Coastal plant communities are models for exploring response to stress on ecological and evolutionary time scales because of the daily and seasonal shifts in temperature, salinity, nutrients and fresh water. Considering predicted sea level rise and shifts in temperature and salinity (IPCC 2007), it will be important to understand how these species might adapt to the stress associated with global climate change. This class will be a combination of lecture, laboratory and field activities to gain an understanding of the morphology, physiology and ecology as well as the genetic make-up and factors influencing gene expression of several species of coastal plants.

**Topics will include:**

Survey of coastal ecosystems
- Salt marshes
- Mangroves
- Cypress swamps
- Beaches

Biology of halophytes
- Morphological adaptations
- Physiological adaptations
- Ecology
- Genetics and genomics

- Adaptation to stressful environment
- Potential response to climate change
- Conservation/ mitigation