INTRODUCTION
The focus of the Comprehensive Design Studio is the integrated design and detailed development of a building including all of its requisite systems. This studio will merge the full range of your architectural education to produce a design this is both responsive to specific criteria and prototypical of ways to build sustainable, adaptable, long-use buildings—a set attributes often described as “resilience” in contemporary discourse. Your design will respond to and integrate contexts (site, urban, climatic, and economic); project requirements (spatial, performative and programmatic); technical demands (materials, structural loads, environmental enclosure, energy management, occupant comfort, human health); and dynamic processes (construction, assembly, future transformation).

To engender these investigations, the studio project focuses on design thinking for “resilient” buildings. This is both a cultural and technical proposition highly relevant to contemporary practice. While it is impossible to predict the future, as architects you will be asked to plan for it; and your designs will meet current and anticipate possible subsequent uses and conditions. Your building will need to transform efficiently to meet unknown future spatial, structural, and energy needs, and in response to a changing context and environment. Therefore, unlike traditional building programs with a fixed list of functional requirements, your program will be systems, their integration, their assembly, and their adaptability. While programmatic adaptability is one requirement of the studio project, resilience is a broader idea, emphasizing passive and structural solutions as the means to flexibility, durability, climate adaptation, reduced environmental impact, ecological site integration, and human comfort.

The Comprehensive Design Studio is coordinated with the co-requisite Integrated Building Systems course (ARCH-5220). The sequence of lectures in IBS follows the sequence of the studio, and the courses share a common schedule. Please refer to the IBS Syllabus for the schedule. Your grade for IBS will be determined in part by your response to the technical requirements of this studio. The technical requirements include the research, integration, and representation of the many technical systems inherent in this, and every, building project. Your grade in studio will be determined by your synthesis of site, space, and systems into a culturally relevant architecture.

OBJECTIVES
The Comprehensive Studio responds to the following NAAAB Student Performance Criteria:

B.2 Site Design: Ability to respond to site characteristics, including urban context and developmental patterning, historical fabric, soil, topography, ecology, climate, and building orientation, in the development of a project design

B.3 Codes and Regulations: Ability to design sites, facilities, and systems that are responsive to relevant codes and regulations, and include the principles of life-safety and accessibility standards.

B.4 Technical Documentation: Ability to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

B.5 Structural Systems: Ability to demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.

B.6 Environmental Systems: Ability to demonstrate the principles of environmental systems’ design, how design criteria can vary by geographic region, and the tools used for performance assessment. This demonstration must include active and passive heating and cooling, solar geometry, daylighting, natural ventilation, indoor air quality, solar systems, lighting systems, and acoustics.

B.7 Building Envelope Systems and Assemblies: Understanding of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources
B.8 Building Materials and Assemblies: Understanding of the basic principles used in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies based on their inherent performance, including environmental impact and reuse.

B.9 Building Service Systems: Understanding of the basic principles and appropriate application and performance of building service systems, including lighting, mechanical, plumbing, electrical, communication, vertical transportation, security, and fire protection systems.

C.1 Research: Understanding of the theoretical and applied research methodologies and practices used during the design process.

C.2 Integrated Evaluations and Decision-Making Design Process: Ability to demonstrate the skills associated with making integrated decisions across multiple systems and variables in the completion of a design project. This demonstration includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.

C.3 Integrative Design: Ability to make design decisions within a complex architectural project while demonstrating broad integration and consideration of environmental stewardship, technical documentation, accessibility, site conditions, life safety, environmental systems, structural systems, and building envelope systems and assemblies.

REQUIREMENTS

All work this semester will be done in pairs, which reflects the collaborative nature of architectural practice. Pairing also raises the expectations for the quantity and quality of the work, and for the depth and breadth of intellectual inquiry. We encourage you to be careful in your selection of partners, to establish clear mutual expectations, and to develop lines of communication early in the semester so as to avoid potential problems.

Only new and complete work will be reviewed at any desk crit, pin-up, or jury. We will not review work that you presented at any previous desk crit, pin-up, or jury.

Each assignment will clearly identify deliverables you must bring to the review (your professor may supplement this list). Students who are not prepared with the minimum requirements at the beginning of a critique will not have the opportunity to have their work reviewed. Computer output issues are not acceptable excuses for incomplete or missing work; the requirements are due for each review, regardless of the media choices that you make.

PREREQUISITES

This course requires that the following prerequisites be completed satisfactorily before enrolling. If it is discovered that you have not completed this prerequisites, you may be dropped from the course at any time during the semester:

ARCH 5110 Housing and Aggregation Studio

ATTENDANCE AND PARTICIPATION

Attendance and active participation in all class sessions is both expected and required. You can learn a great deal by observing other students’ reviews, for this reason (and as a courtesy to your classmates) attendance is mandatory at all critiques. All students are required to participate in class discussions and we encourage your active dialogue at reviews. Per School of Architecture policy, you are also required to attend the School of Architecture lectures offered during this term. The lectures are scheduled on Monday evenings.

Each absence will reduce your course grade, and three unexcused absences will automatically drop your grade by a full letter (e.g., from an A- to a B-). Consider that missing 3 of our 28 meetings represents approximately 11% of the course. More than 3 absences will constitute an automatic failure of the course. If you cannot attend a class, you must communicate this to your professor in advance, and you must submit a written excuse from you doctor, etc. If you have flu-like symptoms: you should not come to class, contact your professor, see a doctor, and get a written note from the doctor.

EXCUSED ABSENCES AND SPECIAL CIRCUMSTANCES

Per university policy, excusable lateness or absences are as follows: participation in University-sponsored student activities and athletic competitions, religious observances, jury duty and military service. You are responsible for making arrangements with the professor at least two weeks in advance or as soon as possible if it is at the beginning of the term. All of these conditions except religious observances require written documentation. Please contact College Student Services Office for details on what forms of documentation are acceptable and how it should be submitted.

Northeastern University has many resources available to support students in case of illness or personal crisis. Should a situation arise that will affect your attendance or performance in the course you must contact your academic advisor and professor as soon as possible to apprise them of the circumstances, as well as how much time will be missed. You should work with your professor to develop a plan, including a timetable, to make up missed course work. Please refer to the University’s Academic Policies and Procedures for additional information.
COURSE EVALUATIONS
As students, you play a critical role in the University’s commitment to quality teaching. The College of Arts Media and Design considers student feedback essential and requires all students to complete TRACE evaluations at the end of the semester. You will be asked to provide a screen shot to your professor that reflects your participation. You can, anonymously, opt out of completing the survey and still obtain the screen shot that satisfies the TRACE requirement. Of course, there is no need to wait all semester with a suggestion or comment to improve the course: we welcome and will thoughtfully consider your feedback and constructive criticism.

NAAB DOCUMENTATION
The work that students produce toward a degree granted by the School of Architecture is the property of the School of Architecture, and per NAAB requirements, the School of Architecture collects the complete body of coursework from selected students in each course contributing to the accredited degree program. You should document any work you wish to add to your personal portfolio in case the School requests it for NAAB documentation. If requested, the work must be submitted to the professor no later than one week after final exams.

EVALUATION
A consistent application of serial iterations is highly encouraged. We will assess the quality and quantity of the work at each studio session. While both your process and your progress affect your grade, you should be aware that merely spending a lot of time on a project is not equivalent to good performance. Your final semester grade will be calculated as a composite of the following criteria:

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EVALUATION CRITERIA
To avoid confusion about the level of achievement associated with each grade, please refer to the Graduate Course Catalog and The Architecture Department guidelines for studio course grading, which are summarized below.

A Superb quality work
The student: demonstrates one of the best performances on projects the instructor has seen at Northeastern or any other accredited school of Architecture; demonstrates true intellectual passion, curiosity, initiative, and exploration; consistently brings strong ideas to fruition with a high level of craft; conveys a strong affinity for design culture

A- High quality work
The student demonstrates one of the best performances on projects within the studio; demonstrates true intellectual curiosity, initiative, and exploration; consistently brings ideas to fruition with a high level of craft; conveys strong interest in design culture

B+ Good quality work
The student demonstrates a strong performance on projects within the studio; consistently brings strong ideas to fruition with a good level of craft; conveys broad interest in design culture

B Above average work
The student demonstrates good initiative and above average craft; conveys interest in design culture

B- Average work
The student demonstrates average effort, craft, and initiative while meeting all requirements

C+ Below average work
The student demonstrates below average effort, craft, and initiative; meets all requirements

C Well below average work
Well below average work. The student demonstrates minimal effort, craft, and initiative; engages in excuse-making, tardiness, and absence

F Unacceptable work
The student demonstrates little effort, craft and initiative that is so poor as to be unworthy of credit; engages in excuse-making, tardiness, and absence
ACADEMIC INTEGRITY

Northeastern University is committed to the principles of intellectual honesty and academic integrity. As Northeastern students and faculty, we are part of an academic community dedicated to the creation and translation of knowledge, and therefore dependent on relationships based on honesty and trust. Actions that violate these standards undermine the community—such as submitting others work as our own—will not be tolerated. Please be sure you are familiar with the University’s Code of Student Conduct, and the Academic Integrity Policy, and know that violations of these policies have serious administrative and academic consequences. If you have any concerns, please contact your professor prior to submitting work for evaluation. For additional information refer to: http://www.northeastern.edu/osccr/academichonesty.html