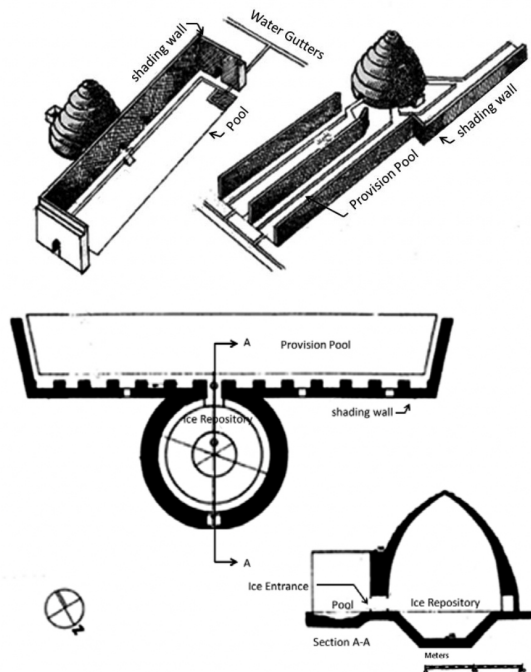


# Food + Architecture from Ancient to Modern Times

## Course Syllabus

**Instructor:** Gwynne Mhuireach, PhD  
**Course:** 4 credits, 2 hours, 2 days/week  
**Format:** Hybrid virtual/remote and in-person  
**Eligibility:** All students enrolled in AgBE Singapore Study Abroad program  
**Prerequisites:** None



—Source: Hosseini and Namazian, 2012

### CONTEXT

Historically, food systems were tightly integrated with urban planning and architectural design, largely due to energy constraints. Traditional cultures had specific building types and infrastructure devoted to the production, processing, storage, preparation, and eventual reuse of food wastes. Similar to vernacular architecture, climate and geography traditionally played key roles in determining the types of food crops that were grown and their preservation techniques. Thus, in the past food and architecture were tightly intertwined with the cultures they arose from, due to their dependence on local geographic and climatic factors.

As technologies and energy sources changed over time, breaking connections with local materials and climate, relationships between food and architecture also evolved. For example, the advent of widespread refrigeration in the mid-1900s meant food could be stored longer and transported across larger geographic distances, leading to a disconnection between people and their food sources. Today, we are critically de-

pendent on electricity, a long global supply chain, and a few industrial producers, which has resulted in a fragile, vulnerable food system.

Through lectures, discussions, case studies, and group projects, this course will encourage you to think critically about how to create more sustainable and secure urban food systems through renewed integrations of food and architecture. We will examine building form and organization, materials, spatial requirements, environmental control systems, and other key aspects of designing with food in mind. Rediscovering and learning from innovations throughout human history will be a primary focus area of our inquiry and exploration of this topic. Ultimately, we will test the underlying premise of this course: our need to procure, store, process, and distribute food has been a primary driver of architecture and urban planning throughout human history.

### LEARNING OBJECTIVES

Upon the successful completion of this course students will be able to:

- *list* ways in which climate and geography affected both food and architecture in traditional cultures;
- *describe* major historical inflection points that caused dramatic changes in the relationship between food and architecture;
- *compare* modern and historic building typologies for food storage, processing, and preparation;
- *critique* different building typologies with regard to: 1) social issues, such as food equity and human health; 2) operational energy use; 3) material resource use.

### COURSE INFORMATION

#### *Assignments*

Students are expected to attend all class meetings, actively engage in discussions and activities, and perform all required readings. The following three assignments will comprise the majority of students' grades:

Discussion Lead: Student pairs will facilitate one reading discussion during the first half of the term.

Assignment 1: Groups of 2–3 students will select a major historical inflection point in the food system (e.g., fermentation, refrigeration, electrification) and examine its impact on architectural design. They will produce a 3–5 page report with written and graphical analyses of the selected inflection point, accompanied by bibliographic references where appropriate.

Assignment 2: Individual students will conduct case studies of specific building typologies related to food storage, processing, and/or preparation to tease out fundamental architectural issues and place them in the context of social and technological changes. Case studies will include diagrams in section and plan, which will eventually be combined to create a large matrix of typologies across cultures, climate, technologies, and time. During the final weeks of the term, students will give a 20–30 minute slide presentation and submit a written script and bibliography.

#### *Grading*

Attendance & participation	20%
Reading & discussion	20%
Inflection point research	30%
Case study presentations	30%