Public Interest Architecture Program

GEORGIA BIZIOS
North Carolina State University
Public Interest Architecture Program

Professor Georgia Bizios, FAIA, DPACSA
School of Architecture
College of Design
NC State University
A. Public Architecture Program

ARC 503 or 402  Public Interest Architecture: Modest Homes  6 credits
ARC 503: Advanced Studio. Required credit in M. Arch program. Students select among several offerings.
ARC 492 Advanced Studio. Required credit in B.E.D.A. program. Students select among several offerings.

ARC 590  Public Interest Architecture Seminar  3 credits
ARC 590: Graduate Architecture Seminar. Required credit in M.Arch and B.Arch programs. Students select among several offerings.

Course Prerequisites: Graduate or senior standing in Architecture

These co-requisite courses have been offered as a Public Architecture Program
Spring 2014: to 5 advanced graduate students and 4 undergraduate seniors
Summer 2025: to 8 graduate students

This Public Architecture Program is enhanced by collaborations with community partners and with local architectural offices. Students work with representatives of non-profit organizations that are providing affordable housing in NC and/or with future homeowners. They are also assigned to professional offices as interns reporting approximately 200 hours of IDP credit.

Organization and Scope: Studio
The focus of the studio is on architectural design at residential scale. Students will have the opportunity to design modest places and carry out design explorations and proposals that integrate issues of site, human needs and construction methods. Modest buildings challenge students to develop their ideas in greater depth and detail that is usually required of larger scale studio projects and use presentation techniques that clearly communicate with lay persons the design intent and its potential for implementation.

Organization and Scope: Seminar
The course addresses design in the public interest as a critical and growing element of the architecture discipline, contributing to the social, economic, and environmental wellbeing of our communities. We review the history of public interest architecture, and study current trends and successful examples. Students lead in class discussions based on weekly reading assignments and complete a research/case study paper or a project. In class presentations of student papers or projects and individual meetings with the instructor take place during the second part of the semester. Students explore and document personal, academic, and civic learning through critical reflections.

B. Home Environments Design Initiative (HEDI)

As Director of HEDI (2004-present) Professor Bizios has been creating opportunities for students in our curriculum to earn academic or internship credit by engaging in design projects for the public good, through collaborations with community partners and local professional offices. These opportunities and collaborations provided the appropriate context for our School to be able to offer the Public Architecture Program described above as soon as NCARB regulations allowed full integration of academic and internship credit.
NORTHSIDE NEIGHBORHOOD HOMES: The Courts

Public Interest Architecture Studio Project

Kersten Welch, M.Arch 2016

Funded internship and academic credit

Community Partners: Self-Help Community Development Corporation, Community Alternatives for Supportive Abodes (CASA), and The Jackson Center at UNC Chapel Hill

Completed in 2015
NORTHSIDE NEIGHBORHOOD HOMES:
Caldwell Street Bungalows

Public Interest Architecture Studio Project
Rebecca Ryan, M.Arch 2016
Funded internship and academic credit
Community Partners: Self-Help Community Development Corporation, Community Alternatives for Supportive Abodes (CASA), and The Jackson Center at UNC Chapel Hill.
Completed in 2015
NORTHSIDE NEIGHBORHOOD HOMES:
The Living Lane

Public Interest Architecture Studio Project

Mahta Nazari, M.Arch 2016

Funded internship and academic credit

Community Partners: Self-Help Community Development Corporation, Community Alternatives for Supportive Abodes (CASA), and The Jackson Center at UNC Chapel Hill.

Completed in 2015
THE CABINS OF STOKES COUNTY:
Hanging Rocks Cabin

Public Interest Architecture Studio Project

Arsalan Abbasi, B.Arch 2015
Rachel Steinsberger, M.Arch 2014

Funded internship and academic credit

Community Partner: Economic Development
Commission (EDC), Stokes County, North Carolina

Completed 2014

AIA/ACSA Practice & Leadership Award 2015

Georgia Bizios, FAIA, DPACSA
THE CABINS OF STOKES COUNTY:
Hanging Rocks Cabin

Public Interest Architecture Studio Project

Arsalan Abbasi, B.Arch 2015
Rachel Steinsberger, M Arch 2014

Funded internship and academic credit

Community Partner: Economic Development Commission (EDC), Stokes County, North Carolina

Completed 2014

Arsalan and Rachel were assigned a site near downtown Danbury, NC, and they focused on creating a community of cabins with shared recreational facilities. The form of their cabin was inspired by the rock outcroppings of Hanging Rock. They pushed this mountain concept to inform the “carved out” living area in the cabin with a “hanging” roof that provides protection. The layout includes a service “bar” where the kitchen, toilet, and stair are grouped together linearly for efficient use of space.
THE CABINS OF STOKES COUNTY:
Mountain View Cabin

Public Interest Architecture Studio Project

Will Sendor, M.Arch 2015
David Koontz, M.Arch 2015

Funded internship and academic credit

Community Partner: Economic Development Commission (EDC), Stokes County, North Carolina

Completed 2014

David and Will explored vernacular architectural language, a simple formal gesture, and efficient construction techniques in the cabin design. Mountain View Cabin Resonates with the surrounding architectural language of Stokes County, NC, with it's simple vernacular form and materials. The design packs in sleeping, cooking, dining, and relaxing for up to four travelers into a 500-s.f. footprint, using flexible spaces that transform throughout the day.

David and Will continued the schematic design into a more developed AutoCAD drawing set, which was presented to the Stokes County EDC. Will continued the design development using the EDC and community feedback during Summer 2014.
BRIDGING THE GAP: Public-Interest Architectural Internships (Lulu, 2011)

Georgia Bizios and Katie Wakeford, editors

Bridging the Gap, a collection of 19 essays, brings together the best in current practice and thinking regarding public-interest architectural internship and advocates for new models that will have the power to profoundly change the architectural profession and our communities. The collection is intended to fuel a vibrant conversation in the hope of inspiring the creation of new public-interest internships and informing the ongoing updates to the Intern Development Program (IDP). The advantages to developing new public-service internships are clear. Let’s get started!
THE HEART OF TOWN: Revitalizing Main Street

Graduate Architecture Seminar Funded Project

Jamey Glueck, M Arch 2011
William Lavin, M Arch 2013
Academic credit

and Katie Wakeford, M Arch 2006
Funded Internship

Community Partner: Downtown Development,
Town of Rocky Mount, NC
Completed in 2011
Sustainable Strategies for Residential Renovations

August 2014

6. Structural Frame and Building Envelope:

Substantial Benefit:

Shading Systems and Gutters

- Design appropriate overhang to allow sunlight into the home during winter months and block sun from entering the building envelope in the summer. Shading devices can range from trees, as mentioned in Section 1, Site and Landscape, to bifolds and awnings. Consider adjustable shading devices to accommodate various times of the day and year.

- Overhangs are also an important moisture management strategy, with at least 1 1/2 ft overhang recommended on all sides of the home for water protection.

- Design appropriate gutter system to work with the slope of the land to carry water at least 5 feet away from the house.

Building Frame/Envelope

- Implement advanced framing techniques: Advanced framing techniques include using blocking and roof sheathing 24 inches on center, constructing a 2x4 stud wall, and using cross-laminated timber beams with engineered wood products.

- Use Forest Stewardship Council (FSC) certified wood for framing, floor joists, and ceiling rafters.

- If FSC certified wood is not an economically feasible choice, other options for framing include engineered lumber products.

- For decks, consider composite decking products.

- Install a rain screen wall system to allow water to penetrate the exterior cladding to effectively drain out before penetrating the wet assembly.

- Use noncombustible and durable exterior products, preferably with a 60-year product lifetime.

- Create a second attic space.

- Include proper flashing, weather-stripping, and caulking around all walls and roof penetrations to prevent air leakage.

- Air seal and insulate on Joists, using celotex or a barrier with rigid insulation, or a spray polyurethane foam insulation.

Sustainable Strategies for Residential Renovations

Research Project

Jordan Eure, B.Arch 2011

Funded Internship

Sponsored by Home Environments Design Initiative, North Carolina State University

Completed in 2010
WALLTOWN TOOL LENDING SHED

Design/Build Project

Geoffrey Barton, M.Arch 2009

Service Internship

Community Partner: Self-Help Community Development Corporation

Building Materials funded by Self-Help Community Development Corporation

Completed in 2010
MEETING THE NEED:
Architecture in Affordable Housing

Master of Architecture Thesis Project
Craig Bethel, M.Arch 2010

Academic credit
Community Partner: Self-Help Community Development Corporation
Completed in 2010
ROSE HILL EMERGENCY HOUSING
STORAGE SHED

Design/Build Project

Megan Patnaik, M.Arch 2010
Adam Harker, M.Arch 2010
Courtney Evans, M.Arch 2010

Academic Credit

Community Partner: Sanders Service Center, Magnolia, NC

Building materials funded by the students through crowd sourcing efforts.

Completed in 2010
ROSE HILL EMERGENCY HOUSING
STORAGE SHED

Design/Build Project

Megan Polnauik, M.Arch 2010
Adam Harker, M.Arch 2010
Courtney Evans, M.Arch 2010

Academic Credit

Community Partner: Sanders Service Center, Magnolia, NC

Building materials funded by the students through crowd sourcing efforts.

Completed in 2010
Affordable Housing Internship Program Launched

Architecture student Lauren Liberto and Wendy Legerton had the experience of a lifetime during the summer of 2009. They worked in architecture internships addressing affordable housing issues at Self-Help, an organization dedicated to community development, in Durham, North Carolina.

Self-Help provides financial services to low-income families and communities in rural and urban areas in North Carolina. The organization has been a leader in developing affordable housing since its inception in 1974. The Durham office has been involved in numerous housing initiatives, and its work has been recognized for its innovative approaches to affordable housing.

The Durham office was involved in a project to develop affordable housing in a low-income neighborhood in Durham. The goal of the project was to create a neighborhood that was affordable and sustainable, while also providing opportunities for economic development.

The architecture students were involved in the design and planning of the project. They worked closely with the Self-Help staff to understand the needs of the community and the challenges of developing affordable housing.

The internship experience was a valuable learning opportunity for the students. They gained a deeper understanding of the complexities of affordable housing and the importance of community involvement in the process.

The Internship Program

The University of North Carolina at Chapel Hill School of Architecture's Community Engagement Program provided funding for the internship. The program aims to connect students with community organizations working on issues related to housing and neighborhood revitalization.

The Internship Program is open to architecture students who are interested in working on affordable housing projects. The program provides funding to cover the cost of living expenses and travel to the project site.

The program is designed to provide students with hands-on experience working on real-world projects. Students are assigned to projects based on their interests and qualifications.

The Internship Program is co-sponsored by Self-Help and Home Environments Design Initiative, North Carolina State University. The program is open to students from both universities and is funded by a grant from the U.S. Department of Housing and Urban Development.

The Internship Program is an excellent opportunity for students to gain valuable experience in affordable housing and community development. It is a great way to connect with community organizations and learn about the challenges and successes of developing affordable housing.

For more information about the Internship Program, please contact the Community Engagement Program at the University of North Carolina at Chapel Hill School of Architecture.
LUMBER HOME DESIGNS
PEMBROKE, NC

PROJECT DESCRIPTION:

In the Fall of 2004, NC State University's College of Design, in cooperation with the Lumbee Tribe of North Carolina, embarked on an initiative to promote quality home designs and an increase in tribe member home ownership. The role of the College of Design, through its statewide program of research, extension, and engagement, was to assist in developing prototype home designs to be used by members of the tribe in building new homes for their families.

A team of architectural graduate students, under the leadership of Professor Georgiana Ilieva, worked together with the tribe members to identify important priorities for the Lumbee homes. The resulting design guidelines emphasized affordability, site sensitivity, sustainability, quality construction, and cultural values. At the conclusion of the initial phase of the Lumbee Home Designs project, the NC State Design Team delivered the Design Development drawing sets and models for three house prototypes, as well as for possible additions/variants on each. As of January 2006, the final Lumbee Home Design is under construction.

The NC State/Lumbee Tribe partnership is now entering Phases Two and Three. Phase Two will focus on the design of a small house to be built with panelized construction and intended to reduce the Tribe's dependence upon trailers. In Phase Three, the NC State design team will work with the Lumbee community to develop Neighborhood Design Guidelines for a 100-acre tract of tribe-owned land. The expectation is that many of the prototype designs will be built in this new neighborhood and the design guidelines will promote a cohesive, nurturing, and culturally appropriate development pattern.

In addition to providing a valuable service to homeowners, this project is an excellent opportunity for students to learn by addressing issues of site and place for communities in North Carolina.

HOMES FOR THE LUMBER TRIBE
OF NORTH CAROLINA

Research and Participatory Design Project

Jim Argenta, Cho' Clark, Marshall Dunlap, Mikhail Kim,
K.C. Kurtz, Wendy Legerton, Katie Wakeford

Funded Internships

Cosponsored by The Lumbee Tribe of North Carolina and
Home Environments Design Initiative, North Carolina
State University

Completed 2004-2007
HOMES FOR THE LUMBEE TRIBE OF NORTH CAROLINA

Research and Participatory Design Project

Jim Argenta, Che’ Clark, Marshall Dunlap, Mikhail Kim, K.C. Kurtz, Wendy Legerton, Katie Wakeford

Completed 2004-2007

AIA/ACSA Practice & Leadership Award 2015

Georgia Bizios, FAIA, DPACSA