

## MIT SCHOOL OF ARCHITECTURE + PLANNING

4.154

Architecture Design Option Studio

STUDIO TITLE: OFF-CAMPUS: TRANSFORMING THE MONASTERY OF TOUMLILINE  
SPRING 2017  
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LEVEL: GRADUATE  
PREREQUISITES: 4.145 or 4.153  
SCHEDULE: THURSDAYS 1-6 PM + FRIDAYS 12-5 PM

## OFF-CAMPUS

### TRANSFORMING THE MONASTERY OF TOUMLILINE



## SUMMARY

The University of Al-Quaraouiyine, located in Fes, Morocco, is the oldest existing and operating university in the world. Founded in 859, the university is one of the leading educational centers in the Muslim World. The university espouses traditional modes of learning within an ancient and sophisticated architectural structure ensconced in the heart of the old medina of Fès.

In contrast, situated in a forest at the base of the Atlas mountains 80 km south of Fès, the Toumliline Monastery was founded in 1952 to serve as a rural haven for a community of Benedictine monks. Despite being a Christian community in an Islamic land, this small monastery developed into a space of education and dialogue which hosted international conferences and meetings on interfaith relations, politics, and literature. During its short lifespan, the monastery also served as a school, library, and hospital for the local community. After the last monks left the monastery in 1968, the site has remained abandoned.

This objective of this studio is to reactivate and transform the site of Toumliline into an experimental campus of learning and cultural exchange. The new center at Toumliline will serve as a 'mirror campus' to the University Al-Quaraouiyine. Disconnected from the urban fabric, this new campus must be a self-sustaining territory: dimensioned on available resources, built with materials existing on-site, and integrated into a circular economy.

## STUDIO DESCRIPTION

Architects often enter a project long after its critical limits have been defined, as one small player in a predetermined process. They are not participants in what occurs before their entry into a project, nor are they involved in the life of a project after it is built. This studio posits that architectural strategies should be integrated into a project long before and long after the conventional point of entry. The architect's perimeter of action is what we will try to expand and redefine. The goal of the studio is to develop a project's *conditions of existence* and not simply its formal incarnation.

This studio is based on a real project in its nascent phase. A non-profit association has begun discussions about the monastery's eventual transformation in conjunction with the university, but no concrete position has yet been established. This studio will thus spearhead efforts to formulate viable alternatives for the site's future transformation. Strategies for the future sustainability of the project will also inform the design process. Students will integrate the realities of the project's social, economic, and political context into the conceptual frameworks they construct. At the end of the semester, the output of the studio will be presented to the association, the university, and public authorities in a workshop to launch the transformation of the monastery.

This studio will function on a collaborative model of design. The studio will begin the semester with a collective analysis phase of researching precedents. During the second part of the semester, students will work collaboratively in small groups to craft a territorial and programmatic proposal for the site in its entirety. After the midterm review and the studio trip to the site, the students will choose or craft one site strategy to develop together as a group. The overall site will then be divided into a series of smaller overlapping plots (one per student), upon which each student will develop an individual project. This approach will encourage students to explore issues of negotiation and spatial connection by accounting for the conditions posed by the adjacent projects of their classmates, ultimately creating an 'exquisite corpse.'

## CONTEXT - SITE

*"Rien ne se perd, rien ne se gagne, tout se transforme" (Lavoisier)*

Architecture is never entirely new, never pure: it assimilates, transforms, and reuses what already exists, drawing on the old to create the new. Renaissance Rome was constructed with marble recycled from ancient Roman structures; the Hagia Sophia was transformed from one of the greatest churches in Christendom into a mosque. In this studio, students will address questions of architectural patrimony and the negotiation of architectural limits between the extant structure and the new architectonic components.

The city of Fès is one of the most sophisticated and well-preserved urban fabrics built in the Arab world. The earliest traces of the campus date as far back as the middle of the 9th century and in many ways, the city has been built around and grown from the university. Al-Quaraouiyine was constructed with materials dug from the site itself and all of its infrastructure was conceived as a closed self-sufficient loop; the university was imagined and dimensioned to be an autonomous entity. Today, these systems have been integrated into the municipal networks and none of the original autonomy remains. By designing a mirror campus on the site of the Toumliline monastery, a rural territory far from any settlement, the studio will be re-engaging with the notion that a campus is a "proto-urban form" -- a possible beginning for a new city and a territory where resources, activities, materials and people exist in a fragile balance. This balance is at the heart of the studio project. At the scale of the entire territory and then at an architectural dimension, the students will develop designs that are strictly bound by the resources of the site itself.

## SCHEDULE

Studios will occur Thursdays and Fridays. The first studio will take place on **Thursday, February 7**. We will meet every week for two days, on Thursday afternoons from 1:00 pm-6:00 pm and Friday afternoons from noon-5 pm. As needed, we will hold discussions on Skype during the weeks when Tarik and Linna are not in studio.

Students are expected to be present in studio during the entire duration of the class period.

Week 1:	Feb 7-8	Studio Presentation / Introduction to the site / Case Studies (Tarik)
Week 2:	Feb 14-15	Desk crits (Maya): Precedents and Territorial Strategies
Week 3:	Feb 21-22	Thursday: Studio Pin-up / Friday: Desk crits (Linna)
Week 4:	Feb 28-March 1	Desk crits (Maya): Programmatic frameworks
Week 5:	March 7-8	Thursday: Studio Pin-up / Friday: Desk crits (Tarik)
Week 6:	March 14-15	Desk crits (Maya)
Week 7:	March 21-22	Thursday: <b>Midterm review</b> / Friday: Desk crits (Tarik + Linna)
Week 8:	March 25-29	<b>Spring break</b> – Studio trip
Week 9:	April 4-5	Desk crits (Maya)
Week 10:	April 11-12	Thursday: Studio Pin-up / Friday: Desk crits (Linna)
Week 11:	April 18-19	Desk crits (Maya)
Week 12:	April 25-26	Thursday: <b>Penultimate review</b> / Friday: Desk crits (Tarik)
Week 13:	May 2-3	Desk crits (Maya)
Week 14:	May 9-10	Thursday: Desk crits / Friday: Desk crits (Linna)
Week 15:	May 14-16	<b>Final Review</b> (date to be confirmed)

## STUDIO TRIP

The studio will travel to Morocco to see and document the site during spring break. The students will then travel to France to see Le Corbusier's La Tourette (to be confirmed).

## STUDIO OBJECTIVES

- Strengthen the students' ability to research, conceptualize, and develop an understanding of complex urban environments
- Strengthen the students' ability work across urban, landscape, and architectural scales
- Learn and practice presentations skills in front of clients and user groups
- Ability to represent a design concept through accurate graphic representation

## EVALUATION CRITERIA

Students will be graded according to the following criteria:

### Studio Criteria:

- Quality and depth of analysis and design research.
- Engagement in communal discussions and contribution to the studio's shared learning.
- Ability to process criticism in a productive manner and to self-evaluate.
- Clarity and organization of oral presentations.
- Completion of assignments by their deadlines.
- Individual growth over the growth of the semester.

### Attendance:

Attendance for the full duration of each class is mandatory. Greater than three absences for the semester without a medical excuse supported by a doctor's note or a family emergency confirmed by a school official may result in a failing grade. If you miss six or more classes, you will be asked to drop the subject or receive a failing grade.

## GRADING DEFINITION

The final grade will be based on a combination of attendance, participation, timely completion of assignments, and the quality of the work produced.

Weekly assignments, participation, quality of work: 40%

Midterm Review: 30%

Final Review: 30%

**A:** Exceptionally good performance demonstrating a superior understanding of the subject matter, a foundation of extensive knowledge, and a skillful use of concepts and/or materials.

**B:** Good performance demonstrating capacity to use the appropriate concepts, a good understanding of the subject matter, and an ability to handle the problems and materials encountered in the subject.

**C:** Adequate performance demonstrating an adequate understanding of the subject matter, an ability to handle relatively simple problems, and adequate preparation for moving on to more advanced work in the field.

**D:** Minimally acceptable performance demonstrating at least partial familiarity with the subject matter and some capacity to deal with relatively simple problems, but also demonstrating deficiencies serious enough to make it inadvisable to proceed further in the field without additional work.

**F:** Failed. This grade also signifies that the student must repeat the subject to receive credit.

## FINAL STUDIO DELIVERABLES

Grades will not be posted for students to view on their grade report until their work has been archived. The projects need to be properly prepared and formatted, and delivered to the Archiving TA. Studio TA's will collect project archives from each student immediately following the review. Detailed requirements and instructions for formatting will be posted to CRON, the Department website, and sent to students at the beginning of the semester.

## ACADEMIC INTEGRITY+HONESTY

All work submitted will fall under the jurisdiction of the MIT Policy on Academic Integrity. MIT's expectations and policies regarding academic integrity should be read carefully and adhered to diligently: <http://integrity.mit.edu>.

## DISABILITIES

A student who has a documented disability, or any concerns which he/she thinks may affect his/her ability to perform in class are invited to consult with the professors early in the semester so that suitable arrangements may be made. For MIT's policy on accommodations for disabilities, please follow this link: <http://mit.edu/uaap/sds/students/>.

## STUDENT PERFORMANCE CRITERIA

NAAB Student Performance Criteria

Required by NAAB and organized by “realms” to better understand the relationships between individual criteria. (The “NAAB Student Performance — Educational Realms & Student Performance Criteria” document is available on the Faculty Handbook website.) Include the criteria your subject addresses:

### **Realm A: Critical Thinking and Representation**

- A1. Communication Skills: Ability to read, write, speak and listen effectively
- A2. Design Thinking Skills: Ability to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.
- A3. Visual Communication Skills: Ability to use appropriate representational media, such as traditional graphic and digital technology skills, to convey essential formal elements at each stage of the programming and design process.
- A4. Technical Documentation: Ability to make technically clear drawings, write outline specifications, and prepare models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.
- A5. Investigative Skills: Ability to gather, assess, record, apply, and comparatively evaluate relevant information within architectural coursework and design processes.
- A6. Fundamental Design Skills: Ability to effectively use basic architectural and environmental principles in design.
- A7. Use of Precedents: Ability to examine and comprehend the fundamental principles present in relevant precedents and to make choices regarding the incorporation of such principles into architecture and urban design projects.
- A8. Ordering Systems Skills: Understanding of the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three dimensional design.
- A9. Historical Traditions and Global Culture: Understanding of parallel and divergent canons and traditions of architecture, landscape and urban design including examples of indigenous, vernacular, local, regional, national settings from the Eastern, Western, Northern, and Southern hemispheres in terms of their climatic, ecological, technological, socioeconomic, public health, and cultural factors.
- A10. Cultural Diversity: Understanding of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the implication of this diversity on the societal roles and responsibilities of architects.
- A11. Applied Research: Understanding the role of applied research in determining function, form, and systems and their impact on human conditions and behavior.

### **Realm B: Integrated Building Practices, Technical Skills and Knowledge:**

- B1. Pre-Design: Ability to prepare a comprehensive program for an architectural project, such as preparing an assessment of client and user needs, an inventory of space and equipment requirements, an analysis of site conditions (including existing buildings), a review of the relevant laws and standards and assessment of their implications for the project, and a definition of site selection and design assessment criteria.
- B2. Accessibility: Ability to design sites, facilities, and systems to provide independent and integrated use by individuals with physical (including mobility), sensory, and cognitive disabilities.
- B3. Sustainability: Ability to design projects that optimize, conserve, or reuse natural and built resources, provide healthful environments for occupants/users, and reduce the environmental impacts of building construction and operations on future generations through means such as carbon-neutral design, bioclimatic design, and energy efficiency.
- B4. Site Design: Ability to respond to site characteristics such as soil, topography, vegetation, and watershed in the development of a project design.
- B5. Life Safety: Ability to apply the basic principles of life-safety systems with an emphasis on egress.
- B6. Comprehensive Design: Ability to produce a comprehensive architectural project that demonstrates each student’s capacity to make design decisions across scales while integrating the following SPC:
  - A.2. Design Thinking Skills
  - A.4. Technical Documentation
  - A.5. Investigative Skills

- A.8. Ordering Systems
- A.9. Historical Traditions and Global Culture
- B.2. Accessibility
- B.3. Sustainability
- B.4. Site Design
- B.5. Life Safety
- B.8. Environmental Systems
- B.9. Structural Systems

- B7. Financial Considerations: Understanding of the fundamentals of building costs, such as acquisition costs, project financing and funding, financial feasibility, operational costs, and construction estimating with an emphasis on life-cycle cost accounting.
- B8. Environmental Systems: Understanding the principles of environmental systems' design such as embodied energy, active and passive heating and cooling, indoor air quality, solar orientation, day lighting and artificial illumination, and acoustics; including the use of appropriate performance assessment tools.
- B9. Structural Systems: Understanding of the basic principles of structural behavior in withstanding gravity and lateral forces and the evolution, range, and appropriate application of contemporary structural systems.
- B10. Building Envelope Systems: Understanding of the basic principles involved in the appropriate application of building envelope systems and associated assemblies relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.
- B11. Building Service Systems: Understanding of the basic principles and appropriate application and performance of building service systems such as plumbing, electrical, vertical transportation, security, and fire protection systems.
- B12. Building Materials and Assemblies: Understanding of the basic principles utilized in the appropriate selection of construction materials, products, components, and assemblies, based on their inherent characteristics and performance, including their environmental impact and reuse.

### **Realm C: Leadership and Practice**

- C1. Collaboration: Ability to work in collaboration with others and in multidisciplinary teams to successfully complete design projects.
- C2. Human Behavior: Understanding of the relationship between human behavior, the natural environment and the design of the built environment.
- C3. Client Role in Architecture: Understanding of the responsibility of the architect to elicit, understand, and reconcile the needs of the client, owner, user groups, and the public and community domains.
- C4. Project Management: Understanding of the methods for competing for commissions, selecting consultants and assembling teams, and recommending project delivery methods.
- C5. Practice Management: Understanding of the basic principles of architectural practice management such as financial management and business planning, time management, risk management, mediation and arbitration, and recognizing trends that affect practice.
- C6. Leadership: Understanding of the techniques and skills architects use to work collaboratively in the building design and construction process and on environmental, social, and aesthetic issues in their communities.
- C7. Legal Responsibilities: Understanding of the architect's responsibility to the public and the client as determined by registration law, building codes and regulations, professional service contracts, zoning and subdivision ordinances, environmental regulation, and historic preservation and accessibility laws.
- C8. Ethics and Professional Judgment: Understanding of the ethical issues involved in the formation of professional judgment regarding social, political and cultural issues in architectural design and practice.
- C9. Community and Social Responsibility: Understanding of the architect's responsibility to work in the public interest, to respect historic resources, and to improve the quality of life for local and global neighbors.