CAPSTONE:

General Description:
1. Practice Pedagogy
2. University Capstone Mandate
3. Research applicable beyond terminal project
4. Evolution and Trajectory

Projects:
1. Dani Alvarez: Urban Renewal in Birzeit, Palestine
2. Sean Bollinger: Ecology and Education, Camp Surf
3. Paul Frederickson: Deployability, Antarctic Exploration
Birzeit, located just north of Jerusalem, is a small city known for its “flagship of Palestinian institutions,” Birzeit University. Much of its economy is tied to the student population of the University. Several surrounding villages depend on Birzeit’s economy; particularly during the latest round of roadblocks and closures imposed by the Israeli Defense Forces. Students commute to Birzeit from several surrounding cities attend the University.

The University campus move from the city center has rendered the city motionless. The current location of the University allows student traffic to bypass the Old Campus site and the Historic Center. Without intervention, the Historic Center and surrounding urban fabric will continue to decay as a result of inactivity.

By injecting the Old Campus site with activity, the Historic Center and surrounding urban fabric can be resuscitated. The re-location and addition of architecture, arts, and theater programs from the BZU Main Campus back into the currently unused Old Campus Site will stimulate activity in and surrounding the site, as well as bringing life back into Birzeit’s Historic Center.

Implementation of a new pedestrian and bike path from the BZU Main Campus through Old Campus Site to the Historic Center. The path will stimulate activity as well as encouraging the use of bicycles and walking as modes of transportation rather than motor vehicles.

**Project Proposal**

1. The re-location and addition of architecture, arts, and theater programs from the BZU Main Campus back into the currently unused Old Campus Site. The new programs will stimulate activity in and surrounding the site, as well as bringing life back into Birzeit’s Historic Center.

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Nassir Family Residence

Dead zones

Primary school

Church

Mixed use

Youth center

Grocery store

Historic center

Site plan

1/32" = 1' - 0"

Existing conditions (X = abandoned)

Abandoned - demo + infill + new addition

Total: 18,892 sf

1: Lobby (sf)
2: 1st year studios (sf)
3: Storage
4: Faculty offices (10 @ 120 sf)
5: Conference room (1 @ 300 sf)
6: 4th year studio (4473 sf)
7: 2nd and 3rd year studios (4473 sf)
8: Roof garden (1000 sf)

Total: 3550 sf

1: Administration (1775 sf)
2: Exhibition (1125 sf)
3: Outdoor exhibition
4: Outdoor theater
5: 1st and 2nd year studios (1775 sf)
6: Existing washroom
7: Classrooms (1116 sf)
8: Library (3030 sf)
9: Theater college (3294 sf)
10: Administration (1775 sf)
11: Exhibition (953 sf)
12: Supply store (1525 sf)
13: Cafeteria (1792 sf)
14: 1st level
15: 2nd level
16: Lecture hall (1364 sf)
17: 1st office (2620 sf)
18: Existing residential
19: Computer/photo lab (1430 sf)
20: Print lab (462 sf)
21: Materials labs (5000 sf)
22: Breakout space (1 @ 1250 sf)
23: 5th year and grad studio (3000 sf)

Total: 9250 sf

Program:

Teaching

25 - 75 students
3 faculty

50 - 100 students
7 - 10 faculty

Architecture

200 students
10 - 12 faculty

Program and use

Intervention strategies: program and use

 Dani Alvarez | arc452 Design Studio VIII Capstone | s2011
entry from street material lab

moment frame steel structure

concrete decking and pour

sloped insulation and substrate (where necessary)

allows for water run-off

slotted metal frames for drainage

guardrail frames (42" typical)

act as a platform for the variation of program along the walkway

Frames are sized at varying heights according to changing ergonomic needs

18" h seat

6' h leaning surface

8' h shade structure

boxes can fulfill various program needs (vegetation/shade structures/seating/lighting)

operable doors along the interior skin allow for cross ventilation throughout the entire space

the existing facade is used as an outer building skin

breeze supply/return ducts

the infill steel structure is pulled in from the existing facade to allow for circulation and moments of rest

new openings are created in the facade to allow for maximum air flow, daylighting, and visual contact to the level.
multi-height frames highlight critical experiential moments of old & new building technologies
Embedded Network

Nature Education Center at YMCA Camp Surf

**Theory:**
“...Theoretical platform of this project is to investigate the performance of the ‘educational facility.’ Through careful analysis of educational content and effective learning modalities, the architecture can become the passive facilitator through allowing the ecology in which the construct is embedded to take over.”

**Education:**
Any act or experience that has a formative effect on the mind, character, or physical ability of an individual.

**Ecology:**
Scientific study of the relation of organisms to one another and their surroundings.

**Sequence Methodology:**

**Ecosystem:**
Biological environment consisting of all the organisms living in a particular area, as well as all the nonliving (abiotic), physical components of the environment with which the organisms interact, such as air, soil, water, and sunlight.

**Program Definition:**

- **Dining Pavilion Renovation**
- **Construct:** Way Finding Interpretive Trails
- **Renovate:** Major Support Amenity – Current Dining Pavilion

- To make room for the main structure of the NEC and to increase the capacity, the shade structure over the dining pavilion must be removed and rebuilt, and the patio itself renovated. The dining pavilion is a necessary feature for visitors participating in overnight residential programs.

- **Location:**

1. Downtown San Diego
2. YMCA Camp Surf (SITE)
3. City of Imperial Beach
4. 2,531 Acre Tijuana River Research Reserve
5. Border between USA and Mexico
6. Tijuana

- **Dining Pavilion Renovation**

- **Way Finding Trails**

- **Construction**:

- 45 acre preserved coastal wetland

- **Southern California**

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Macro Scheme: Ecological Zones + Trail Network

Coastal Life Habitats at YMCA Camp Surf

- Beach/Inter-tidal Zone: 3.5 Acres
- Southern Fore-dune: 2.9 Acres
- Coastal Salt Marsh: 13.5 Acres
- Wetland: 1.1 Acres
- Grassland: 3.7 Acres
- Maritime Succulent Scrub: .8 Acres

Macro Scheme: Seawall redux = Coastal Circulation

Existing

- Rusted steel is a hazard
- forces circulation immediately inland
- circulation dead ends at dining deck

Proposed

- with embedded boardwalk encourages coastal circulation
- circulation with no dead ends
- hazardous steel and barbed wire demolished
1. Existing Kitchen
2. Existing Dining Pavilion
3. Dune Rehabilitation Area
4. Add on entry porch to existing trail
5. Indoor Dining Area
6. Exhibition Hall
7. Hands on Learning Display area (Multi-Use)
8. Buffet Area
9. Seawall & Boardwalk (to Beach)
10. Recycling
11. Reception
12. To Mezzanine/roof garden
13. Resource/reading room
14. Media Stage
15. Storage/Solar Battery Room
16. Solar Learning garden + PV array
17. Water Collection Cistern
Roof Structure
Nature Education Center at YMCA Camp Surf
The core of the embedded network of trail systems at ymca camp surf will be the Educational Node. These 5 outdoor classrooms will consist of dock like construction of southern Pine planks and framing members placed onto piles as foundations and supporting structure for overhead shading. The program for each consists of various moments of introspection and group seating that as a whole is a just off the beaten path. Each node also consists of signage to explain the theme which is the ecological zone it is in and a concept of sustainable living ie: food conservation.