



ARC 404LAB-0002- Architecture Design Practicum (Laboratory)
Architectural Ceramic Assemblies Workshop- Innovation in Practice
Spring 2020 / Credit Hours: 3 Credits
Class Hours: Tuesday 9:30AM-12:20PM
Instructor: Associate Professor Omar Khan

Description

This architecture design practicum will address the contemporary practice of architectural terracotta design and manufacturing. It will provide students an opportunity to understand how architectural practices innovate and work through a design process towards a working prototype. Students will work in teams and be paired with architectural practices from around the country that are participating in the Architectural Ceramic Assemblies Workshop 2020 (ACAW2020). You will observe their process and as necessary assist them in developing their project. Likewise you will be developing your own design project- moving through research, design and prototyping.

The design practicum will also expose you to the manufacturing process and how that influences design innovation. Manufacturing, like practice, is also looking to innovate, anticipating needs from the profession and remaining competitive in a globalized world. You will visit their factory and observe ways that they are looking to innovate with new technologies and engaged research with the profession. As part of your research you will model ways that terracotta is manufactured and incorporate that into your own design development.

Class Objectives and Learning Outcomes:

- Students will develop an understanding of applied research between the architectural profession and manufacturing.
- Students will develop an understanding of terracotta manufacturing practices and designing for advanced manufacturing.
- Students will develop an ability to fabricate slip cast terra cotta prototypes.

Schedule and Evaluations:

The semester will involve three activities that will overlap over the semester and be **graded** as follows:

20% Professional Engagement

30% Research

50% Prototype

Professional Engagement: Your team will be paired with a professional practice engaged in the Architectural Ceramic Assemblies Workshop 2020. You will attend weekly calls where these teams are developing their ideas in collaboration with Boston Valley consultants. You will assist these teams as needed to better understand their process.

Research: You will visit Boston Valley Terra Cotta's Factory and understand the manufacturing process. We will collectively develop model to represent this process so that we can better reference them. Thereafter you will do research into developing a bioclimatic façade system that uses terra cotta. You can take inspiration from past ACAW projects and architectural precedents.

Prototype: In the latter half of the semester you will develop a design for a bioclimatic façade system taking it all the way to a scaled terra cotta prototype.

	Date	Deliverable
W1	28-Jan	Introduction to course
W2	4-Feb	Visit to Boston Valley Terra Cotta 6860 S Abbott Rd, Orchard Park, NY 14127
W3	11-Feb	Research 1 due
W4	18-Feb	Discussion of issues/ Crits
W5	25-Feb	Research 2 due
W6	3-Mar	Discussion of issues/ Crits
W7	10-Mar	Prototype Concept due
W8	17-Mar	<i>Spring Recess- No class</i>
W9	24-Mar	Prototype Digital Model due
W10	31-Mar	Discussion of issues/ Crits
W11	7-Apr	Prototype Mold due
W12	14-Apr	Production review
W13	21-Apr	Production review
W14	28-Apr	Production review
W15	5-May	<i>Final Reviews- No Class</i>
W16	12-May	Final Presentation

Grading Criteria

A= 4 Exceptional work. Meets and exceeds all criteria. Clear understanding of concepts and techniques. Exhibits insights indicating that the experiences from one project/exercise to the next are cumulative and transferable. Constructively challenges and criticizes issues brought forth during the semester. Develops capability to be constructively self-critical. Assumes responsibility for intellectual development of self and encourages intellectual development of colleagues. Maintains perfect attendance. This grade indicates clear capability to perform well at the next level.

B= 3 Above average work. Meets all criteria. Good understanding of concepts and techniques. Reasonable carryover from previous exercises. Constructively challenges issues brought forth during the semester. Maintains excellent attendance. This grade indicates a reasonable prediction of competent performance at the next level.

C= 2 Average work. Meets minimum requirements. Indicates some difficulty in understanding concepts and techniques or in transferring experience from one project to the next. Exhibits need for improvement in critical thinking skills. Maintains good attendance. This grade indicates mediocre to poor performance at the next level.

D= 1 Below average work. Does not meet minimum requirements. Indicates serious difficulties in understanding concepts and techniques, and/or in the transfer of information. Probable indication of poor attendance and lack of motivation.

F= 0 Poor work. This grade is a probably indication of late work, incomplete work, work not submitted, or overall work so weak that a passing grade is not reasonable.

Work Expectations:

Most of your time in the studio will be spent on developing your projects through team discussions and reviews. However, there will be visits to factories that will take place during the semester which you are required to attend. These all will be in the Western New York region. The studio is a constructional learning environment. It and your success will depend on you being self directed and bringing issues to the table.

Specific Needs:

Students with specific needs that require attention should inform the instructor at the beginning of the semester. If you have a disability (physical, learning, or psychological) which may make it difficult for you to carry out the course work as outlined, and/or requires accommodations such as recruiting note takers, readers, or extended time on exams and assignments, please contact the Office of Disability Services, 25 Capen Hall, 645-2608. The office will provide you with information and review appropriate arrangements for reasonable accommodations.