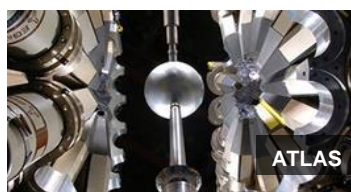
The Office of Science Research Portfolio
https://science.osti.gov/Programs/

|	
Advanced Scientific Computing Research	• Delivering world leading computational and networking capabilities to extend the frontiers of science and technology
Basic Energy Sciences	• Understanding, predicting, and ultimately controlling matter and energy flow at the electronic, atomic, and molecular levels
Biological and Environmental Research	• Understanding complex biological, earth, and environmental systems
Fusion Energy Sciences	• Building the scientific foundations for a fusion energy source
High Energy Physics	• Understanding how the universe works at its most fundamental level
Nuclear Physics	• Discovering, exploring, and understanding all forms of nuclear matter
Isotope R&D and Production	• Supporting National Preparedness for isotope production and distribution during national crisis
Accelerator R&D and Production	• Supporting new technologies for use in SC's scientific facilities and in commercial products

The Office of Workforce Development for Teachers and Scientists (WDTS)

- Mission: WDTS strives to ensure that the DOE has sustained, diverse pipeline of science, technology, engineering, and mathematics (STEM) workers.

- WDTS fulfills this mission by sponsoring the following programs in collaboration with the DOE National Laboratories and host sites:
  - **Science Undergraduate Laboratory Internships (SULI):** 2-/4-year colleges and universities
  - **Community College Internships (CCI):** dedicated to community colleges
  - **Visiting Faculty Program (VFP):** under-represented institutions in STEM, including all HBCUs
  - **Office of Science Graduate Student Research Program (SCGSR):** SC mission priority areas

- WDTS funds these programs, provides oversight, manages their national application systems, and ensures that a common set of core program elements are delivered.

- Host labs and facilities operate these programs locally; e.g. - identifying mentors and projects according to their mission overlap, reviewing & selecting candidates, and executing professional development activities per common programmatic baselines.
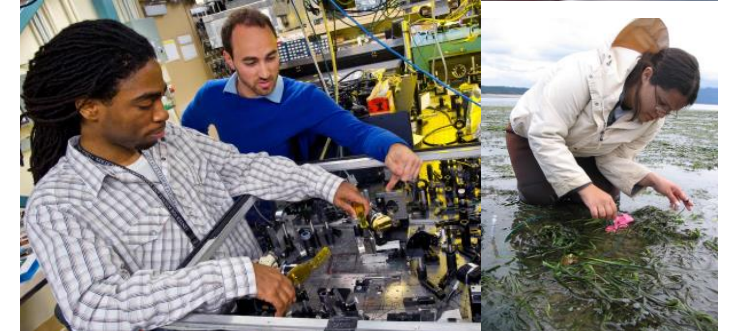
Community College Internships (CCI)

The Community College Internships (CCI) program seeks to encourage community college students to enter technical careers and pursue 4-year degrees relevant to the DOE mission by providing technical training experiences at the DOE laboratories.

▸ Applications are accepted for the Fall, Spring, and Summer terms
  - ▸ **Fall (August-December): 10-weeks @ 40 hrs/week or flex-schedule for 16-weeks**
  - ▸ Spring (January-May): 10-weeks @ 40 hrs/week or flex-schedule for 16-weeks
  - ▸ Summer (May-August): 10-weeks @ 40 hrs/week

▸ Paid internship
  - ▸ $650/week or $6500 total stipend
  - ▸ Housing and travel allowance provided

Credit: **Lawrence Berkeley National Laboratory**

Full details: https://science.osti.gov/wdts/cci

Eligibility Requirements

▸ **Citizenship**-Must be a United States Citizen or Lawful Permanent Resident at the time of applying.

▸ **Age**-Must be 18 years or older at the time the internship begins.

▸ **Enrollment**-Must be currently enrolled as a full-time student at a community college or accredited two-year college and completed at least one semester at the time of applying.

▸ **High School Diploma or GED**- Must have earned a high school diploma or General Educational Development (GED) equivalent at the time of applying.

▸ **Grade Point Average (GPA)**-Must have an undergraduate cumulative minimum Grade Point Average (GPA) of 3.0 on a 4.0 scale for all completed courses taken as a matriculated student at the applicant's current (or recently-graduated) institution and at any undergraduate institutions attended as a matriculated postsecondary student during the 5 years preceding the start of the current enrollment. *College courses completed during high school are not required to be reported.*

▸ **Coursework**-Must have completed at least 6 credit hours in science, mathematics, engineering, or technology course areas, and completed at least 12 credits hours towards a degree

▸ **Participation and Application Limit**-Applicants are limited to participation in CCI program to no more than two internships. Applicants can apply to the CCI program a maximum of three times.

Before you apply, verify you meet the eligibility requirements.

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Key Dates

CCI Internship Term:	Fall 2023
On-line Application Opens	March 15, 2023
Applications including recommendations due	**May 25, 2023 5:00 PM EDT**
Offer Notification Period Begins on or around	June 12, 2023
All DOE Offers and Notifications Complete	On or around August 7, 2023

***The Application System closes at 5:00 PM Eastern Daylight Time. Materials will not be accepted after the system has closed.

More details available https://science.osti.gov/wdts/cci/Key-Dates

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Application Requirements

Completed applications must be submitted by 5:00 p.m. EDT on May 25, 2023.

▸ All applications must be completed online through the [online application system](#). You will need to create an account to access the online application system.

▸ Only complete applications submitted by the deadline will be considered for evaluation and placement. As a reminder, letters of recommendations are a component of a completed application.

▸ The application system is not compatible with smartphones. Completion of applications and letters of recommendation requires use of a computer and web browser.

APPLY NOW

How to apply: https://science.osti.gov/wdts/cci/How-to-Apply

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Navigating the Application

Application Portal: https://apps.orau.gov/cci/Account/Login

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Components of the CCI Application Menu

▸Applicant Profile

▸Educational Background

▸Work Experience and Skills

▸Program Information

▸Essays

Credit: **Lawrence Berkeley National Laboratory**

Applicant Profile

Applicant Profile

Instructions | ❶ Complete Your Application | ❷ Request Recommendations | ❸ Verify & Submit | ❹ Check Your Status

ℹ The CCI Application will close in 71 days

APPLICANT PROFILE

✅ General Information
● Address
● Citizenship / Languages / Eligibility
● Demographics *optional*

Applicant Profile

General Information

First Name

WDTS

Response "No"

- Will you be 18 years or older by the start of the internship? ➡ **Not Eligible**

Response "No"

- Are you a U.S. citizen or U.S. permanent resident? ➡ **Not Eligible**
- What is your primary language?

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Educational Background

Educational Background
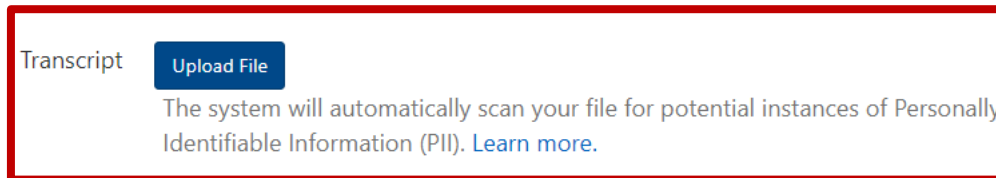
Educational Background: Academic Institutions

▸ Eligibility requires submission of the transcript from an applicant's current institution. This must be the most recent transcript available at the time of application. Recent is defined as the transcript printed or accessed no earlier than the opening date of the application or March 15, 2023.

▸ Upload a transcript in Pdf format in the application system for each postsecondary institution enrolled within the last 5 years of most recent enrollment.

Transcript   **Upload File**
The system will automatically scan your file for potential instances of Personally Identifiable Information (PII). Learn more.

▸ Redact personal identifiable information (PII) such as full date of birth and social security number.

▸ Ensure the transcript includes the applicant's name, institution name, and course names and grades and cumulative GPA.

▸ Unofficial transcripts are acceptable for submission to the application system if they contain applicant's name, institution name, and course names and grades, and cumulative GPA. Otherwise, the applicant must upload an official transcript.

▸ Watch this video to assist with transcript uploads.

Education Background: Awards

▸ Include all awards you received during your academic career. Some awards may include:

    ▸ Dean's List

    ▸ Membership in Honor's Society

    ▸ Merit Scholarships

    ▸ Honors Program

    ▸ Winner of contests, challenges, and tournaments
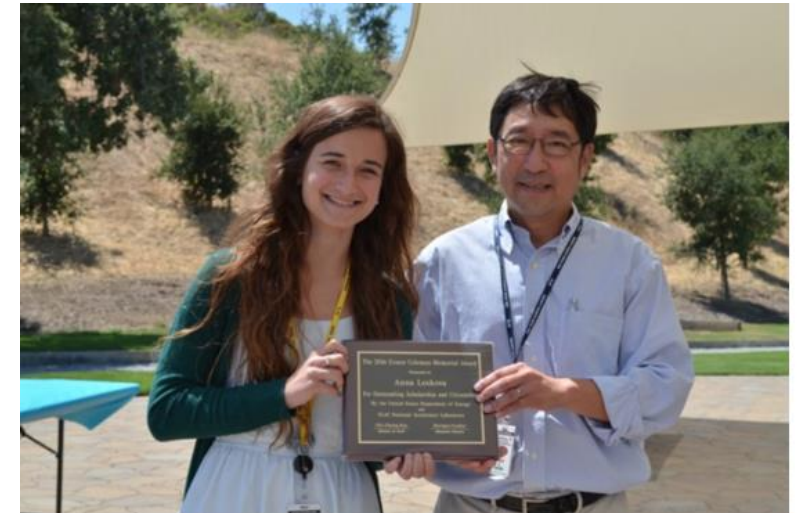
Lab Director Chi-Chang Kao presents the Ernest Coleman Award to SULI intern Anna Leskova.
SLAC
Accessed 1/9/2019 at https://www6.slac.stanford.edu/news/2016-08-26-undergraduate-interns-learn-summer-research.aspx

Work Experience

Work Experience and Skills: Work Experience

- *Include paid and volunteer work experience*
  - *STEM internships or research experiences*
  - *Tutoring appointments*
  - *Teaching Assistantships*
  - *Mentoring*

Work Experience and Skills: Computer Skills

▸List all computer skills including programming languages, standard software applications, statistical analysis software, and certifications.

Credit: **NREL-** Photo by Amy Glickson

Accessed 1/9/2019 from https://www.nrel.gov/news/features/2017/nrel-summer-interns-climb-to-new-heights.html

Work Experience and Skills: Laboratory and Technical Skills

▸Describe your research and technical skills in detail

▸The skills may be obtained through employment or coursework.

Credit: Oak Ridge National Laboratory

Program Information

From left: **PPPL** physicist Ahmed Diallo, SULI student Jalal Butt, and PPPL physicist Egemen Kolemen. Photo by Raphael Rosen.

From https://www.pppl.gov/news/press-releases/2018/08/undergraduate-students-extoll-benefits-national-laboratory-research
Accessed 1/9/2019

Program Information: Eligibility

- **Held more than 2 appointments? Not Eligible**

- **Applied more than 3 times? Not Eligible**

Program Information: DOE Laboratories and Technical Project Areas

- Applicants must select a first-choice and second-choice laboratory to be considered for placement.
- Applicants are encouraged to review [laboratory websites](#) and contact DOE researchers to learn about their research.
- Visit the **Laboratory Selection Tool** to learn the success rates of eligible applicants by lab.
- **Double check your lab selections before submitting your application! WDTS is unable to switch your laboratory preferences.**

Program Information

Get Help With...

Host DOE Laboratories and Technical Project Areas Selection

When selecting your first and second choice host DOE Laboratories, and your first, second, and third choice project areas, please carefully review the R&D program area descriptions. Not all project areas are available at all DOE Laboratories. For further assistance in selecting DOE Laboratories, please see the Laboratory Selection Tool.

First Choice Host DOE Laboratory

Ames National Laboratory (AMES)

First Choice Technical Project Area
Nanotechnology

Second Choice Technical Project Area
Quantum Communication

Third Choice Technical Project Area
Chemical Technology

Second Choice Host DOE Laboratory

Brookhaven National Laboratory (BNL)

First Choice Technical Project Area
Environmental Technology

Second Choice Technical Project Area
Cyber Security

Third Choice Technical Project Area

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Fall 2023 Term: Participating Host DOE Laboratories

- ‣ Ames Laboratory
- ‣ Argonne National Laboratory
- ‣ Brookhaven National Laboratory
- ‣ Fermi National Accelerator Laboratory
- ‣ General Atomics/DIII-D Facility
- ‣ Lawrence Berkeley National Laboratory
- ‣ Lawrence Livermore National Laboratory
- ‣ Los Alamos National Laboratory
- ‣ National Renewable Energy Laboratory
- ‣ Oak Ridge National Laboratory
- ‣ Pacific Northwest National Laboratory
- ‣ Princeton Plasma Physics Laboratory
- ‣ Thomas Jefferson National Accelerator Facility

You're encouraged to attend the next workshop to interact with laboratory staff. The workshop is scheduled at 3:00 p.m. EDT on April 24, 2023 and registration is available on the program website.

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Essays

Essays: Technical and Research Experience

Technical/Research Experience

Describe your previous technical/research experience or equivalent experience on complex projects, including the level of independence, while working as a member of a technical/research/project team.

- Describe all prior research and technical experience including
  - Research experiences (paid and unpaid)
  - Special projects
  - Skills obtained during coursework count!
  - No previous research experience beyond coursework is required!

Current Character Count [0] (max: 2500)

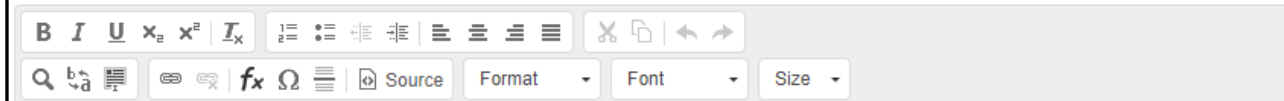U.S. DEPARTMENT OF ENERGY | Office of Science

Essays: Technical and Research Experience Interests

Essays

Technical/Research Interests

Describe the type(s) of technical/research subjects or activities that interest you at your first and second choice host laboratories, and discuss any particular factors influencing your choice of host laboratories.

- Elaborate on why you wish to participate in the CCI Program.
- Which labs are you interested in conducting research and how your interest align with those labs.
- What do you hope to gain from the experience?

Current Character Count [0] (max: 2500)

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Essays: Personal and Professional Goals

Essays

Personal Experience

Describe your professional, academic, or life experience and skills you have that enhance your ability to be an excellent contributing member to the CCI Program.

- Share your skills or experience, outside of research, that are applicable to CCI.
- What life experiences motivated or inspired you to pursue your major?
- Think of your employment, academic, extracurricular, and life experiences, and how they've led to you applying to CCI.
- Include unique qualities which may influence your participation in CCI such as being a first-generation college student, working student etc.
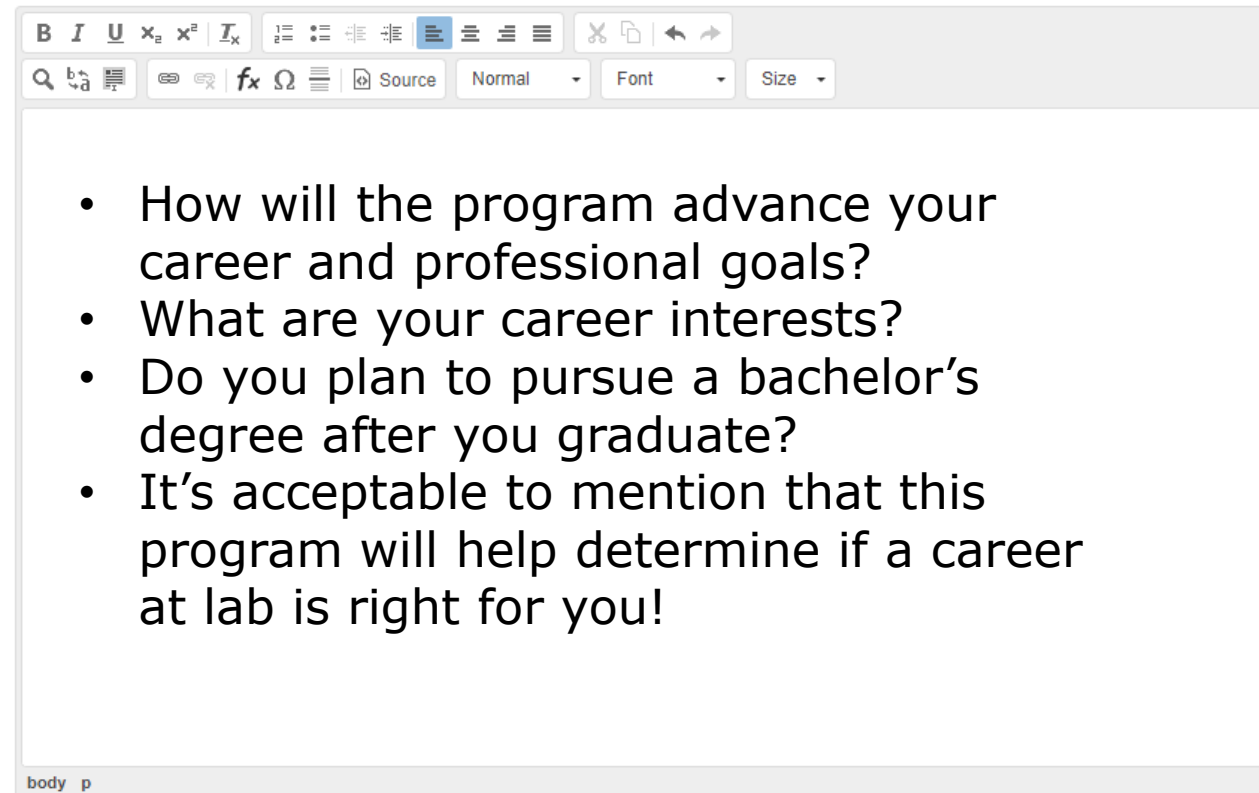
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Continue

Essays: Professional Interests

Essays

Professional Goals

Describe your long-term academic and professional goals, and how participation in the CCI program could develop or expand skills required to achieve those goals.

- How will the program advance your career and professional goals?
- What are your career interests?
- Do you plan to pursue a bachelor's degree after you graduate?
- It's acceptable to mention that this program will help determine if a career at lab is right for you!

body   p

Current Character Count [0] (max: 2500)

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Letters of Recommendation

Letters of Recommendations

- A completed CCI application requires recommendations from two individuals familiar with the applicant's education, training, experience, aptitude, or promise relevant to the CCI Program. *Note: Family and friends of family are not allowed to serve as authors of recommendations.*

- An applicant will be asked to provide contact information for individuals indicated in the online application system. **Applicants are encouraged to make the requests for recommendations as soon as possible.**

- Letter of reference must be submitted through the application portal by the application deadline (i.e. 5:00 p.m. Eastern Time on May 25, 2023 for the Fall 2023 term).

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Resources To Assist With Application Components

▸Application [checklist](#)

▸Submitting [transcripts](#)

▸Tips for preparing [essays](#)

▸Requesting [letters of reference](#)

▸FAQ's-https://science.osti.gov/wdts/cci/Frequently-Asked-Questions

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Selection and Notification

▸ **Eligibility and Compliance Check-**All applications must pass eligibility and compliance check.

▸ **Merit Review-** Assessment by first and second choice labs selected by the applicant.
  - ▸ Applications will be assessed based upon <u>performance in completed academic coursework</u>, <u>strength of recommendations letters</u>; <u>expressed scientific or technical interests</u>; and the <u>applicant's background</u>, <u>experience</u>, <u>accomplishments</u>, and <u>interests as they relate to the host laboratories</u>.

▸ **Notifications**-Offers made by a host Laboratory Education Director via e-mail. Applicant has 10 calendar days to respond to offer. **Only one offer will be extended to an applicant.**

All appointments are contingent upon proof of citizenship or citizenship status and the outcome of a formal background check.

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Participant Obligations

▸ Commit to 10-weeks (40 hrs/week) in the program.

▸ Maintain health insurance during the appointment.

▸ Complete deliverables by deadline

  ▸ Pre-survey

  ▸ Post-survey

  ▸ Research paper (6-8 pages)

  ▸ Poster presentation

▸ Maintain professional behavior.

More details: https://science.osti.gov/wdts/cci/Participant-Obligations

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Benefits to Participating in CCI

▸Contribute to exciting, real world, innovative, ongoing projects in the DOE national laboratories.

▸Build professional networks with scientist and engineers.

▸Opportunity to establish a mentor.

▸Enrichment opportunities through professional development and technical seminars.

▸Enhance science communication skills.

▸Decide if a career in research is right for you.

▸Land a permanent position.

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Don't forget!!

- **Application deadlines and requirements are firm, including receipt of recommendations (no exceptions!)**

- The application deadline is May 25, 2023 at 5:00 p.m. EDT.

- Plan early. Submit your application ahead of the deadline.

- Contact your reference letter writers as soon as possible. It is the applicant's responsibility to ensure recommendations are submitted by the deadline.

- Do your research! Visit the DOE National Laboratories and host sites webpages to make a more informed decision about your lab preferences.

- Technical support for the online system is available during regular business hours.

- Only complete, compliant, and eligible applications are reviewed by self-selected first and second-choice labs.

- One offer per term only, independent of acceptance or declination.

- Send us a message if you have questions. Contact sc.cci@science.doe.gov.

Join Us for An Application Assistance Workshop!!

▶**Next Workshop Scheduled**

▶**April 24, 2023 at 3:00 pm (EDT)**
Office Hours with DOE Lab Staff

▶Register [here](). More info available on CCI website.

My Internship Experience at the Federal Laboratories

Dr. Toliver receiving her certificate of completion during her appointment as an intern at NASA's Johnson Space Center.

Connect with us…..

‣ After this session, e-mail us sc.cci@science.doe.gov if you have questions.

‣ CCI LinkedIn

WE'D LOVE TO

Connect

WITH YOU!