

**Opportunity Title:** Environmental Epidemiology Database Specialist at EPA

**Opportunity Reference Code:** EPA-SSP-0024-17

**Organization** U.S. Environmental Protection Agency (EPA)

**Reference Code** EPA-SSP-0024-17

**How to Apply**

- Submit application and supporting documents by clicking on Apply Now button.
- *For more information, contact [EPAjobs@orau.org](mailto:EPAjobs@orau.org).* Do not contact EPA directly.

**Description** The EPA Environmental Research and Business Support Program has an immediate opening for an Environmental Epidemiology Database Specialist position with the Office of Research and Development at the EPA's facility in Chapel Hill, NC.

The Office of Research and Development at the EPA supports high-quality research to improve the scientific basis for decisions on national environmental issues and help EPA achieve its environmental goals. Research is conducted in a broad range of environmental areas by scientists in EPA laboratories and at universities across the country.

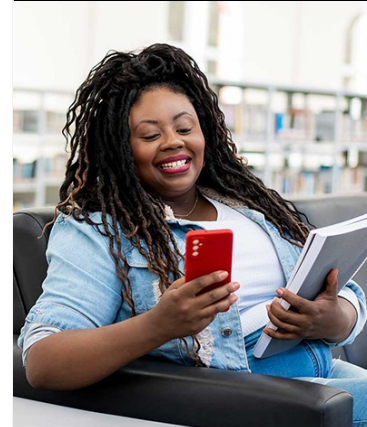
The Clinical Research Branch (CRB) of the Environmental Public Health Division operates laboratories and clinical facilities at the EPA Human Studies Facility building (HSF) located on the campus of the University of North Carolina at Chapel Hill. CRB investigators use controlled exposure studies and epidemiological analyses in large cohorts to determine the effects of exposure to ambient pollution on human health and elucidate exposure mechanisms and the most responsive subgroups of the population. CRB studies are conducted in close consultation with client offices in order to support the regulatory activities of the Agency.

The selected candidate shall work in the CRB with CRB researchers in order to construct a database of electronic health records for use in epidemiology studies. Responsibilities include the design, construction, evaluation, maintenance, and documentation of a database to house current and future electronic health records and environmental exposure database. Specifically, he/she shall assist an EPA researcher tasked with evaluating appropriate database architectures, selecting suitable software frameworks, e.g. PostgreSQL vs Oracle, for implementing the database, documenting and overcoming challenges associated with databases linking electronic health records and environmental data, and linking the database to relevant external tables and APIs necessary for its proper function. The selected candidate shall be expected to contribute to the planning, evaluation, and maintenance of the database. He/she shall assist to develop scientific manuscripts documenting the proper creation, curation, and continued evaluation of such databases and to potentially present their work at relevant scientific conferences.


The selected candidate shall learn a number of analytic techniques and procedures for handling large electronic health records. They shall learn to design, build, and interface with electronic medical record databases and to evaluate the utility of said databases for research purposes. He/she shall



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additionally learn how to prioritize and organize the various aspects of creating and maintaining databases of electronic health records and environmental data and how to optimize said databases for research purposes while maintaining flexibility for the continued incorporation of new data.

The selected candidate shall work side by side with postdoctoral researchers, Principal Investigators, and research personnel who specialize in electronic medical record databases. Through these interactions he/she will be exposed to the philosophical and functional questions which arise when handling volumes of patient records and will receive premier instruction in analytic and ethical concerns which must be properly considered for the success of projects centered around electronic medical records. The selected candidate shall be expected to attend regular staff meetings.

**Communications-related responsibilities shall include:**

- Participating as a member of a multi-disciplinary research team;
- Interacting with EPA scientists and outside collaborators;
- Preparing detailed documentation of their efforts; and
- Preparing scientific manuscripts on their work and present at relevant scientific meetings.

The selected candidate may be asked to present work performed as a poster at a scientific conference.

**Location:** This job will be located at EPA's facility in Chapel Hill, NC.

**Salary:** The selected applicant will become a full time temporary employee of ORAU and will receive an hourly wage of \$20.96 for hours worked.

**Hours:** Full Time.

**Travel:** Occasional local travel may be required. Occasional overnight travel to scientific meetings to present research may also be required.

**Working Conditions:** The selected candidate shall be supervised by a mentor who will provide day-to-day direction, as well as coach, advise and counsel the selected candidate, and review his/her work.

This position will involve working with Protected Health Information including patient hospital records and geocoded addresses. The selected candidate will be required to complete all relevant trainings prior to beginning the position and to maintain their training for the duration of their work.

**Expected Start Date:** The position start date is November 2017. The selected applicant will be temporary employee of ORAU working as a contractor to EPA. The initial contract period is through May 14, 2018. EPA may elect to renew the contract for an additional two (2) 12-month optional periods.

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directly.

**Qualifications Eligible applicants must:**

- Be at least 18 years of age and
- Have earned at least a Bachelor's of Science degree in computer science, bioinformatics, computational biology, database design, database administration, information technology, or closely related informatics field from an accredited university or college within the last 24 months and
- Be a citizen of the United States of America or a Legal Permanent Resident.

*EPA ORD employees, their spouses, and children are not eligible to participate in this program.*

**Required Knowledge, Skills, Work Experience, and Education**

Successful candidates shall have:

- 3+ years of combined coursework and experience in database design and implementation including experience with the following:
  - Design of databases using MySQL or Oracle SQL Developer and implementation to at least 3rd normal form
  - Loading data via both SQL Loader and external tables
  - Implementing users and quotas within the database
  - Database optimization, indexing, and error checking including the use of foreign keys
  - Storing metadata
  - Database documentation for non-expert users

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| <b>Eligibility Requirements</b> | <ul style="list-style-type: none"><li>• <b>Citizenship:</b> LPR or U.S. Citizen</li><li>• <b>Degree:</b> Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 24 month(s).</li><li>• <b>Discipline(s):</b><ul style="list-style-type: none"><li>◦ <b>Computer, Information, and Data Sciences</b> (<a href="#">16</a> 👁)</li><li>◦ <b>Environmental and Marine Sciences</b> (<a href="#">1</a> 👁)</li><li>◦ <b>Life Health and Medical Sciences</b> (<a href="#">45</a> 👁)</li></ul></li></ul> |
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**Affirmation** I certify that I am at least 18 years of age; have earned at least a Bachelor's of Science degree in computer science, bioinformatics, computational biology, database design, database administration, information technology, or closely related informatics field from an accredited university or college within the last 24 months; a citizen or a Legal Permanent Resident of the United States of America; and not a current employee of EPA ORD or the spouse or child of an EPA ORD employee.

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