

## Improving Access to Clean Water Through Service Learning

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The Water Supply in Developing Countries class at Purdue combines service learning, international development, student leadership, and interdisciplinary collaboration in an engaging educational environment. Graduate and undergraduate students from multiple disciplines including engineering, agricultural economics, nursing, biology, and food sciences collaborate to solve an international dilemma: lack of access to clean, safe drinking water. Students design and install sustainable water treatment systems in primary schools in the Dominican Republic that provide safe water for local communities. Through partnership with community members, each system is tailored to fit the social, cultural, and health needs of each community. Continuous contact with the communities and repeated evaluation through research allow students to gain valuable learning experiences while giving back through service learning.

To ensure a truly sustainable solution, the class develops WASH (water, sanitation, and hygiene) educational materials in the form of lesson plans, posters, and interactive murals to promote safe water usage practices. They also develop a sustainable economic model for distributing the water that enables community members to have autonomy in their future water and sanitation development by spreading access to clean water to surrounding areas while simultaneously raising funds for future community development.

Since 2012, Water Supply in Developing Countries has worked closely with four Dominican Republic communities, has implemented three water treatment systems, and is designing a fourth. Throughout this service learning, students have built intercultural competence and strengthened both interdisciplinary relationships with each other and international relationships with the communities.