

ARCH 484/584 STUDIO RAPID SHELTER DISPLACED PEOPLE

SPRING 2019



Shore Acres State Park on Cape Arago, State Park Service Photo

INSTRUCTORS

Earl Mark, PhD, (visiting) Associate Professor of Architecture
Kendall Blake, Sailmaker, Eugene, Oregon

<https://blogs.uoregon.edu/rapidshelterdisplacedpeople/>

OVERVIEW

According to the United National High Commissioner for Refugees (UNHCR), there are over 68.5 million forcibly displaced people in the world today, increasing annually and believed to be the greatest number in history. Forcibly displaced people may be unexpectedly caught out in the open with few possessions, possibly traumatized, disoriented, ill, underfed and seeking food and water. Survival may depend upon speed and initiative, where an improvised, if imperfect shelter will save lives in time or fail to do so. Looking at a refugee settlement over a longer timeframe the studio goal will be to develop a three-part design sequence:

1. **Improvisational** structures deployed at the outset of a forcible displacement.
2. **Transitional** more fully featured shelters with some secondary support shelters.
3. **Stable** longer-term shelters as well as additional shelters for commonly needed services.

The program will focus on 16 family shelters for 80 occupants as a whole: a particular number of shelters and size population group identified as a “Community” by the UNHCR that share common facilities, resources and open space. The studio will explore an increasing detailed series of design exercises to create collapsible light-weight tension membrane fabric structures with a small environmental footprint and intended for rapid delivery. Hands on workshops will be based on wooden boatbuilding and sailmaking traditions. Studio techniques will also include more revolutionary tensegrity tensioning methods and high strength fabric materials. Additional design studio methods will involve computer simulation, visualization and geometrical modeling.

Studies of the environmental footprint, the ecology of animal and plant habitats and general site conditions will be made by direct field observation methods and sketching hosted by the [Oregon Institute of Marine Biology \(OIMB\)](#) on the coast.

BUILDING TYPOLOGY

The UNHCR planning standards are based on the primary aggregate of a “Community” site plan. Sixteen Communities are typically aggregated into a single “Sector” and four “Sectors” are in turn aggregated into a “Settlement” for roughly 20,000 people. While the studio will be focused on the Community scale, it will more abstractly consider implications at the Settlement scale.

GRANT SUPPORTED OVERNIGHT TRAVEL TO OIMB

A field trip to the Oregon Coast is planned with an overnight stay from Friday April 26 to Saturday April 27 at the OIMB near Sunset Bay State Park. Each student will have a private room. The trip includes a walking tour of the ecosystem, habitats, plants and animals as well as a view from a research sea vessel of the oceanfront setting with emphasis on the environmental footprint of existing and potential built structures. A wooden sailboat “mast hoop” steam-bending workshop will be held in nearby Coos Bay. Lodging and activities will be paid for by a research grant. Due to the availability of OIMB the date of this trip is later than and in lieu of the department wide field trip day scheduled for earlier in the spring quarter.

NARRATIVES

Readings and topics within the studio include profiles of forcibly displaced peoples, their varied circumstances, cultures, and particular needs as encountered by humanitarian aid organizations and health care providers. Each design studio participant will independently select, research and respond to the discrete narrative of a particular group of forcibly displaced people. For case studies in the field, see also the [bibliography](#) of a [rapid shelter displaced people seminar](#) currently taught by Earl Mark at the University of Virginia.

SITE

Studio participants will have the option to make a case study of one of two possible state parks on the Oregon Coast. [Sunset Bay State Park](#), where a campsite presently exists, and nearby [Cape Arago State Park](#), where one does not presently exist, will be the hypothetical home of the “Community”. Sketching, site diagramming and other observation methods will be a central part of the site visit during the OMIB field trip. Site studies on location will be integrated later with computer based digital terrain modeling.

INSTRUCTOR BACKGROUNDS / QUESTIONS

[Earl Mark](#) has been teaching similar studios at the University of Virginia since 2007 for sites on the Maine Coast, primarily Acadia National Park at Schoodic Point where he spent a research sabbatical in 2015 testing small scale mockups of structures with sensing technology. This design research transitioned to the current refugee shelters program in 2016.

[Kendall Blake](#) is a commercial sailmaker and experienced sailor. Blake runs Prairie Sail and Canvas. He has collaborated with architects and engineers on other type structures and recently collaborated on a design studio at the University of Oregon.

Questions may be sent by email to emark@uoregon.edu.