

# COMMUNITY ENGAGEMENT IN ENVIRONMENTAL HEALTH SCIENCES

## 16:963:511

**Course Directors:** Dr. Brian Buckley [buckley@eohsi.rutgers.edu](mailto:buckley@eohsi.rutgers.edu) Dr. Robert Laumbach [Laumbach@eohsi.rutgers.edu](mailto:Laumbach@eohsi.rutgers.edu)

**Course Instructors:** Helmut Zarbl, PhD, Lauren Aleksunes, PharmD, PhD, Nancy Fielder, PhD, Cliff Weisel, PhD, Joanna Burger, PhD, Laura Liang, DrPH, Michael Gochfeld, MD, PhD, Judith Graber, PhD, Howard Kipen, MD, MPH, Derek Shendell D. Env, MPH

**Course Description:** The purpose of this independent study elective course is for students to gain knowledge and skills in engaging with community stakeholders by developing and performing community-engaged experiential projects. The course will include individualized one-on-one meetings with faculty members to discuss approaches to community engagement and completion of a community service learning practicum. Projects will aim to identify, examine, and act to address community environmental health concerns. Opportunities for students to interact with community partners will be facilitated through the Environmental and Occupational Health Sciences Institute and/or Community Engagement Core (CoEC) of the NIEHS P30 Center for Environmental Exposures and Disease. Current community partners include GreenFaith, Coalition for Health Ports, NJ Environmental Justice Alliance, Jersey Coast Anglers Association, Ironbound Community Corporation, Isles Corp, Housing and Community Development Network of New Jersey, and Clean Water Action New Jersey. Example projects are described below.

**Course Credit:** Students will be able to enroll in this elective course for up to 3 credits per semester and for more than one semester.

### Instructional Goals:

- Students will work with faculty advisors to design and complete an individual service and/or research project that addresses an environmental concern in a local community.
- Students will identify, obtain, and utilize relevant resources and information to participate in applied, community-engaged research.
- Students will collaborate with community partners to address local concerns.
- Students will advance their knowledge and skills in public health, exposure sciences and toxicology to include the perspective of community members.
- Students will participate in human subject protection (CITI) training and the development of IRB protocols as warranted by project goals.
- Students will demonstrate community engagement to accomplish their service and/or research projects.
- Students will generate a project deliverable such as reports, posters, presentations, videos, blogs, social media, etc.

**Core Curriculum:** Students enrolled in the course will complete either live or recorded modules on a core curriculum that provides instruction on community-based participatory research. Reflections, readings, exercises and/or activities will be performed to demonstrate competency in each of the areas.

- Spectrum of community engagement
- Principles of community-based participatory research
- Cultural competency
- Communication of science

### Outcomes:

- Recognize relationship building approaches needed for establishing and maintaining successful partnerships with local communities.
- Identify, interpret, and assess competing interests and stakes in problem solving to address community concerns.
- Demonstrate engagement with community members and leaders.
- Recognize the benefits and challenges associated with community-based service projects.

**Evaluation Methods:** While each project will be unique in scope and depth, the following general evaluation methods will be employed.

- Active participation with faculty advisor for the project
- Active participation in small group core curriculum didactic sessions with faculty
- Reflection papers evaluating the roles of toxicology, exposure science, and public health in concerns raised by community partners
- Evaluation from the faculty advisor and community partners, if applicable
- Final product including reports, posters, presentations, videos, blogs, social media, etc.

**Example Projects:**

- Develop a community-engaged sampling strategy for indoor or outdoor field sampling of dust, air, water, soil, or biota for analytical quantification of environmental contaminant concentrations.
- Utilize publically available databases to develop and disseminate models of environmental chemical exposures.
- Develop and distribute fact sheets that summarize environmental health concerns to citizens, advocacy groups, or public officials.
- Coordinate, participate in, and assess a series of community-scientist dialogs with local community organizations.
- Assess the impact of environmental chemical exposures on a community during a natural or accidental disaster.
- Collaborate with community members performing a citizen science research project.