

**Opportunity Title:** U.S. Army DEVCOM CBC - Aerosol Detection Integration and Evaluation Intern

**Opportunity Reference Code:** CCDC-CBC-2021-0012

**Organization** U.S. Department of Defense (DOD)

**Reference Code** CCDC-CBC-2021-0012

**How to Apply** Click on *Apply* now at the bottom of the opportunity to start your application.

**Description** The U.S. Army Chemical Biological Center (CBC) is offering a bachelor's level opportunity at the U.S. Army Combat Capabilities Development Command - Chemical Biological Center (DEVCOM-CBC).

The U.S. Army Chemical Biological Center (CBC) has been tasked by Department of Homeland Security (DHS) to develop and validate two synthetic background recipes based on data collected at public indoor locations. The synthetic recipes will be used in aerosol chamber testing, measuring the Level of Detection for biological agent triggers and field screen devices of interest to DHS.

#### What will I be doing?

You will join a community of scientists and researchers in an effort to develop and characterize the custom aerosol generation equipment, develop required software, and integrate and analyze data from ground truth and detection equipment.

#### Why should I apply?

Under the guidance of a mentor, you will gain hands-on experience to complement your education and support your academic and professional goals. Along the way, you will engage in activities and research in several areas. This includes, but is not limited to, conducting aerosol and detection research experiments to determine level of detection and false alarm frequency of sensor in developmental research.

During this process, you will learn and gain experience:

- Operating and developing custom aerosol generation equipment including software modifications for associated chambers
- Operating, troubleshooting and integrating chemical and biological sensors
- Analyzing data from aerosol particle monitoring equipment and CB sensors to calculate the level of detection and associated statistics
- Modifying sensor algorithms and evaluating the use of AI/ML techniques to improve sensor performance
- In laboratory safety requirements, quality control procedures, and acceptance criteria.

#### Where will I be located?

Edgewood portion of Aberdeen Proving Ground, Maryland

#### What is the anticipated start date?

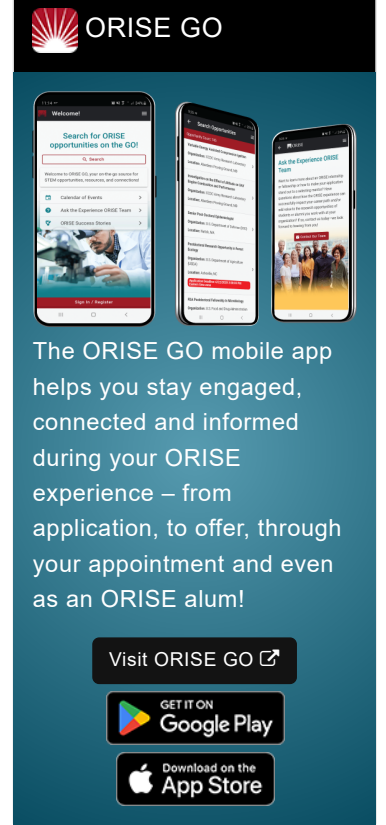
The CCDC-CBC is ready to make appointments immediately. Exact start dates will be determined at the time of selection and in coordination with the selected candidate. Applications are reviewed on an ongoing basis and internships will be filled as qualified candidates are identified.

#### Appointment Length

This appointment is a six month research appointment, with the possibility to be renewed for additional research periods. Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant.





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#### **What are the benefits?**

You will receive a stipend to be determined by **CCDC-CBC**. Stipends are typically based on a participant's academic standing, discipline, experience, and research facility location. Other benefits may include the following:

- Health Insurance Supplement. *Participants are eligible to purchase health insurance through ORISE.*
- Relocation Allowance
- Training and Travel Allowance

#### **Nature of Appointment**

You will not enter into an employee/employer relationship with ORISE, ORAU, DoD, or any other office or agency. Instead, you will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment.

#### **About The U.S. Army Combat Capabilities Development Command - Chemical Biological Center**

The U.S. Army Combat Capabilities Development Command - Chemical Biological Center (CCDC-CBC) is the primary Department of Defense technical organization for non-medical chemical and biological defense. (CCDC-CBC) activities at the Edgewood portion of Aberdeen Proving Ground, Maryland, provide an extraordinary capability against emerging biological and chemical threats by merging intelligence assessments with its world-renowned chemistry, biology, physiology and engineering expertise at every stage of the acquisition life cycle. **We provide a unique blend of distinguished scientists and engineers for the research and development of innovative technological solutions to solve chemical and biological defense threats to our nation—both abroad and on the homeland.**

For more information on CCDC Chemical Biological Center visit <https://www.cbc.ccdc.army.mil/>.

**Qualifications** Highly competitive applicants will have:

- A Bachelor's degree in Physics and/or Mechanical Engineering with GPA of 3.5 or higher
- Research or technical experience that includes some aspects of mechanical design and computer modeling knowledge or understanding of algorithms, data analysis programs and design software such as MATLAB, C++, Arduino, Mathematica, LabView, Mechanical and Electrical Design, SolidWorks

A complete application consists of:

- Zintellect Profile
- Educational and Employment History
- Essay Questions (goals, experiences, and skills relevant to the opportunity)
- Resume (PDF)
- Transcripts/Academic Records - For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. [Click here for detailed information about acceptable transcripts.](#)
- One Recommendation

*Submitted documents must have all social security numbers, student identification numbers, and/or dates of birth removed (blacked out, blackened out, made illegible, etc.) prior to uploading into the*



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*application system. All documents must be in English or include an official English translation.*

If you have questions, send an email to [ARMY-RDECOM@orise.orau.gov](mailto:ARMY-RDECOM@orise.orau.gov). Please list the reference code of this opportunity CCDC-CBC-2021-0012 in the subject line of the email.

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- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
  - **Degree:** Bachelor's Degree received within the last 24 month(s).
  - **Overall GPA:** 3.50
  - **Discipline(s):**
    - **Engineering** ([1](#) )
    - **Physics** ([16](#) )