

**Faculty-Led Study Abroad Program on
Hydro-Diplomacy
Summer I 2024
ADVANCED TOPICS IN CIVIL ENGINEERING
CE 4375 CRN 3185
University of Texas at El Paso
Universidad Autónoma de Chihuahua**

Course Organizers Alex Mayer

Course Dates: June 3, 2024 to June 22, 2024

Course Credits: 3

Course Prerequisites: None

Class standing: No restrictions

Degree program: No restrictions

Course Description

Conflicts over water arise from the need to balance availability for human needs, agricultural and industrial development, and ecosystem services. International conflicts over water can occur when one country draws more water or pollutes water from a transboundary water source. Nation-states negotiate and invest in transboundary water arrangements to reduce the risk of water conflicts. However, international water agreements can be problematic if historical arrangements no longer reflect the current political, social, and physical geography. Institutional arrangements for US-Mexico binational water governance have evolved over the last century, but the waters shared by the US and Mexico are emblematic of the current challenges of water resources co-management, including over-allocation of water for agricultural and urban use, migration and development producing shifts in demand, increasing unreliability due to climate change, depletion of groundwater resources.

This course offers an overview of diplomacy applied to water governance in transboundary basins, with a focus on US-Mexico shared water resources. During the course, students will participate in a role-play simulation, seminars by guest experts, field trips, and online discussions. Students will synthesize course readings through presentations and will complete a course project, as a way of applying what they have learned about multinational water governance. The three-week course will occur as follows.

Week 1 (June 3-7, Online): Introduction to Hydro-Diplomacy Principles and Projects

Week 2 (June 9-15, El Paso, Ciudad Juárez): Transboundary and US-Mexico water governance, Negotiations role play, Course projects

Week 3 (June 16-22, Chihuahua, Delicias): US-Mexico binational water governance, Course projects

Intended Learning Outcomes

This course is meant to complement a broad range of degree programs in engineering, biophysical and social sciences, and humanities by exposing students to water management as applied to transboundary waters. By taking this course, students will be able to

- (a) describe the challenges of equitable engineering, management, and governance of water as a common pool resource,
- (b) apply diplomatic tools, namely negotiation, to transboundary water governance,

- (c) assess existing strengths and gaps in institutional water governance between Mexico and the United States, and
- (d) understand water management as place-based stocks and flows, involving local meanings and politics whether directly connected to the international border, and thus requiring local engagement.

Class Schedule

This intensive course will take place over a three-week period. Students can expect to participate in course activities academic and social activities and to work on course assignments every day, including most weekend days, for at least 8 hours a day.

Readings

Readings will be available on the course website.

Assignments/Expectations

Students will be expected to

- actively participate in online discussions, seminars, and field trips,
- prepare and deliver presentations on readings (in groups),
- role play in water negotiation game, and
- complete a course project, including research, written report, and presentation (in groups).

Evaluation

45% course project report and presentation (in groups)

20% presentations on readings (in groups)

20% participation in online discussions

15% overall course participation

Course Website

Teams (site will be available later)