University of Massachusetts, Amherst

Interim Progress Report for Year Five

Instructions and Template

November 30, 2021
Contents

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4. Requirements for the Use of Digital Content in Interim Progress Reports
1. INSTRUCTIONS AND TEMPLATE GUIDELINES

Purpose

Continuing accreditation is subject to the submission of interim progress reports at defined intervals of 2 years and 5 years after an eight-year term of continuing accreditation is approved.

This narrative report, supported by documentation, covers three areas:
1. The program’s progress in addressing not-met Conditions and Student Performance Criteria (SPC) from the Interim Progress Report Year 2 review.
2. Changes or Planned Changes in the Program.

Supporting Documentation

1. The narrative should describe in detail all changes in the program made in response to not-met Conditions and Student Performance Criteria, including detailed descriptions of changes to the curriculum that have been made in response to not-met SPC that were identified in the review of the Interim Progress Report Year 2. Identify any specific outcomes expected to student performance. Attach new or revised annotated syllabi identifying changes for required courses that address unmet SPC.
2. Evidence of student work is only required to address deficiencies in the following cases: (1) If there are any SPCs that have not been met for two consecutive visits; (2) If there are three not-met SPCs in the same realm in the last visit.
   • Provide three examples of minimum-pass work for each deficiency and submit student work evidence to the NAAB in electronic format. (Refer to the “Guidelines for Submitting Digital Content in IPRs” for the required format and file organization.)
   • All student work evidence must be labeled and clearly annotated so that each example cross-references the specific SPC being evaluated and shows compliance with that SPC.
3. Provide additional information that may be of interest to the NAAB team at the next accreditation visit.

Outcomes

IPRs are reviewed by a panel of three: one current NAAB director, one former NAAB director, and one experienced team chair.¹ The panel may make one of two recommendations to the Board regarding the interim report:
1. Accept the 5 yr. Interim Progress Report as having corrected deficiencies identified in the Interim Progress Report Year 2. The annual statistical report (see Section 9 of the 2015 Procedures) is still required.
2. Reject the interim report as having not corrected deficiencies or demonstrated substantial progress toward addressing deficiencies and advance the next accreditation sequence by at least one calendar year, thereby shortening the term of accreditation. In such cases, the chief academic officer of the institution will be notified and a copy of the decision sent to the program administrator. A schedule will be determined so that the program has at least six months to prepare an Architecture Program Report. The annual statistical report (see Section 9 of the 2015 Procedures) is still required.

Deadline and Contacts

IPRs are due on November 30. They shall be submitted through the NAAB’s Annual Report System (ARS). As described in Section 10 of the 2015 NAAB Procedures for Accreditation “…the program will be assessed a fine of $100.00 per calendar day until the IPR is submitted.” If the IPR is not received by

¹ The team chair will not have participated in the visiting team during the year in which the previous decision on a term of accreditation was made.
January 15 the program will automatically receive Outcome 2 described above. Email questions to accreditation@naab.org.

Instructions

1. Reports shall be succinct and are limited to 40 pages/20 MBs, including supporting documentation.
2. Type all responses in the designated text areas.
3. Reports must be submitted as a single PDF following the template format. Pages should be numbered.
4. Supporting documentation should be included in the body of the report.
5. Remove the #4 “Requirements for the Use of Digital Content in Interim Progress Reports” pages before submitting the interim progress report.
2. EXECUTIVE SUMMARY OF THE TWO MOST RECENT NAAB VISITS: 2016 and 2010

**CONDITIONS NOT MET**

<table>
<thead>
<tr>
<th>2016 VTR</th>
<th>2010 VTR</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**STUDENT PERFORMANCE CRITERIA NOT MET**

<table>
<thead>
<tr>
<th>2016 VTR</th>
<th>2010 VTR</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.3 Codes and Regulations</td>
<td>13.14. Accessibility</td>
</tr>
<tr>
<td>B.9 Building Service Systems</td>
<td>13.20. Life safety</td>
</tr>
<tr>
<td></td>
<td>13.25. Construction Cost Control</td>
</tr>
<tr>
<td></td>
<td>13.28. Comprehensive Design</td>
</tr>
</tbody>
</table>
3. TEMPLATE

Interim Progress Report Year 5
University of Massachusetts, Amherst
Department of Architecture
Master of Architecture
Track I (non-preprofessional degree plus 87 credits)
Track II (preprofessional degree plus 57 credits)
Year of the previous visit: 2016

Please update contact information as necessary since the last APR was submitted.

Chief administrator for the academic unit in which the program is located:

Name: Stephen Schreiber
Title: Professor and Chair
Email Address: schreiber@umass.edu
Physical Address: Design Building, Room 222, 551 North Pleasant St., UMass Amherst, Amherst, MA 01003

Any questions pertaining to this submission will be directed to the chief administrator for the academic unit in which the program is located.

Chief academic officer for the Institution:

Name: John McCarthy
Title: Provost and Senior Vice Chancellor for Academic Affairs
Email Address: jmccarthy@provost.umass.edu
Physical Address: Whitmore Building, UMass Amherst, Amherst, MA 01003
I. Progress in Addressing Not-Met Conditions and Student Performance Criteria
   a. Progress in Addressing Not-Met Conditions

   University of Massachusetts, Amherst, 2021 Response: N/A

   b. Progress in Addressing Not-Met Student Performance Criteria

   B.3 Codes and Regulations

   2016 Team Assessment: Evidence found in student work in ARCH 601 G4 Studio (Graduate Design IV) and ARCH 700 Integration Studio indicated that an understanding of this SPC is being introduced. However, the team did not find consistent evidence that an “ability” with regard to this SPC is being addressed in these courses.

   University of Massachusetts, Amherst, 2018 Response: At the time of the visit, the department had just begun a practice of having one professor teach both Grad Design 4 and Integration. That instructor has taken these concerns seriously, and we are confident that this student performance criterion is met in the two semester sequence, particularly in Arch 700 Integration.

   University of Massachusetts, Amherst, 2021 Response: The 2 semester sequence of Graduate Design IV (spring) followed by Integration (fall) addresses these issues. Graduate Design Studio IV is a semester long course that teaches graduate students how to develop design concepts to improve energy performance of buildings, use building performance analysis software and simulations to determine ways to achieve net-zero energy, combine passive and active design strategies for improving energy-efficiency, integrate different building systems, and investigate the effects of design decisions on building performance. Students are rarely exposed to this aspect during their education, and this particular model is extremely successful in preparing future architectural professionals to address pressing environmental challenges. Students typically focus on a complex building project, and work on schematic and design development documentation. Mid-term and final projects are scheduled to review the progress and final outcomes of the design process. Integration Studio is a subsequent course, in which students develop construction documentation (construction drawings and specifications) for the project designed in Graduate Design Studio IV. Early weeks of the Integration studio focus on understanding the basic organization of construction documents, cartooning and planning the construction documents set, and learning about the graphic standards for construction documents. Students are expected to develop construction documents of their designs, starting with site-work, structural plans, and building shell. Then, students proceed with the development of floorplans, reflected ceiling plans, sections, and elevations (annotated and dimensioned). Mid-term review is scheduled to provide feedback and direction for next stages. Following the mid-term review, students work on developing technical details for the facade systems and roofing systems. Students also prepare specifications for the facade or roofing system, identifying materials and their properties, as well as construction techniques. The last part of the semester focuses on final preparation of the construction documents. Final review is scheduled to review finalized construction documents. Guest critics and practicing architects are typically invited for the final review.

B.9 Building Service Systems
2016 Team Assessment: The team found evidence of student achievement at the prescribed level in work prepared for ARCH 620 Building Physics II and ECO 597 Advanced Building Energy in mechanical and electrical systems; however, plumbing, communication, vertical transportation, and fire protection systems were not covered. Vertical transportation, plumbing, and fire protection systems were noted as topics to be covered in the spring 2014 syllabus of ARCH 700 Integration Studio, but no student work was produced in this course that showed achievement in these areas at the level of “understanding.”

University of Massachusetts, Amherst, 2018 Response: A different instructor is now teaching the required Environmental Control Systems class (now called BCT 521) and is covering the issues of vertical transportation, plumbing and fire protection. See #4 for c.v. Those issues are also more directly covered in Arch 700 Integration.

University of Massachusetts, Amherst, 2021 Response: These issues are covered directly in Arch 700, Integration. See description above. Plumbing and fire protection are also covered in BCT 521.

II. Changes or Planned Changes in the Program

Please report such changes as the following: faculty retirement/succession planning; administration changes (dean, department chair, provost); changes in enrollment (increases, decreases, new external pressures); new opportunities for collaboration; changes in financial resources (increases, decreases, external pressures); significant changes in educational approach or philosophy; changes in physical resources (e.g., deferred maintenance, new building planned, cancellation of plans for new building).

University of Massachusetts, Amherst, 2021 Response: The following faculty retired since the last visit: Sigrid Miller Pollin and Kathleen Lugosch. Both positions have been filled. Barbara Krauthamer became Dean of the College of Humanities and Fine Arts in Summer 2020, replacing Julie Hayes who retired as dean. Dean Krauthamer is one of the few African-American female deans in the ACSA/NAAB orbit. John McCarthy became provost in 2018, replacing Jim Staros, who retired. The Department of Architecture moved into the brand-new 82,000 SF Design Building in January 2017.

III. Summary of Preparations for Adapting to 2020 NAAB Conditions

Please provide a brief description of actions taken or plans for adapting your curriculum/classes to engage the 2020 Conditions.

University of Massachusetts, Amherst, 2021 Response: Several faculty attended the NAAB workshop at the ACSA Administrators Conference in October 2021. The Architecture faculty completed a strategic plan refresh during Fall 2021, in anticipation of the new conditions. Stephen Schreiber began a 3-year term as director of NAAB in October 2021

IV. Appendix (include revised curricula, syllabi, and one-page CVs or bios of new administrators and faculty members; syllabi should reference which NAAB SPC a course addresses. Provide three examples of low-pass student work for SPCs in the following cases--if there are any SPCs that have not been met for two consecutive visits, or if there are three not-met SPCs in the same realm in the last visit--as required in the Instructions.)

University of Massachusetts, Amherst, 2021 Update: Must include student work evidence for B.3: Evidence for this criterion is at this website, where there are examples of all student work from Graduate Design IV, Spring 2020: https://www.umass.edu/architecture/work/diplomacy-lab-spring-2020. This student’s online portfolio also shows combined work from Graduate Design IV and Integration from 2017 http://dylanbrowndesigns.com/portfolio/the-timber-terrace-timber-in-the-city/graphics. The regular professor for the Graduate Design IV and Integration sequence, Ajla Aksamija, left UMass in September 2021. Evidence from the current version of Integration, currently being taught by Jordan Kanter, will be available after December 15th
A. GENERAL INFORMATION

Course Number / Title: ARCH 700 / Integration Studio
Number of Credits: 4
Type of Course: Graduate Design Development Course
Pre-requisites: Student must have completed Graduate Design Studio IV
Meeting Time: Friday: 9:05 AM - 12:05 PM
Meeting Location: Design Building 221

Instructor: Jordan Kanter
Office Location: DB 331
Zoom Office Hours: Wednesday, 10:00AM - 12:00PM, or by appointment
Email to schedule an appointment or remote meeting
Email address: jkanter@umass.edu

B. COURSE DESCRIPTION

What is this course about?

“The working drawing is a technical tool: factual, binding, and precise. [...] The symbolic language it uses must hold to norms and convention. And nonetheless - or perhaps for that very reason? - it is an unrivaled means of expression bearing the architect’s handwriting.”


“The best things happen when you have to deal with reality.”

- Robert Venturi

The Integration Studio offers an introduction to working drawings and the process by which schematic designs are carried through design development and into construction documentation. That is to say, it’s about learning how to realize an architectural idea through the technical and materials means of architectural production.

Over the course of the semester, students will develop a set of design drawings for their Graduate Design Studio IV project and learn about how to integrate the myriad technical systems required into a coherent architectural project. Specific emphasis will be placed on the design of technical details as an opportunity for architectural expression and ideation, and on exploring how architectural ideas can be carried from schematic design through the development of working drawings.

This course has three primary themes:

1. To improve students’ understanding of the technical and aesthetic criteria by which architects design and evaluate details. The student will gain exposure to typical details, but the primary goal is for students to become more proficient in “thinking through” a detail. The course will encourage students to see details as an opportunity for architectural expression.

2. To advance students skills in the communication of architectural ideas through graphic standards, drawing conventions, and technical architectural documentation.

3. To introduce students to the process of design development, working drawings, and specifications. Students will learn about the standard organization of working drawings, the role of different components of
construction documents, and the relationship between specifications and graphic materials. Students should also become more proficient at “thinking through” a drawing set.

C. COURSE OBJECTIVES  
*What can I expect to learn in this course?*

- Project delivery methods & phases of an architectural project
- Communication of architectural intention through written and 2D formats
- Architectural graphics standards, annotations, and keynotes
- Structure and organization of working drawings and construction documents
- Universal design and accessibility
- Building code requirements and compliance
- Preparation of construction documentation
- Exposure to critical detail types, and experience evaluating technical details
- Preparation of written specifications
- Quality assurance and control (QAQC) strategies

D. EXPECTATIONS AND REQUIREMENTS  
*What opportunities does the course provide for me to learn? What will I be expected to do?*

This course is project-based and will be centered on the development of a comprehensive drawing set of the students' previous semester studio project. These drawing sets will be progressively developed throughout the semester, working from an initial cartoon set to a fully realized set of working drawings. Assigned readings and in-class lectures will support this work and introduce students to the key concepts and technical information necessary to develop this project. Studio time will be broken up into discussion of the readings, lectures, and desk critiques and/or pin-ups. Students will be expected to respond to feedback provided by the instructor in the form of comments or redlines, as well as to give and receive thoughtful and constructive critiques to their classmates. Formal reviews of the progressing drawing set will be held at midterm and final review sessions. In addition to the regular class schedule, some class time will be devoted to a “Dialogs with Practice” series, during which architects currently in practice will join the class via zoom to discuss their approach to detailing, and its role in both the aesthetic and technical development of a project.

** Students are free to use the CAD/BIM drafting software of their choosing (AutoCAD, Revit, etc.). However, this is not a software technique class. Students will be reviewed and evaluated based on the drawings they produce, and not the process they use to generate those drawings.

E. ATTENDANCE  
*More than 2 unexcused absences may result in a failing grade. Excused absences are: illness with note from a doctor, family emergency, religious observance. If you are absent for any reason you are responsible for all missed assignments and lecture*
information. Arrange to contact a classmate (not your professor) who will be able to pass on any necessary information. Please make an effort to let your professor know in advance if you will be absent from the class. Attendance is required for the entire class period.

F. GRADING / EVALUATION

How will my learning in this course be assessed?

Assessments will be based on the ability to expand the design project into the technical aspects and prepare construction documentation. Grades will also be a reflection of the level of intensity of performance which is expected to be at the professional entry level in the field of architecture.

Assignments: There will be a series of assignments over the course of the semester, due every few weeks. Grades will be given for each assignment. It is important that assignments be handed in on time. All assignments must be submitted in digital format. Late work will result in deducted points. In the case of outstanding circumstances, please email the instructor before the assignment deadline.

Participation: Participation is required and will be individually noted throughout the semester. This will include participation in the readings discussions, group pin-up sessions, and Q+A sessions with outside practitioners.

Mid-term Review: Mid-term review will be scheduled to discuss progress and further steps for completing construction documentation. Students will be expected to pin up their in-progress drawing sets at half size (12”x18”) with all sheets assigned up to that point. This will include site plan, floor plans, building sections, elevations, wall sections, and facade/roof details.

Final Review: Final review will be scheduled to review final documentation. Students will be expected to complete their construction sets. Students will be expected to pin up their final drawing set at full size (24”x36”), with all required sheets. This will include all drawings from the mid-term plus the interior sheets.

Grade Distribution:
- Assignments: 20%
- Participation: 10%
- Mid-term Review: 20%
- Final Review: 50%

Evaluation Rubric

Your grades will be determined using the criteria described below. Projects will be evaluated according to the concept, development, craft, and degree of difficulty and completeness. Your evaluation will take into account both the tangible things which are evident in the work, but also those things which are not so evident and are often ephemeral such as, passion, dedication, determination and persistence. The following standards will be used in assigning grades:

A: Truly extraordinary work, which has gone far beyond the description of the stated problem. Work that makes evident a significant understanding of the problem, shows exceptional competence in the required skills, extraordinary craft and exhibits an advanced conceptual clarity and depth. The student exhibits an attitude of exploration, of open-mindedness, and a willingness to benefit from criticism.
<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A- or B+</td>
<td>Exemplary work, which is attended with initiative beyond the description of the stated problem. The problem is well understood and the work shows competence, excellent craft and conceptual clarity and depth. The student exhibits an attitude of exploration, of open-mindedness, and benefits from criticism.</td>
</tr>
<tr>
<td>B</td>
<td>Good work that shows an understanding of the problem, displays a conceptual foundation and is well crafted. Shows overall competency, as well as mastery in some areas. Is attended with an open and inquisitive attitude.</td>
</tr>
<tr>
<td>B- or C+</td>
<td>Acceptable work but with some deficiencies. Shows an understanding of the problem, but there is a need for some improvement to be at the appropriate level for the class / assignment.</td>
</tr>
<tr>
<td>C</td>
<td>Work which meets the minimum requirements of the problem and course. The problem is only partially understood and there is a clear need for improvement to be at the appropriate level for the class / assignment. Students should make every effort to meet with their instructor to identify their strengths and weaknesses.</td>
</tr>
<tr>
<td>C- or D+</td>
<td>Work which does not show an understanding of the problem, and demonstrates deficiencies in the mastery of skills, self-motivation and respect for criticism. Students should meet with the professor and discuss their course of study.</td>
</tr>
<tr>
<td>D</td>
<td>Unacceptable work which does not meet the requirements of the problem or course, shows a serious deficiency in the mastery of skills, and suggests that this course of study may be inappropriate for the student.</td>
</tr>
<tr>
<td>F</td>
<td>A grade of “F” is obvious</td>
</tr>
</tbody>
</table>

**Late / Incomplete Work:** Students may be given an extension in the event of medical or emergency circumstances only. Late work will only be accepted at the discretion of the instructor. Incompletes will only be considered if a request is made in writing, the extenuating circumstances are explained and are consistent with University policies.

### G. COURSE COMMUNICATION

Department of Architecture Announcements: Department announcements are sent via email listserves only.

Studio Information: Check email regularly for updates and course announcements. Project handouts will be distributed in class, sent via email, and/or available on Moodle.

### H. STUDIO CULTURE

The Department of Architecture at UMass Amherst has a vibrant and engaging studio culture that emphasizes mutual respect, professionalism, and shared responsibilities among students, faculty, administrators and practitioners. For more information about the policy, visit: [https://www.umass.edu/architecture/content/umass-amherst-studio-culture-policy](https://www.umass.edu/architecture/content/umass-amherst-studio-culture-policy). Please read this document carefully and be familiar with all course guidelines.
# I. SCHEDULE

<table>
<thead>
<tr>
<th>Week : Date</th>
<th>Topics + Assignments</th>
<th>Readings</th>
</tr>
</thead>
</table>
| 1: 9/3      | **Topic: Introduction**
Assignment 1: Building a Background Set (titleblock, site plan, building plans, sections, elevations, define structural system) | AIA: Chapter 4 (Architectural construction documentation), pp. 141-144, 151-160 |
| 2: 9/10     | **Topic: Drawing Set Organization**
Desk Crits | AIA: Chapter 1 (Universal and Accessible Design) pp. 19-72, IBC2018, Sections 10.01 - 10.07, 10.17, 10.20 |
| 3: 9/17     | **Topic: Code Compliance and Accessible Design**
Desk Crits (Site Plan + Plans) | AIA: Chapter 11 (Shell: Superstructure), pp. 329-386 |
| 4: 9/24     | **Topic: Structure / Sections + Elevation**
Desk Crits (Sections + Elevations) | The Perfect Wall, AIA: Chapter 11 (Shell: Design Considerations, Exterior Vertical Enclosure), pp. 313-319, 387-467 |
| 5: 10/1     | **Topic: Intro to Building Enclosure Design**
Assignment 1 due
Assignment 2: Building Enclosure Design (wall sections, technical details, specifications) | AIA: Chapter 10 (Substructure), pp. 273-312 |
| 6: 10/8     | **Topic: Walls, Roofs + Foundation**
Desk Crits (Wall Section) | AIA: Chapter 11 (Shell: Horizontal Enclosure), pp. 468-526, AIA: Chapter 4: Construction Specifications, pp 146-151 |
| 7: 10/15    | **Topic: Material Selection + Specifications**
Desk Crits (Details)
LECTURE: Daniel Gillen, IIT | AIA: Chapter 5, 6, 7, or 8 (read the two chapters most relevant to your project) |
| 8: 10/22    | **Topic: Preparation for Midterm**
Desk Crits (Overall Drawing Review)
LECTURE: Ben Ruswick, MMA | AIA: Chapter 13 (Services: Conveying, Plumbing, HVAC), pp. 642-731 |
| 9: 10/29    | **Mid-term Review**
Assignment 2 due | AIA: Chapter 13 (Services: Fire protection, electrical), pp. 732-778 |
| 10: 11/5    | **Topic: Building Interior Design + Documentation**
Assignment 3: Building Interior Design + Documentation (reflected ceiling plans, enlarged interior plans, room schedule, etc.) | AIA: Chapter 14 (Equipment and Furnishings), pp. 779-876 |
| 11: 11/12   | **Topic: RCP's, Lighting, Mechanical, Fire Protection**
Desk Crits | AIA: Chapter 14 (Equipment and Furnishings), pp. 779-876 |
| 12: 11/19   | **Topic: Equipment and Furnishings, QAQC**
Desk Crits | AIA: Chapter 14 (Equipment and Furnishings), pp. 779-876 |
| 13: 12/3    | **Final Review** | AIA: Chapter 14 (Equipment and Furnishings), pp. 779-876 |
| Assignment 3 due (Full drawing set) |

* Schedule, assignments, and required readings are subject to change
J. INSTRUCTIONAL MATERIALS
What materials will I need for this course?

Readings
Required:

* This book is available digitally through the UMass library. However, I recommend purchasing this book as it is an invaluable resource as a student and young professional.

Suggested/Supplementary:
● Architectural Detailing: Function, Constructability, & Aesthetics; by Edward Allen and Patrick Rand. (UMass electronic resource)
● The Architect's Studio Companion; by Edward Allen and Joseph Iano.
● Building Construction Illustrated; by Francis Ching (UMass electronic resource).
● (UMass electronic resource).

Drafting and Model-making Tools / Materials
Basic drawing, modelling, and drafting supplies and equipment are required for this course. Students may choose their preferred software – AutoCAD, Revit or other equivalent software - for preparing their drawings and documents.

Laptop Recommendations
Please review the “Computing Resources” page on the Dept. of Architecture website:
https://www.umass.edu/architecture/content/computing-resources

K. DOCUMENTATION AND COLLECTION OF STUDENT WORK
At the end of the semester, each student is required to submit documentation of all project work from the semester. This should include all assignments and the final construction drawing set in a high resolution PDF book. Grades will not be issued until the materials have been submitted.

In addition, selected projects will be collected and retained by the University, you will have limited access to the projects once they are collected, so be sure they are thoroughly documented. These projects are a required part of the accreditation process for our program.

Archiving Your Work
As each semester progresses, set aside time to document your projects. It is best to consistently document at the end of each project rather than waiting until the end of the semester. Include process and final work as you go along. This will prevent worrying about work being destroyed or disintegrating during the semester. It will also provide you with a wide variety of images to choose from for preparing a portfolio.
L. NAMES AND PRONOUNS
Everyone has the right to be addressed by the name and pronouns that they use for themselves. Students can indicate their preferred/chosen first name and pronouns on SPIRE, which appear on class rosters. Please let me know what name and pronouns I should use for you if they are not on the roster. A student's chosen name and pronouns are to be respected at all times in the classroom.

M. ACADEMIC HONESTY
Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst. Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent (http://www.umass.edu/dean_students/codeofconduct/acadhonesty/).

N. ACADEMIC ACCOMMODATION
The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services (DS), you may be eligible for reasonable academic accommodations to help you succeed in this course. If you have a documented disability that requires an accommodation, please notify me within the first two weeks of the semester so that we may make appropriate arrangements.
ASSIGNMENT 1: BUILDING A “BACKGROUND” SET

Enric Miralles, Torre de Gas Natural Plan, 1999

Introduction
In this first assignment for the Integration Studio, you will prepare a “background” drawing set of your studio project from Grad Design IV. Backgrounds are drawings issued by the architect to the engineers and other consultants involved in the DD and CD phases of project development. This set of drawings generally consists of building plans, sections, elevations, and reflected ceiling plan, and is issued before major project deadlines to provide the consultants with a clear understanding of the geometry of the building. These drawings provide the framework for these consultants to develop their scope of work, as well as for the architect to advance the design of more detailed aspects of the project.

In this assignment, you will create a background set that comprehensively defines the overall geometry of your building. This will involve creating a sheet template and titleblock, developing a cartoon set, and drawing through a well-resolved set of plans, sections, and elevations. During this assignment you will also define the structural system and grid for your building and review your design for code and accessibility compliance.

Required readings, in-class lectures, desk crits, and in-class exercises will support the development of your drawings.

Required Drawings
You will be responsible for the following drawings:
- Site plan
- Building plans (all levels)
- Roof plan
- (2) Building sections (one N-S / one E-W)
- (4) Building elevations (N, E, S, W)

Building and roof plans, sections and elevations should all be drawn at 1/8” = 1'-0” scale. The site plan should be drawn at an appropriate scale to the overall site area. All drawings should be on 24”x36” sheets with a titleblock of your design. Sections and elevations should be keyed on the plans.

Schedule*
9/3 - Introduction

9/10 - Organizing a Drawing Set
- Due: Titleblock, Cartoon Set, Drawing Index

9/17 - Code Compliance and Accessible Design
- Due: Draft Site Plan, Plans, Sections, Elevations
- In Class Exercise: Code Review

9/24 - Pin up
- Print half size background set (12”x18”)
- Assignment 1 due

* see syllabus for required readings
ASSIGNMENT 1: BUILDING A “BACKGROUND” SET

Final Drawings
- Cover Sheet
- Drawing Index
- Building Axonometric
- Site Plan
- Floor Plans (for all floors) 1/8"=1'-0"
- Roof Plan 1/8"=1'-0"
- Elevations (4) 1/8"=1'-0"
- Building Section (2) 1/8"=1'-0"
- Wall Section 1/2"=1'-0"
- Enlarged Elevation 1/2"=1'-0"
- Details (3) 3"=1'-0"
- Reflected Ceiling Plan 1/8"=1'-0"

* additional drawings may be required
Introduction
In the assignment, you will advance the technical and aesthetic resolution of your building through a rigorous examination of its envelope. The envelope is the interface between inside and out, and the point of most intensive technical coordination in a building. Envelope design must control light, water, air, vapor and heat, but it also functions as the face of the building, and is the most visible aspect of the design. In the best buildings, these functional considerations and aesthetic aspirations work together to produce a cohesive, highly performative envelope system.

Deliverables
For this assignment, you need to select an area of your envelope to study in detail. This investigation will involve the development of the following drawings and documents:

- **Wall section** taken at a key location in your envelope, and cutting from roof through slab (1/4" = 1'-0" scale)
- **Enlarged facade elevation** taken at the same location as the wall section (1/4" = 1'-0" scale)
- **Envelope details** of at least 2 conditions in that wall section/elevation (3" = 1'-0" scale)
- **Specification** of one exterior cladding material

The final submission should include two sheets at 24x36 (ArchD), the wall section and elevation on one sheet, building details on the other.

Schedule
10/1 - Intro to Building Envelope Design
10/8 - Roof, Wall, Foundation
  - Desk Crit (bring cartoon set of assigned drawings/sheets + research on proposed cladding system)
10/15 - Detailing Strategies + Specification
  - Pin Up: Wall Section + Elevation
10/22 - Midterm Prep
  - Desk Crit (bring in progress details)
10/29 - Midterm
  - Assignment 2 due
ASSIGNMENT 2: BUILDING ENVELOPE DESIGN

Reading + References

- Joseph Lstiburek, "The Perfect Wall" (access online)
- AIA, Architectural Graphic Standards, 12th Edition*
- Allen et al., Fundamentals of Building Construction: Materials and Methods, 6th Edition*
- Herzog et al., Facade Construction Manual, 2nd Edition*
- Ching, Building Construction Illustrated*

* available as an ebook at the UMASS Library
ASSIGNMENT 3: FINAL DELIVERABLES

Introduction
The rest of the semester will be dedicated to refine your drawing sets and prepare for the final review. In the previous two assignments, you developed the first draft of your background set and envelope design drawings. You have received feedback on both of these elements. For the final review, you should refine your drawings based on this feedback and while working on the two additional required drawings:

- Reflecting ceiling plan (scale: 1/8” = 1’-0”) - draw the reflected ceiling plan of one level of your building, describing the ceiling material + panelization, lighting design, and HVAC systems. This drawing should include a symbols key for materials and lighting/HVAC components.
- 3D chunk drawing (scale TBD) - select a key assembly or “chunk” of your building that would benefit from further analysis in an axonometric drawing. This drawing should focus on a complex aspect of your facade, and be related to your 2D facade drawings. Key components of the assembly should be clearly modeled and called-out.

Final Deliverables
The requirements for the final review pin up will include the following sheets:
- Title Sheet / Information Sheet
- Site Plan
- Building Plans
- Reflected Ceiling Plan
- Elevations
- Building Sections
- Wall Section + Enlarged Elevation
- Facade Details
- 3D Axonometric Drawing

The final submission should be printed at 24x36” (ArchD) sheets for the final pin up, and submitted as a high resolution PDF booklet of ArchD sheets. The final PDF submission is due on 12/10 via moodle.

Schedule

11/5 - 3D Chunk Diagram

11/12 - Updated Envelope Design
- Pin up 3D Chunk + Updated Envelope Sheets
- Introduce Reflected Ceiling Plan

11/15 - Reflected Ceiling Plan
- Pin Up Reflected Ceiling Plan

11/19 - Final Prep
- Submit Final Draft Full Set as PDF for markup

11/26 - NO CLASS

12/3 - FINAL REVIEW

12/10 - FINAL SUBMISSION DUE
ASSIGNMENT 3B: CODE COMPLIANCE EXERCISE

Introduction
In this exercise, you will analyze your plan layouts for code compliance. The analysis will be based on the 2018 International Building Code (IBC), a code standard that has been implemented, either directly or in a revised form, in many jurisdictions in the United States. This exercise will help to familiarize you with the language typical of building codes, how to navigate through the code to extract the relevant information for your project, and how to apply it to your building design to ensure code compliance. This exercise will focus on means of egress, which is addressed in Chapter 10 of the IBC2018, and is a critical component of code compliance that must be considered early in the design process. The IBC2018 can be accessed online at this link: https://codes.iccsafe.org/content/IBC2018

Process
To determine appropriate means of egress, follow the steps listed below. Find the appropriate sub-sections in IBC Chapter 10 to identify the relevant information, tables, and calculations.

- **Step 1**: Using the room schedule you have already created for one floor of your building, determine occupancy load for each room. Find the appropriate table in the IBC to look up the load factor for each occupancy type, and calculate the amount for each room on your floor. Calculate a total occupancy load for the entire floor. Add these calculations to your room schedule spreadsheet as a table to be added to your drawing set.
- **Step 2**: Calculate the total egress stair sizing and number of stairs to meet required egress. Find appropriate sections/tables in the code to determine these sizes/numbers.
- **Step 3**: Check stair separation. Find the section of the code that defines the minimum stair separation. Locate your egress stairs at a sufficient distance to ensure proper separation. Draw these distances onto a copy of your floor plan to indicate compliance.
- **Step 4**: Check maximum travel distance and dead-end corridor length. Find relevant code sections that define the maximum path of travel from any point in the floor to the nearest egress stair, and the maximum length of any dead-end corridors. Adjust stair locations and/or corridor arrangements to ensure compliance with these requirements.

Deliverables
Once you have completed your analysis, develop a sheet in your drawing set that includes the code analysis documents. This could be included as part of your information sheet or could be a separate sheet focused on code compliance. This sheet should include the following information:
ASSIGNMENT 3B: CODE COMPLIANCE EXERCISE

- Copied language from relevant sections of the IBC.
- Room Schedule / Occupancy load table
- Plan diagram indicating location and separation of fire stairs, and worst case maximum path of travel line.
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education

Southern California Institute of Architecture, Los Angeles, CA, Master of Architecture, Graduated with Distinction, 2008

Massachusetts Institute of Technology, Cambridge, MA, Bachelor of Science in Biology, Minor in Architecture, 2000

professional positions

Michael Maltzan Architecture, Los Angeles, CA, Associate / PM / PA / PD, 2017 - Present

Tectonicus, Los Angeles, CA / Tucson, AZ, Senior Researcher, 2018 - Present


Crystal Architecture Design, Beijing, CHINA, PM / PA, 2012 - 2013

Emergent / Tom Wiscombe Architecture, Los Angeles, CA, Intern, 2007

SmithGroup, San Francisco, CA, Staff Architect, 2004 - 2005

academic appointments

Illinois Institute of Technology, Adjunct Professor, 2013 - 2015

Tsinghua University School of Architecture, Instructor, 2012 - 2013

Tianjin University School of Architecture, Visiting Professor, 2013

Visiting Critic: Massachusetts Institute of Technology, Southern California Institute of Architecture, University of California Berkeley, California College of the Arts, Illinois Institute of Technology, School of the Art Institute Chicago, University of Arizona, Tsinghua University, Tianjin University, Southeast University (Nanjing)
awards + publications

Community Panel Selection: “Urban Confluence / Community Platform”, San Jose Urban Confluence Competition, 2020

Grant: “Solar River”, US Department of Energy Small Business Innovation Research (SBIR) Phase II Award, 2020 ($2,150,000)

Grant: “Solar River”, US Department of Energy Small Business Innovation Research (SBIR) Phase I Award, 2019 ($150,000)

Publication: “Soft Space / Soft Structure”, Proceedings of the ACADIA Conference, 2018


Grant: “Octopus Pavilion”, Beijing Design Week, 2016 (30,000 RMB)

Grant: “Hutong Cartography”, Beijing Design Week, 2012 (20,000 RMB)


Journal submission in preparation: “Monument, Icon, and Artifice: Tiananmen Square, Mao Zedong, and the making of political space in China”

Lecture Coordinator: Southern California Institute of Architecture, 2007-2008


lectures, symposium + exhibitions

Exhibition: “Soft Space / Soft Structure”, ACADIA Conference, 2018

Exhibition + Symposium: “Soft City”, Beijing Design Week, 2016

Lecture: “Second Natures”, Beijing Jiaotong University, 2015

Panel Participant: “Algorithmic Thinking at IIT and SAIC”, Chicago Computation Group, 2014

selected projects

Bakehouse Art Complex, Miami, FL, Michael Maltzan Architecture, PA / PD, 2021 - present

Porto Romana Olympic/Student Housing Competition, Milan, ITALY, Michael Maltzan Architecture, PM, 2021

Brannan Square, San Francisco, CA, Michael Maltzan Architecture, PA / PD, 2019 - present

Olive West Housing, St Louis, MO, Michael Maltzan Architecture, PM / PA / PD, 2019 - present

Solar River Canal-Spanning Solar Project (CSSP) Research, Arizona / California, Tectonicus, Senior Researcher, 2018 - present

Urban Confluence Competition, San Jose, CA, foundCity, Principal-in-charge, 2020

Art Center College of Design Student Housing, Pasadena, CA, Michael Maltzan Architecture, PM / PA / PD, 2019 - present

Sixth Street Bridge PARC Facilities Buildings, Los Angeles, CA, Michael Maltzan Architecture, PD, 2018-2019

METRO Gold Line Extension Identity Design, Los Angeles County, CA, Michael Maltzan Architecture, PD, 2017-2018

Luxe Lakes Hotel + Welcome Center, Chengdu, CHINA, Michael Maltzan Architecture, PA / PD, 2017 - 2018

Santa Monica Blvd Housing RFP, Los Angeles, CA, Michael Maltzan Architecture PM / PA, 2019

lectures + exhibitions (cont.)


Lecture: “Processing Indeterminacy”, Tianjin University, 2012


Lecture: “Emergent Bodies”, Chinese Academy of Fine Arts (CAFA), 2010
selected projects (cont.)

LA River Bike Path RFP, Los Angeles, CA, Michael Maltzan Architecture, PA / PD, 2018

Octopus Pavilion, Beijing, CHINA, foundCity, Principal-in-charge, 2016

Lucas Museum of Narrative Arts, Los Angeles, CA, MAD Architecture, PA / PD, 2016 - 2017

East 34th Street Tower, New York, NY, MAD Architecture, PM, 2016-2017

Lucas Museum of Narrative Arts, Chicago, IL, MAD Architecture, PA / PD, 2014 - 2016

Harbin Opera House, Harbin, CHINA, MAD Architecture, PM / PA / PD, 2010-2015

Taichung Convention Center RFP, Taichung, TAIWAN, MAD Architecture, PD, 2009 - 2010

Ordos City Museum, Ordos, CHINA, MAD Architecture, PD, 2007

Dragonfly Exhibition Installation, Los Angeles, CA, Emergent / Tom Wiscombe Architecture, Fabrication / Installation Team, 2007


selected courses + workshops

3rd Year Undergraduate Studio: “Hybrid”, Illinois Institute of Technology, Fall 2014

Design Communication III Seminar: “City / Data”, Illinois Institute of Technology, Fall 2014

4th Year Undergraduate Comprehensive Building Studio: “Modulating Ruin”, Illinois Institute of Technology, Summer 2014


Urban Research Option Studio: “Urban Data Models”, Illinois Institute of Technology, Fall 2013, Spring 2014
selected courses + workshops (cont.)

Design Communication II: “Material + Making”, Illinois Institute of Technology
Spring 2014

Design Communication I: “Objects + Operations”, Illinois Institute of Technology
Fall 2013

3rd / 4th Year Undergraduate Studio: “Fluid Spaces”, Tianjin University, Spring
2013

Graduate Studio: “Airport of the Future”, Tsinghua University, Spring 2013

Graduate Studio: “Organic Systems and Urban Form”, Tsinghua University, Fall
2012

Tsinghua Summer Studio Workshops: “Processing”, Tsinghua University, Summer
2012, Summer 2013

Week / Dashilab, Summer 2013

2012

foundCity, Winter 2012