Below is an introduction to the study abroad program in Puerto Peñasco!

**ACCOMMODATIONS & LAB FACILITIES**

**CEDO Field Station & Education Program**

The Intercultural Center for the Studies of Deserts and Oceans (CEDO) is a field research station and education center located just east of Puerto Peñasco, Sonora, Mexico. This region offers a variety of natural habitats for study, and we invite you to join us in exploring the creatures, ecosystems, and cultures of the Sonoran Desert and Sea of Cortez. Our mission is to advance and share knowledge about the Upper Gulf of California and surrounding Sonoran Desert, and to promote the conservation and sustainable use of its natural and cultural resources. Jointly operated by Mexican and U.S. non-profit foundations, CEDO promotes research and science education, as well as conservation programs and materials for a diverse public.

**NATURAL RESOURCES**

Located at the meeting place of two unique biosphere reserves - the Pinacate and Colorado River Delta- the Upper Gulf of California has a multitude of unique ecosystems available for your exploration.

The northern Sea of Cortez is an area of extreme temperatures, salinity, and tides. Rocky intertidal habitats (with coquina limestone, granite and basalt substrates) are home to many interesting invertebrates, and sandy beaches dominate the landscape. Nearby islands are home to California Sea Lions and many species of marine birds.

Several negative estuaries (esteros) are located on the outskirts of town and contain mudflats of subterranean cities as well as opportunities to observe birds migrating through the area.

Thirty miles to the north lies the Pinacate Biosphere Reserve with dormant volcanoes, lava fields, craters, and the vast Gran Desierto sand sea, the largest dune system in North America. The area also holds examples of common flora and fauna of the Sonoran Desert.

**CEDO FACILITIES**

CEDO is a multi-use facility open to the public, researchers, and academic groups. While primarily operating as a jumping-off point to visit the surrounding area, CEDO also provides the following resources to enhance studies of the area:

**Edificio Agustín Cortes:**
- Henry Harris Memorial Library: books and articles in both Spanish and English emphasizing the upper Gulf of California and surrounding Sonoran Desert.
- Laboratory: Dry and wet lab space, aquaria, and microscopes.

**Visitor’s Center:**
- Gift and bookstore with local field guides, tide calendars, T-shirts etc. in a unique “Earthship” construction
- Fin whale skeleton, botanical gardens, fisheries and historical exhibit
- Reference collections of local flora and fauna.
ACCOMMODATIONS

The main building, Edificio Agustín Cortes, has Greek-monastic style architecture with an open courtyard and deck overlooking the Sea of Cortez. We will be staying in their accommodations, dormitory-style. Students may also sleep on the deck and have access to a bathhouse with separate men’s and women’s facilities with hot showers. Bring your own toiletries and towel, a sleeping bag and a pad (sleeping pads are available for up to 50 people), and, if you would like, your own tent.

For breakfast and lunch every day, we will be bringing our own food and cooking in CEDO’s kitchen and making use of their dining facilities. Cabinet storage space and refrigerators are available for us to use. Dinner each night will be in town at the individual’s expense.

GUIDED FIELD EXCURSIONS

TIDEPOOL EXPLORATION

An excursion to the rocky intertidal zone teaches students about the formation of coquina reefs, the patterns of intertidal zonation, and adaptations to microhabitats as seen in the great diversity of species in the tidepools. A hands-on exploration of these unique ecosystems and a chance to get close to a large variety of invertebrates. Depends on tidal conditions.

CHOLLA BAY

A trip to the extensive mud flats of Cholla Bay provides students with the opportunity to discover the diversity of life in this highly productive bay. This experience provides good contrast to the surrounding desert, rocky intertidal reefs, and estuarine ecosystems and illustrates the threats of coastal development in the region. Depends on tidal conditions.

TRONA SALT MINE TOUR

About 45 minutes north of the field station are the Trona Salt mines. We will visit this unique site of marine resources, learn about how this salt can be used, and how it is mined.
ISLA SAN JORGE

This full-day excursion to the Island is an unforgettable experience. See dolphins on the boat ride to the island, and, at the island, thousands of seabirds and a large colony of California sea lions. Snorkel gear is included, and participants dive with the sea lion pups and females. Students learn the many species of birds, including Blue-footed Boobies, Tropic birds and Heerman’s Gulls and participate in our long-term Sea Lion Census research. A full SCUBA option is available for those certified and for an additional fee. Duration: 7 hours. Includes lunch.

PARTICIPATING IN CEDO RESEARCH!

Intertidal Species Diversity Transect: An ongoing long-term survey of the common flora and fauna in the intertidal zone along a 150-meter transect. Conducted over the course of two days. Additionally, we have participated in a census of a local population of osprey near the field station and the endangered Least Tern which nests on the beaches of local estuaries.

KAYAK CAPER

Experience the inspirational wildlife and scenic beauty of the estero Morua at eye level. Reach places inaccessible by any other means in a silent kayak, followed by a visit to a large oyster cultivation farm. Estuaries form highly important ecosystems that serve to guard many species of fish and vertebrates and provide essential feeding, nesting, and nursery space for thousands of resident and migratory birds. Duration: 5 Hours.
SLIDESHOW LECTURES

- Puerto Peñasco Natural History - Introduction to Desert and Oceans
- Marine Mammals
- Fisheries in the Sea of Cortez

PHYSICAL REQUIREMENTS

The daily excursions can include walking, hiking, and climbing on uneven surfaces such as sand, mud, and rock, both in and out of the water. Our kayaking adventure requires a moderate level of upper arm and core body strength. We will be out in the sun every day.

WEB PAGES

www.mesacc.edu/study-abroad/puerto-penasco-mexico (International Education website)
http://mccmarinebiologystudyablog2014.blogspot.com/ (blog from last year’s trip)
http://www.cedointercultural.org/ (The field station website, CEDO, our base of operations while abroad)

ESTIMATED PROGRAM COSTS

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Cost includes round trip transportation by van, educational excursions, instructional support, lodging in the dormitories of Center for the Study of Deserts and Oceans (CEDO), medical insurance, and daily breakfast and lunch.

CONTACT INFO

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