

# EH MATTERS

Environmental Health MethodologicAl, Training, and Teaching  
EnterPRiSe

## 2 year Undergraduate Research Internship Program

<https://envhealthcenters.usc.edu/ehmatters>

**Applications for Fall 2021 Due August 8, 2021**

### **Program Introduction**

EH MATTERS offers USC undergraduate students from under-represented groups a paid, two-year, three-semester per year internship (Summer/Fall/Spring) to build capacity of diverse students to engage in environmental health sciences and community health disparities research. Rising sophomores and juniors are encouraged to apply.

This community-engaged environmental health research program will expand students' understanding of fundamental concepts in environmental health, exposure, susceptibility, risk, and health disparities. This formal training will provide a basis for a firm academic understanding of community environmental health disparity issues and firsthand experiences that look at environmental health through the lens of environmental justice.

EH MATTERS fellows (program participants) are expected to intern the following number of hours each semester, most of which will be in person on the Health Science Campus once campus is fully open:

- Fall – 10 hours per week (during regular workday hours), attendance at cohort meetings twice per month
- Spring – 10 hours per week (during regular workday hours), attendance at cohort meetings twice per month
- Summer – 36 hours per week (during regular workday hours), attendance at cohort meetings twice per week

**Commitment to the above schedule is expected of all EH MATTERS fellows.**

### **Program Objectives**

- Students will understand how urban health disparities and environmental exposures intersect and interact in communities, and how to leverage action-oriented research

- Students will develop the necessary skills to successfully engage in community-driven environmental health research to address environmental health disparities;
- Students will build skills and confidence to pursue graduate education and careers in environmental health sciences.

## Internship and Mentoring

Each EH MATTERS fellow will be paired with a faculty research mentor with whom they will work as a paid intern during their two-year program.

**Below are brief descriptions of the internships by faculty mentor for Fall 2021. Click on faculty member names to view their full profile including research interests and publications.**

***In the online application you will be asked to indicate your top three internship preferences.***

[Zhanghua Chen](#): The intern will conduct literature reviews on any of Dr. Chen's research topics including: short- and long-term health effects of air pollution and persistent organic pollutants exposure; integration and statistical analysis of multi-omics; exposomics; climate change; and COVID-19. The intern will develop critical thinking skills on research hypothesis and study design and will also obtain hands-on training in statistical analysis, write scientific articles, and present findings in meetings and conferences. The student will need to work closely with postdoctoral scholars and research staff in the team and will have regular individual meetings with the Dr. Chen.

[Shohreh Farzan](#): Interns will have the opportunity to work directly with Dr. Farzan and the ECHO/MADRES team to understand how environmental pollutants and social stressors may influence maternal, child and/or adolescent cardiometabolic health. Projects will be developed depending upon interest and skill level. Interns may support research by conducting literature reviews, assisting with data analysis, with potential opportunities to assist with research activities, such as preparing study materials and kits for participant visits. Interns can expect to gain a greater understanding of how epidemiological data are collected, how analyses are conducted, as well as a deeper understanding of how environmental factors may contribute to cardiometabolic health during pregnancy, childhood and beyond.

[Megan Herting](#): Interns receive hands-on experience with important facets of conducting human research to assess brain and behavior development in children and adolescents. Topics include IRB human subjects training, discussions regarding ethics in conducting research with children and incidental MRI findings, learning about the collection and processing of neuroimaging data, and an expanded knowledge in environmental neuroscience, including how air pollution impacts the developing brain during childhood and adolescence.

[Jill Johnston](#): Interns will support community-driven research for environmental justice, will examine the relationship between industrial sources of pollution and community health, and will engage communities in environmental health popular education workshops.

[An-Min Wu](#): The EH MATTERS intern will gain training and mentoring on spatial thinking, hands-on spatial data sampling and handling, and use of GIS analysis and visualization for a deeper understanding of environmental problems in our community. Projects will be developed upon interest and skill level. Basic knowledge of GIS (e.g. SSC1 165 or 265 or 301) or statistics is preferred; students without either background will be considered if interested in learning and developing these essential spatial science skills during the internship. Other interns that Wu supervises include: undergraduate (B.S. in GeoDesign) and graduate students (M.S. in GIST; Ph.D. in Population, Health and Place) in research on the issues of environmental pollution, their health outcomes and underlying injustice at various spatial and temporal scales.

## Program Highlights

- Students will receive an hourly wage for internship hours (10 hours/week Fall and Spring, 36 hours a week for Summer)
- Highly competitive research positions in environmental health research,
- Faculty mentors in the USC Department of Preventive Medicine and Spatial Sciences Institute
- Students will have the opportunity to be mentored by peers (graduate and post-graduate students.)
- **Community-engaged research skill-building:**
  - Through field trips, lectures, and in-person visits, students will gain exposure to community-based environmental justice organizations, public officials, and policy makers throughout Southern California
- **Academic enrichment:** students will have access to course content in related course in undergrad and graduate programs including Health Promotion and Preventive Medicine to increase the ability to successfully compete for acceptance into a doctoral program.
- **Research skill building workshops focusing on:**
  - Developing and Designing a Research Question
  - Understanding Health Disparities
  - Epidemiological Study Designs and Analysis
  - Approaches in Measuring Exposures, Health and Communities

## Program Eligibility

**The program aims to increase diversity of students in environmental health and prioritizes the following students:**

1. All Native (American Indian or Alaskan Native), African-American, Hispanic, Hawaiian Native or Pacific Islander;
2. Students in at least one of the following categories (including international students and permanent residents);
  - a. A language other than English the primary language spoken at home
  - b. First-Generation College
  - c. Identifying as LBGTQ
  - d. Identifying as multiracial
  - f. Immigrant students
3. Must have completed at least one year of undergraduate study to apply;
4. Minimum overall GPA of 3.0 or greater;
5. Students who qualify for Federal Work Study funding (students who do not qualify are also considered).

**Selection will be based on:**

- Student's academic achievements
- Letters of recommendation
- Essay and completed application

## EH Matters Program Application Information

<https://envhealthcenters.usc.edu/ehmatters/ehmatters-application>

Key elements of the application that you can prepare before filling out the online application form include:

Cumulative/Overall GPA for college coursework

How did you hear about EH Matters? (short answer question)

## Short answer essays

**The following five prompts should be answered in 150 words or less. Each answer will be submitted in a text field on the application.**

1. Tell us why you are interested in being a part of EH MATTERS two-year environmental health internship program:
2. What relevant experiences: coursework, internships, jobs have you had that support your interest in this program?
3. What do you bring as a student to the EH MATTERS cohort?
4. How will participation in this program make a difference – for you, for your community, for environmental health?
5. How can this internship support your future goals?

## Unofficial college transcripts

As part of your application, you will need to upload a copy of an unofficial transcript. An unofficial transcript will be issued by your university or college registrar's office upon request but may also be accessed through a student portal. An unofficial transcript may also be a physical, official copy that you have opened and uploaded. Avoid uploading degree progress reports, grade audits, or similar printouts; these do not count as unofficial transcripts.

**Preferred grade report from the USC student portal:** *Completed Course Summary* from the OASIS system

**Not preferred/Do not include:** *STARS Report* from the OASIS system

**Acceptable unofficial transcripts from other U.S. institutions must:**

- Have the word “transcript” on the document
- Have the name of your institution attended
- Include the student's name, program of study, and major of study
- Include a term-by-term breakdown of each completed course with its corresponding units and grade
- Be clearly legible

## Two letters of recommendation

Applicants must send the people you want to have write letters for you this link.:

<https://envhealthcenters.usc.edu/ehmatters/ehmatters-application/eh-matters-letter-of-rec-portal>

They will then upload their letters through the recommendation portal.

- 1) One letter from USC or other college faculty
- 2) One letter from a former work/intern supervisor

Applicants will submit the names and emails of their references in the application portal.

**Program Directors:** Ed Avol and Jill Johnston

**Program Manager:** Wendy Gutschow

**For more information contact:** Wendy Gutschow, [wgutsch@usc.edu](mailto:wgutsch@usc.edu)



Keck School of Medicine of **USC**  
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