

New Course!

ENGR 495/595

Science, Health and Engineering Diplomacy

Spring 2019

Course Description

This three (3) unit course will introduce general themes focused on Science, Health and Engineering and their impact on Policy and Diplomacy. Applications will emphasize Latin America.

Science diplomacy is the use of scientific collaborations among nations to address challenges and opportunities with global implications and to build constructive international partnerships. Three main types of SD activities are:

- "Science in diplomacy": Informing foreign policy objectives with scientific advice.
- "Diplomacy for science": Facilitating international science cooperation.
- "Science for diplomacy": Using scientific cooperation to improve international relations between countries.

As a tool to be utilized in international relations, all final sharing and dissemination of information should increase insight and capacity to support decision making, negotiations and conflict resolution.

A series of science diplomacy experts from US National Academy of Sciences, US National Academy of Engineering and American Association for the Advancement of Science, as well as several distinguished professors from The University of Arizona will provide a framework of science diplomacy, its various sectors, challenges, and its future, while offering examples in the Americas.

Course Format and Teaching Methods

This is an inclusive hybrid course including seminars, small-group activities or group projects, experiential or service-learning, in-class discussion, web-delivered content or assessment, and remote or online field experiences in the community or abroad. Seminars may be held outside of the class period.

The coursework is for senior and graduate students and professionals/public. This course will incorporate lectures from multiple departments of faculty.

Students are expected to have the following responsibilities completed before class:

- Listening to speaker/podcast/webcast, reading assigned literature, references, book chapters;
- Prepared to participate in scholarly discussion with (guest) professor and peers

Course Objectives

The primary goal of this course is to introduce students to the field of science diplomacy and policy to demonstrate its value and need in an increasingly flat world. A secondary goal is to expose students to career opportunities in this important field. To that end, students will examine case studies that demonstrate the macro-issues transcending borders.

Expected learning outcomes include preparing future scientists, engineers, health care providers, and policy practitioners for careers via demonstration of international experience, interdisciplinary knowledge and cultural awareness. The intent is

to provide foundations for the future of sustainable solutions, leadership and partnerships of institutions and government developing policy and diplomacy.

Course Directors: Kevin Lansey and Hassan Vafai

Science Diplomacy experts who will present lectures include:

- Norman Neureiter - Former Science and Technology Advisor to US Secretary of State
- Glenn Schweitzer - Director, Office for Central and Eurasia of the National Academy of Sciences
- William Colglazier - Former Science Advisor to US Secretary of State
- Dan Mote – President, US National Academy of Engineering
- John Boright - Executive Director, International Affairs, US National Academies
- Tom Wang - Former Chief, international Office, American Association for the Advancement of Science
- Andrea K. Gerlak - Associate Professor, School of Geography and Development, and Udall Center for Studies in Public Policy, The University of Arizona
- Robert G. Varady - Research Professor, Udall Center for Studies in Public Policy, The University of Arizona
- Kathleen A. Harder - Director, Center for Design in Health and Human Factors and Ergonomics, University of Minnesota
- Marcela Vasquez-Leon - Director, Center for Latin American Studies, The University of Arizona
- Bradley Dwight-Williams - Arizona Public Policy Chair, American Institute of Aeronautics and Astronautics
- Stephanie Buechler - Assistant Research Scientist, Udall Center for Studies in Public Policy, and School of Geography and Development, The University of Arizona

For more information, contact Professor Hassan Vafai at hvafai@email.arizona.edu