

Independent Study

The Impact of Extreme Heat and Mental Health in Disadvantaged Communities

This 3-credit independent study course is designed for purpose-driven Rutgers Business School undergrad students, in their junior or senior years, who want to develop their knowledge, skills, and understanding of social responsibility and community engagement and are thinking of pursuing careers in such industries as health care, pharma, government, nonprofit management, etc.

I. Premise:

[Over the past year](#) of record-shattering heat, the average person on Earth experienced 26 more days of abnormally high temperatures than they otherwise would have, were it not for human-induced climate change. Many U.S. cities suffer dramatic increases in death rates during heat waves, called Code Red days in the city of Newark. [According to a report](#) issued by a collaboration between Climate Central, the Red Cross Red Crescent Climate Centre and World Weather Attribution, the average American experienced 39 days of such temperatures as a result of climate change since last May, That's 19 more days than in a hypothetical world without human-caused warming.

Deaths result from heat stroke and related conditions, but also from cardiovascular disease, respiratory disease, and cerebrovascular disease. Heat waves are also associated with increased hospital admissions for cardiovascular, kidney, and respiratory disorders. Moreover, as heat waves become more intense, more frequent and longer, it has become increasingly important to address the impact on mental health. High temperatures are [strongly associated](#) with an [increase](#) in [suicides](#), researchers have found. Heat has been linked to a rise in [violent crime](#) and [aggression](#), [emergency room visits](#) and [hospitalizations](#) for [mental disorders](#), and [deaths](#) — especially among people with [schizophrenia](#), dementia, psychosis and substance use.

A. The learning goal(s) and specific objectives of the supervised work are:

1. develop a solid foundation of the current evidence on climate and health across eight main areas
2. become equipped to lead climate and health educational and programmatic development at the student's own institution or within community, and
3. improve public communication and advocacy skills.

II. Specific Objectives are:

Phase I. Secondary Research culminating in a white paper and oral presentation by the entire team. (Weeks 1-4)

- The research, under our supervision, would involve the students immersing themselves in the subject matter, with special attention to identifying best practices around effective interventions.

Phase II. Field Research – (Weeks 5-8)

- Includes Interviews with key people community representatives and subject matter experts

Phase III. Prepare materials for a webinar and create a paper with recommendations. (Weeks 9-12)

Phase IV. Webinar(s) (Weeks 13 and 14)

- Deliver one or two one-hour webinars broadcast widely to Rutgers students, community and professional constituents, including national and global participants

III. Procedures and Process:

1. Define Objectives and Scope

- Objective: Assess the impact of climate change on the mental health of Newark residents.
- Scope: Focus on various demographics, including age, gender, socio-economic status, and geographic location within Newark.

2. Identify Key Climate Change Variables

- Climate Variables: Heatwaves, flooding, air quality, extreme weather events.
- Data Sources: NOAA, EPA, local weather stations, and municipal records.

3. Determine Mental Health Outcomes to Measure

- Outcomes: Anxiety, depression, PTSD, stress levels, suicide rates.
- Metrics: Hospital admissions, prescription rates for mental health medications, self-reported mental health surveys.

5. Data Collection Methods

- Literature Review
- Interviews
- Case studies

6. Interpretation and Reporting

- **Integrated Analysis:** Combine findings to provide a comprehensive picture.
- **Community Feedback:** Present findings to the community for validation and additional insights.
- **Policy Recommendations:** Develop recommendations for local policymakers to address mental health impacts of climate change.

VI Outcomes:

Deliver one or two one-hour webinars broadcast widely to Rutgers students, community and professional constituents, including national and global participants

Important Notes:

This course serves as 3 general elective credits for juniors and seniors who have a GPA of 3.0 or above.

The course will require a team of approximately 3-5 students to work together on a weekly basis to accomplish the specific objectives as outlined above.

Students would be expected to participate in a virtual meeting on zoom for 1-2 hours per week with the faculty advisor along with a designated subject matter expert.

In addition, the team would be expected to organize mutually convenient times to meet and work together on their own, either virtually or in person.

Also, the field research and interviews may need to be scheduled around the interviewees' timing and may be during regular working hours.

We estimate that students would each work approximately 6 hours per week on this project in addition to the 1–2-hour meeting with the faculty advisor.

Students are expected to communicate a brief written progress report on the objectives as outlined above on a regular basis, with an interim report to be submitted halfway through each of the specified phases.