



HART Program
Houston Action Research Team
Engaged Research Opportunity
Spring 2023

Moving Towards Zero Waste: Sustainability Research for HISD

Houston Independent School District (HISD), through support from [Tricon Energy](#), is developing a Zero Waste Program district-wide. HISD is the largest district in Texas and the eighth-largest in the U.S; it serves over 194,000 students through 276 campuses across the Houston area and employs 27,000 team members. Utilizing a reduce, reuse, and recycle sustainability plan, the Office of Sustainability in HISD is working on a pilot program focused on material recycling, composting, and waste management and comprising 20 campuses, from administration buildings to high schools in Houston.

This multi-year effort will begin with a pilot program, along with a consultant project that will include: site evaluations, performance improvement plans, execution strategies, education elements, and post implementation. In conjunction with the consultants' work, the student team will work in two phases for the project. The first phase will be focused on benchmarking by engaging with literature, case studies, and informational interviews to better understand how an institution like HISD can move towards zero waste, sustainably. The second phase will allow for a continuation of the consultants' findings on curriculum and education; logistics and operations; and economic value and sustainability. In this phase, the student team will focus on the 6 high schools that are part of the pilot program. They include: Madison, Booker T. Washington, Lamar, Energy Institute, Northside, and Heights High Schools; these schools represent a regionally and socioeconomic diverse swath within HISD. Here will be an opportunity for students to consider different next steps based on the foundation laid by the pilot program findings and the consultants' report.

Overall, this project will support the ongoing work of HISD around the ultimate goal of becoming zero waste. There will be opportunities to visit the pilot high schools and engage with individuals (students, teachers, and staff) at the schools as well as Rice and Waste Management to better understand how such plans are put into practice and action. In addition to the research project, the student team will engage with the high school students who are involved with the pilot program by supporting the work of the high school student teams and their recycling and waste programs. The aim is to build relationships between the Rice student team and the high school students to lead to informal mentorship and opportunities to share college preparation and strategies.

During the Spring semester of 2023, this Houston Action Research Team will:

- Research, analyze, and synthesize other zero waste plans happening locally, nationally, and/or internationally
- Develop a best practices/literature review on zero waste that will be shared with HISD
- Develop a list of questions to gather inputs among

- Conduct informational interviews with various stakeholders related to recycling, sustainability, and zero waste
- Host a virtual engagement event with high school students mid-way through the project to support their work at their individual high schools
- Utilize the consultants' report to expand on one or more areas: curriculum and education; logistics and operations; and economic value and sustainability
- Generate a written deliverable to be disseminated by HISD Office of Sustainability
- Create an oral presentation and present to various stakeholders, including HISD, Tricon Energy, and Rice.

This engaged research opportunity is available to Rice undergraduate students for Spring of 2023. An interdisciplinary team of four students, each of whom will bring different, but equally important, skills, knowledge, and experiences, will undertake this project. Team members will each work approximately 10 hours per week on this project between **January 16** and **April 30** under the guidance of **Richard Johnson**, the CCL, and a graduate student team advisor, and will receive \$10/hour for their project work. Work time will be flexible, although team members must attend weekly meetings and must coordinate time to work with other team members on the project as needed. Undergraduate students from **all fields of study** with interests and/or skills in at least some of the following areas are encouraged to apply:

Environmental and sustainability studies and/or experiences; k-12 knowledge (lived experiences and formal study); accounting and finances; project management; qualitative research skills; team work; writing and presentation skills; community engagement

APPLICATIONS ARE DUE Thursday, January 5, 2023 at 11:59pm
To inquire or apply contact Dr. Jessica Khalaf, jkhalaf@rice.edu
For more about Rice's HART Program, visit: <http://ccl.rice.edu/hart>