Nepalese Ceramic Water Filter

Design | Build | Test | Market

This UARTS Faculty Engineering/Arts Student Team (FEAST) is partnered with a small ceramic water filter factory in Kathmandu. Our goal is to assist in improving filter construction, testing, and marketing. Ceramic water filters are very effective at preventing water borne illnesses and can be manufactured locally at an affordable price. This team will learn the context of water issues in Nepal, the context of the NGO partner, and develop improved strategies to test and implement in partnership.

This team will: developing better construction, testing, and shipping methods, create survey instruments and data collection strategies, and develop and test marketing materials for the filters. This will advance the research of the filters and the goals of improved filters, data collection on efficacy, and improved marketing and distribution of the filters. The team will assist in developing standardized studio protocols for processing, construction, firing and testing of filters. In addition, the team will assist in developing a health survey strategy for efficacy of the filters in the context in rural Nepal, with potential extension to a new project site in Ethiopia.

Meeting Time and Location

Fridays, 8-10am

Students Sought

Public Health Surveys (3)

- Student skills: survey method, data analysis, Public Health coursework
- Likely majors: SI, ENVIRON, PUBHLTH

Marketing (3)

- Student skills: web and print materials, pricing strategies, audience identification
- Likely majors: ARTDES, BBA, ASIANLAN

Fabrication & Prototyping (3)

- Student skills: hands-on experience with clay, wood, metal, and associated tools
- Likely majors: ARTDES, ARCH, CEE, ME, MSE

Water Quality Testing (3)

- Student skills: water standards, drinking water testing, WHO standards
- Likely majors: CEE, EARTH, ENVIRON, CHEM, ChemE

FACULTY PROJECT LEAD

Joseph Trumpey is a Transition Designer, Science Illustrator, Educator, and Farmer. He holds appointments at the Stamps School of Art & Design, Program in the Environment, and School for the Environment and Sustainability. Joe directs UM's Sustainable Living Experience, a living/learning community for first-year undergraduates. He has expertise in Sustainable Design-Build work, community-based co-design work, and as an illustrator. He has published thousands of illustrations and lectures widely. He and his family live off of the electrical grid in a straw bale home he designed and built in Grass Lake, Michigan. They haven't burned a gram of fossil fuel to heat their home, their water, or cook their food in more than a decade of Michigan winters. They farm heritage breed livestock and grow more than half of their annual food.