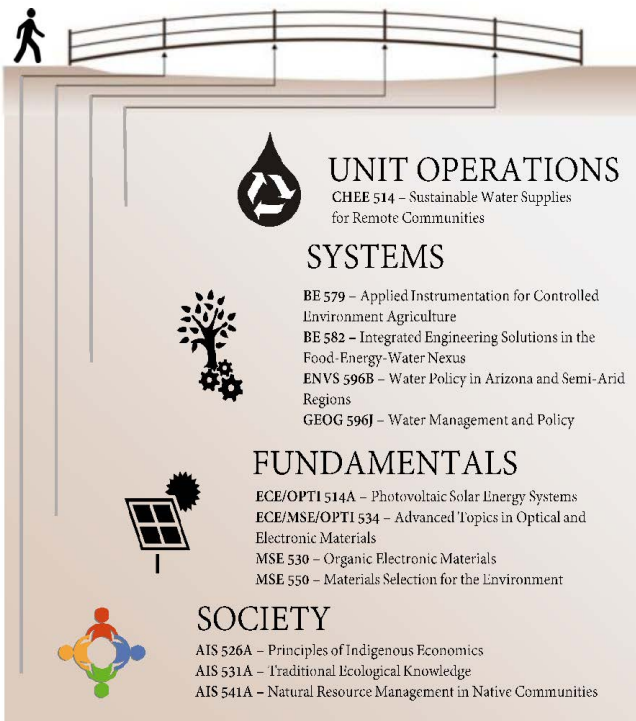




A unique, on-site research and training opportunity for MS and PhD students that bridges engineering, social, and physical sciences.



# Indige-FEWS Minor



Combines classwork, internships, teaching, research, special projects, seminars, cultural immersion and community interactions to enable trainees to tackle critical real world FEWS problems with an understanding of the cultures and sovereignty of Indigenous peoples.

- integrates fundamentals of systems thinking into design of FEW systems.
- MS trainees are expected to take 2 courses.
- PhD trainees are required to take the Minor, 4 courses.
- The Indige-FEWS minor is open to all UA students.



## Indigenous Food, Energy, & Water Security and Sovereignty (Indige-FEWSS)

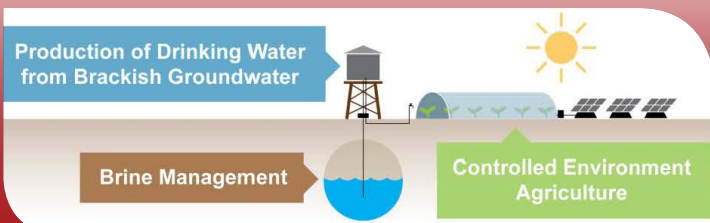
Training Track for Graduate Students to create real-world solutions



Research Projects will develop sustainable, real-world food, energy, and water solutions for off-grid production of safe drinking water, brine management operations, and controlled environment agriculture systems.

Themes: innovative photovoltaics; holographics; sensors and controls; unit operation technologies; and material, device, and systems resiliency.

### Major Research Effort



For More Information:

[www.energy.arizona.edu/indige-fewss](http://www.energy.arizona.edu/indige-fewss)

NSF Grant # DGE1735173



## Traineeship Areas of Study

- Biosystems Engineering
- Chemical Engineering
- Electrical & Computer Engineering
- Environmental Engineering
- Environmental Sciences
- Materials Science Engineering
- Optical Sciences
- Systems & Industrial Engineering

## What

- \$34,000 stipend
- Full tuition remission
- 1 year of funding for MS Trainees
- 2 years of funding for PhD Trainees
- 10-week summer internship
- Immersion at Navajo Nation

## Who

- Master's and doctoral STEM students in a research-based degree program that requires a thesis or dissertation
- U.S. citizens and permanent residents
- International students may participate as non-stipend-supported Trainees

## Where

- At the University of Arizona in Tucson, AZ
- At Diné College in Tsaile, AZ, our partner on the Navajo Nation

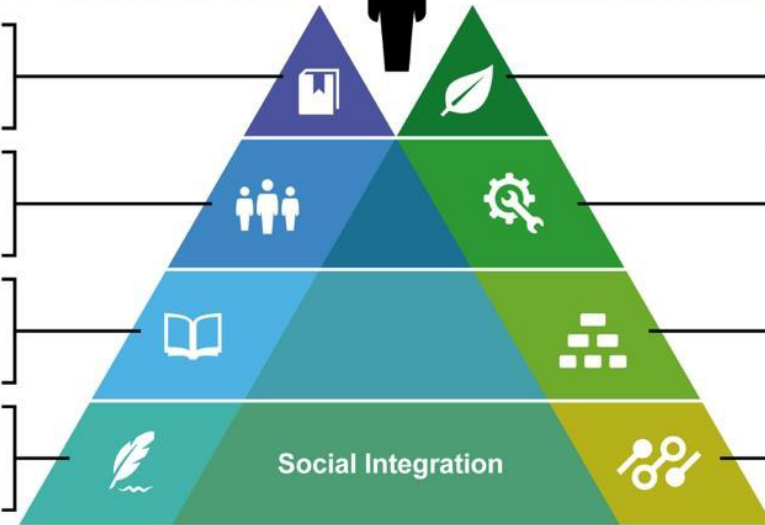
## When

- Enrolling 2018 to 2021
- Once a Trainee, always a Trainee

## EDUCATION & TRAINING



## MAJOR RESEARCH



Goal: To develop a diverse workforce with intercultural awareness and FEWS expertise to address Food, Energy and Water challenges in Indigenous communities.

## Problem-Solving

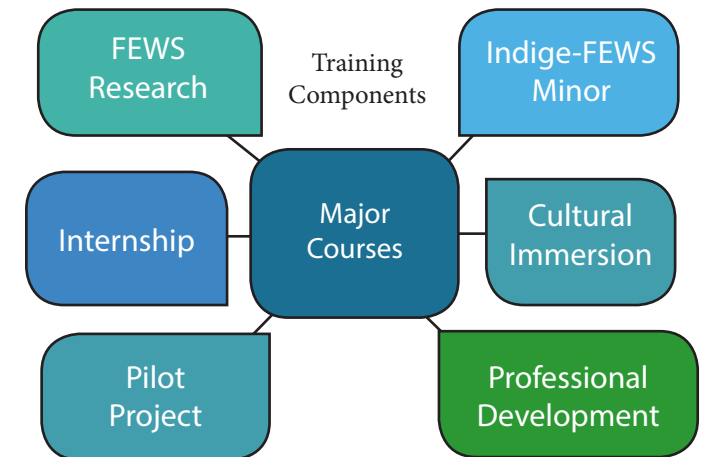
Developing technical solutions to food, energy and water challenges requires an understanding of Indigenous societies, their governance and culture, and the ability to work effectively in these contexts.

## Challenge

Worldwide, ~370 million Indigenous people live in over 90 countries. Indigenous people are approximately 5% of the world population, yet they represent 90% of cultural diversity and hold 20% of the land that maintains 80% of the world's remaining biodiversity.

Indigenous people often lack access to energy, water, and food infrastructure:

- 14% of U.S. Native American households lack access to electricity.
- 35% of dwellings on the Navajo Nation are not connected to central power or portable water.



THE UNIVERSITY OF ARIZONA  
OFFICE FOR RESEARCH & DISCOVERY

Institute for Energy Solutions