

## COURSE OUTLINE

<b>Instructors</b>	Diogo Burnay email: diogo.burnay@dal.ca office: Medjuck, HB19 office hours: By appointment	Susan Fitzgerald email: susan.fitzgerald@dal.ca office: Medjuck, HB18 office hours: By appointment	James Forren (Coordinator) email: james.forren@dal.ca office: Medjuck, HB15 office hours: By appointment
	Michael Putman email: michael.putman@dal.ca office: Medjuck HC2 office hours: By appointment	Talbot Sweetapple email: talbot.sweetapple@dal.ca office: Medjuck, HC1 office hours: By appointment	Catherine Venart email: catherine.venart@dal.ca office: Medjuck, HC6 office hours: By appointment

**Visiting Lecturer** Josée-Ann Cloutier, joseeann2@gmail.com

**Credit Hours** 6

**Format** Lecture/Studio, reviews, site visits

**Time & Location** Tuesday 2:00-3:30 - HA19

Tuesday 2:00-5:30 - HB4, HD4, HD2D, HD2E, HD2F

Friday 2:00-3:30 - B225

Friday 2:00-5:30 - HA18, HD4, HD2D, HD2E, HD2F

**Calendar Description** This course studies advanced principles of architectural design through the design of a medium-sized institutional building. Elaborating on topics from the previous design courses, students organize a complex program on an urban site and develop a project that uses building technology strategically and engages relevant issues in architectural history and theory. Emphasis is also placed on fluency in architectural representation.

**Additional Description** Thermal qualities - warm, cool, humid, airy, radiant, cozy - are an important part of our experience of a space; they not only influence what we choose to do there but also how we feel about the space. An analogy might be drawn with the use of light quality as a design element, truly a venerable old architectural tradition. The light quality - direct, indirect, natural, artificial, diffuse, dappled, focused - can be subtly manipulated in the design of a space to achieve the desired effect. Thermal qualities might also be included in the architect's initial conception and could influence all phases of design.  
- Lisa Heschong, *Thermal Delight in Architecture*

This course uses an intensive study of thermal qualities within the program of bathing as a springboard for understanding larger goals of building integration: the careful coordination of climate, urban context, program, and building systems in architecture. Modern architecture has traditionally sought to achieve steady-state thermal environments which have come at a high energy cost. Through the specific study of bathing you will develop ways to more closely examine temperature and humidity and their effect on the body through curating a carefully choreographed thermal sequence.

This study of bathing is technical and social. The bath is an energy intensive program and introduces issues around energy abundance and scarcity. It asks us to visualize an energy abundant landscape in order to meet high energy demands: a strategy which we can use to address the increasing social and environmental costs of traditional energy resources. The Halifax Public Bath is also a public facility to be enjoyed by people from all walks of life in the community: visitors and residents alike. In many cultures therapeutic bathing is a site of community exchange. However, in Halifax the public bath is an unfamiliar building type, which can prompt dialogue and inquiry around traditional North American ideas of community and the body in public space.

- Learning Objectives**
1. *Comprehensive Design*: Ability to project a comprehensive design based on an architectural idea, a building program and a site.
  2. *Building Systems Integration*: Ability to assess, select, and integrate structural systems, environmental systems, life safety systems, building envelopes, and building service systems into building design.
  3. *Detailed Design Development*: Ability to assess and detail, as an integral part of the design, appropriate combinations of building materials, components, and assemblies.
  4. *Technical Documentation*: Ability to make technically precise descriptions and documentation of a proposed design for purposes of review and construction.

**CACB Student Performance Criteria** The BEDS/MArch program enables students to achieve the accreditation standards set by the Canadian Architectural Certification Board. They are described at <https://tinyurl.com/cacb-spc-2017> (pages 14–17). This Dalhousie ARCH course addresses the CACB criteria and standards that are noted on the “Accreditation” page of the School of Architecture website: <https://tinyurl.com/dal-arch-spc>.

## **ORGANIZATION**

### **Course Structure**

The course meets twice a week for 3.5 hour sessions. These sessions will be dedicated to lectures, desk critiques, and reviews. There will be 2 group reviews of student work during the term as well as an ungraded process review in week 4 and ungraded penultimate review prior to the final review.

### **Hours per Week**

You are expected to work approximately 18 hours/week on Design assignments. This may be distributed unevenly across the term. If you experience difficulty working within this window of time communicate this with your instructor, term coordinator, and/or class representative.

### **Process Portfolio**

Students are expected to maintain process portfolios throughout the term. These will record research, design process, and final design work and be submitted with each project deadline. Refer to separately provided **Process Portfolio** document for specific portfolio requirements.

### **Term Integration**

The course is integrated with B5 BSI, B5 Representation, and B5 Theory.

### **Program Placement**

B5 Design is a culmination of BEDS design courses; and part of an integrated set of courses in the B5 term to develop integrated strengths in design, humanities, technology, and representation as a platform for advanced studies in the MArch program

## **REQUIREMENTS AND RESOURCES**

**Text** Students should purchase a copy of Lisa Heschong’s *Thermal Delight in Architecture* for reference during the course.

**Equipment/Software** There is no required software or equipment. Computing and model-making facilities are available from the Faculty of Architecture and Planning.

**Additional Expenses** You will need to purchase materials for models as required, as well as pay for printing.

### **Brightspace**

Course material including lectures, readings, and digital files will be available on Brightspace. Process Portfolios will be submitted to Brightspace. Site location: <https://dal.brightspace.com/d2l/home/109961>

### **OneDrive**

A Shared OneDrive folder will be used for submissions of Digital Presentations. A link to this folder is provided in Brightspace. Site location: [OneDrive B5Design Link](#)

### **Term Binder**

A *Term Binder* has been assembled for reference throughout the term. This provides information on Bathing Practices and Precedents, the Heat-Cool-Rest Cycle, the Building Program, and the Project Site. As well it contains information on Life Safety, Accessibility criteria, and Environmental Controls.

### **Additional Support**

The School of Architecture Computer Help Desk offers computer software support. Please contact Emanuel Jannasch ([jannasch@dal.ca](mailto:jannasch@dal.ca)) for further details. The Computer Help Desk assistants this winter are Rita Wang (B5) and Katarina Milos (B2).

### **Lectures**

Lecture slides will be provided on Brightspace. Lecture notes will not. Lectures may be recorded.

## **SCHEDULE DETAILS**

### **Instructor Swap**

Marked on the calendar is an “Instructor Swap”. Studio sections will change instructors for one course session in order to provide alternative feedback on your project.

### **Process Portfolios**

Process Portfolios will be uploaded after the Mid-Term and Final Reviews to Brightspace Process Portfolio folders through the Assignments tab on Brightspace. Please see assignment descriptions for submission times. See Process Portfolio document for file naming and file size requirements.

### **11x17 Submissions**

In order to provide more wall space we will be pinning up at different times. To ensure that all work

is completed at once you will submit a **single 11x17 PDF** with the work you will be presenting at the review. This will be uploaded to Brightspace at a **pre-announced time**. This is not graded, it is simply a record of work completed, including photos of models, images of drawings and renders/ photoshopped images, etc. Formatting is not important. The sheet will include your name and your studio instructor's name. **You cannot present work that is not included on this sheet. Presentations** Your work will be presented through digital presentations and selected printed drawings and models. Digital Presentations will be uploaded before the Process, Mid-Term, Penultimate and Final Reviews to **PRESENTATIONS SUBMISSION FOLDER** link on the Brightspace homepage at the time indicated on each assignment sheet. **Presentations uploaded after this time may not be presented.** Presentations should be **50 MB maximum file size**. Label files using the following format:

**A[Assignment Number]-Presentation\_[Lastname-FirstInitial].pdf**

i.e. **A1.1-Presentation\_Forren-J.pdf**

Presentations will be viewed on 1024x768 screen resolution at a 4:3 aspect ratio. Presentation content should be organized to fit within the allotted time for each presentation. Physical models will have to be photographed ahead of time for inclusion in your slide presentation. These should include overall as well as perspective and detail photographs.

**A1.1 Process Pin-Up**

The A1.1 Process Pin-Up is an early review of in-process work and will be conducted as a studio section with your instructor in the spaces available during studio and/or the Exhibition Room. It is not graded. This will include a digital presentation as well as physical process models and drawings.

**A1.2 Mid-Review**

A full day Mid-Review will be held from 9:00 am to 1:00 pm and 2:00pm to 6:00 pm. It will be held in 2 parallel groups allowing approximately 12 min/student presentation. You will have 5 minutes maximum to present your work. There will be a 10 min mid-way break in each morning and afternoon session. Incorporate your Design Statement into your presentation. This will be held all day in the Medjuck Exhibition Room.

**A2.1 Penultimate**

The Penultimate Review will be a digital review and conducted as a studio section with your instructor. It is not graded. You will prepare a draft presentation of your work containing drawings, model photos, renders, etc. This will be a digital presentation from projectors in studio.

**A2.2 Final Review**

Two full day reviews will be held from 9:00 am to 1:00 pm and 2:00pm to 6:00 pm. They will be held in 2 parallel groups allowing approximately 20 min per student presentation. You will have approximately 5 to 10 minutes to present your work. There will be a 10 min mid-way break in each morning and afternoon session. Incorporate your design statement into your presentation. Prepare your slideshow according to these constraints. It is recommended you practice your presentation beforehand to fit within the time limits.

You are expected to attend all of the B5 Design reviews on **April 8 and 9**.

**ACADEMIC INTEGRITY**

**Citing Sources**

You must cite all major references for your work. This includes both literature sources and design sources (buildings and projects by others). Please refer to School of Architecture guidelines for citing sources: [tinyurl.com/dal-arch-writing](http://tinyurl.com/dal-arch-writing)

**Self Plagiarism**

Self-plagiarism is the “reuse of significant, identical, or nearly identical portions of one’s own work without acknowledging that one is doing so or citing the original work.” (<https://en.wikipedia.org/wiki/Plagiarism>).

You cannot submit the same model, drawing, or written work for evaluation in two different courses. You may include work from a different assignment for reference, but this needs to be cited as work from another course. I.e. your BSI Wall Section for BSI A2.2 cannot be submitted for grading in Design or Representation. But you can include it in your Design Presentation, citing it as work completed for BSI.

**EVALUATION**

**Assignments**

Assignment 1. Bathing and the City	Individual	(35%)
Assignment 2. Building Ecologies	Individual	(50%)
Assignment 3. Course Engagement	Individual	(15%).

**Evaluation**

Assignment 1 and 2 will be evaluated collectively by the studio instructors using assignment rubrics. Assignment 3 will be evaluated by individual studio instructors using assignment rubrics.

**Late Assignments**

Except for a Student Declaration of Absence or documented medical reason, late submissions will be deducted 1/3 letter grade (e.g., from A to A-) during the first 24 hours, then 1/3 letter grade for each subsequent period of up to three weekdays.

## Feedback

Your weekly desk-critiques are on-going and in-depth opportunities for feedback. It is recommended that you complete each discussion with your instructor by writing out what you heard as feedback and what is expected of you at your next meeting. Have your instructor review this so you both are in agreement.

In addition, the comments received during your Process, Mid-Term, Penultimate, and Final Reviews are feedback on the progress and development of your work. It is recommended you have a classmate take notes for you during your presentations for you to reflect on later.

Post-Review feedback will be provided through conversations with your instructor at the following studio session. You are responsible for preparing in advance a summary of your review, next steps you are considering, and any questions you have.

## Mid-Term Standing

Before the term withdrawal deadline (March 9) students will receive ongoing verbal feedback described above as well as verbal feedback on A1.1, a rubric assessment for A1.1 and A1.2 and a rubric progress evaluation for A3.

## University Grade Standards (Undergraduate)

Grade	Grade Point Value	Percent Equivalent	Definition	Notes
A+	4.3	90-100	Excellent	Considerable evidence of original thinking; demonstrated outstanding capacity to analyze and synthesize; outstanding grasp of subject matter; evidence of extensive knowledge base
A	4.0	85-89		
A-	3.7	80-84		
B+	3.3	77-79	Good	Evidence of grasp of subject matter, some evidence of critical capacity and analytical ability; reasonable understanding of relevant issues; evidence of familiarity with the literature.
B	3.0	73-76		
B-	2.7	70-72		
C+	2.3	65-69	Satisfactory	Evidence of some understanding of the subject matter; ability to develop solutions to simple problems; benefitting from his/her university experience
C	2.0	60-64		
C-	1.7	55-59		
D	1.0	50-54	Marginal Pass	Evidence of minimally acceptable familiarity with subject matter, critical and analytical skills
F	0.0	0-49	Inadequate	Insufficient evidence of understanding of the subject matter; weakness in critical and analytical skills; limited or irrelevant use of the literature assignments.
INC	0.0		Incomplete	
W	Neutral and no credit obtained		Withdrew after deadline	
ILL	Neutral and no credit obtained		Compassionate reasons, illness	

Assignments will be evaluated according to the University Undergraduate Grading Standards.

## University Policies and Resources

This course is governed by the academic rules and regulations set forth in the University Calendar and the Senate. See the School's 'Academic Regulations' page ([tinyurl.com/dal-arch-regulations](http://tinyurl.com/dal-arch-regulations)) for links to

- Academic integrity
- Accessibility
- Code of student conduct
- Diversity and inclusion; culture of respect
- Student declaration of absence
- Recognition of Mi'kmaq territory
- Work safety
- Services available to students, including writing support
- Fair dealing guidelines (copyright)
- Dalhousie University Library

university policies and resources:

Schedule

	Week	Tuesday	Friday	Reading
TYPE	1 Jan 7, 10	<b>A1.1 Assigned</b> <i>L: Introduction (JF);</i>	<i>L: Hydrotherapy (JC)</i>	<ul style="list-style-type: none"> <li>Heschong, "Necessity"</li> <li>Aaland, "Sweat Bathing and the Body"</li> <li>Bonneville, "The Story of Water"</li> </ul>
	2, No Class PROFESSIONAL PRACTICE WEEK			
ADAPTATION	3 Jan 21, 24	<i>L: Phenomenology (SF)</i> (Program)	<b>A1.1 DUE</b> <b>PROCESS PIN-UP</b>	<ul style="list-style-type: none"> <li>Heschong, "Delight"</li> <li>Bonneville, "Public Baths"</li> <li>Yegul, "Introduction"</li> </ul>
	4 Jan 28, 31	<b>A1.2 Assigned</b> Design Statement (Circulation)	<i>L: Program (DB)</i> (Program)	<ul style="list-style-type: none"> <li>Heschong, "Affection"</li> </ul>
	5 Feb 4, 7	<i>L: Site (CV)</i> Site Visit	No Class (Munro Day)	<ul style="list-style-type: none"> <li>Heschong, "Sacredness"</li> </ul>
	6 Feb 11, 14	Design Statement (Site)	<b>A1.2 DUE</b> <b>MID-REVIEW</b>	
7, No Class WINTER BREAK				
INTEGRATION	8 Feb 25, 28	<b>A2 Assigned</b>	<i>L: Systems (TS)</i> (Structure)	<ul style="list-style-type: none"> <li>Ching 2014, "The Building," pp 2.20-30</li> </ul>
	9 Mar 3, 6	<i>L: Sustainability (SF)</i> (Envelope)	Instructor Swap (Envelope)	<ul style="list-style-type: none"> <li>Deplazes, "Facades"</li> <li>Ching 2014, "Moisture &amp; Thermal Protection"</li> </ul>
	10 Mar 10, 13	<i>L: Detail (TS)</i> (Mechanical)	Desk Crits (Mechanical)	<ul style="list-style-type: none"> <li>Ching 2014, "Mechanical &amp; Electrical Systems," pp 11.02-19</li> </ul>
	11 Mar 17, 20	Design Statement Workshop (Life Safety)	<b>PENULTIMATE</b> <b>REVIEW</b>	<ul style="list-style-type: none"> <li>Ching 2014, "Appendix," pp A.02-03, A.10-11</li> <li>Allen, "Designing for Egress and Accessibility"</li> </ul>
	12 Mar 24, 27	Design Statement Workshop (Integration)	<b>SRI Evaluations</b> Desk Crits (Integration)	
	13 Mar 31, Apr 3	Desk Crits (Presentation Development)	Desk Crits (Presentation Development)	
	14 Apr 8, 9	No Class	<b>A2 DUE</b> <b>FINAL REVIEW</b>	

## A1. TYPE AND ADAPTATION: BATHING AND THE CITY

Assigned: Tuesday, Jan 7  
Due: A1.1 Digital Presentation Upload: 11:00 am, Friday, Jan 24 (Upload to PRESENTATIONS SUBMISSION FOLDER)  
A1.1 Presentation: Friday, Jan 24 (In Class)  
A1.2 11x17 Submission & Digital Presentation Upload: 11:59 pm Thursday, Feb 13 (Upload to PRESENTATIONS SUBMISSION FOLDER)  
A1.2 Presentation: Friday, Feb 14  
A1.2 Process Portfolio: 11:59 pm Saturday, Feb 15 (Upload to Brightspace Process Portfolio Folder)  
Duration: 4.5 weeks

### INTRODUCTION

This assignment uses a method of *typological* design where a typical design solution is developed, and then adapted to a specific context. You will develop a typical design solution for bathing in A1.1, at the scale of the room, to understand the core functions of bathing. Your design solution for A1.1 will then be expanded to the size of a building and adapted to a specific site context in A1.2.

As you develop your project consult the *Term Binder* for specific program requirements. You may depart from these criteria with the approval of your studio instructor. Any adjustments, however, should not radically alter the scope or intent of the project as a large scale, publicly-oriented facility.

### A1.1 TYPE: THE BATHING CYCLE

#### A1.1 Deliverables

1. *Physical Models, 2 minimum* (1:50 (recommended scale))
2. *Plans, Sections, Elevations* (Related to models and as required to communicate important aspects of your design).

The A1.1 Process Presentation will present A1.1 deliverables in a digital presentation. It is not graded and is for early verbal feedback on your project. You will be able to make revisions to your A1.1 deliverables as part of your graded submission for A1.2.

#### A1.1 Description

The bathing cycle of *heating, cooling, and resting* is the cornerstone of the bathhouse program. Through physical models and drawings you will design a single bathing cycle connecting three spaces: one heating, one cooling, and one resting.

Consider how light, air, views, and urban context (street, plaza, and harbor) can play a role in the experience between interior and exterior space. But your design does not need a specific site orientation or location. Think about the character of the spaces you would like to explore. Are they active, lively places for the community? Or quiet escapes from the city? Are they meant to challenge social norms, explore new technologies, or integrate with nature? How do they accommodate diverse social and cultural populations and ranges of mobility? Primary criteria to consider are:

1. *Social*: public/private space, rituals of bathing or resting, spatial procession, interior/exterior space
2. *Phenomenological*: the experience of the body in space, materials, textures, atmospheres, views

You will make **at least two (ideally more)** physical models of your design: one after the other. These should be rough, exploratory investigations as opposed to pristine, finished presentation models. Your second model will distill, focus, and/or refine the ideas from the first model in a process of design iteration. Physical models are required, but you may also use digital models to develop your ideas.

In *Section III: Program* of the *Term Binder* you will find a description of spaces for the Heat-Cool-Rest bathing cycle. Use this as a guide in designing your three spaces, selecting one type of space from each list. Although the program describes these spaces individually, you can combine multiple functions in a single space. But you must satisfy the specific criteria of each program function. You may depart from these examples in consultation with your studio instructor.

To anticipate structural, envelope, and mechanical system requirements you will need to include a horizontal plenum (minimum 305 mm (12 in) interior depth) and a vertical core ( 2.3 sqm (25 sqft ) interior area) or vertical service wall (minimum 460 mm (18 in) interior depth) in your design. You do not need to show any mechanical equipment or ducts, simply provide space. You may, however, consider ideas about structure.

## **A1.2 ADAPTATION: A BATH HOUSE IN THE CITY**

### **A1.2 Deliverables**

1. *A1.2 Building Model* (Photographed in Site Model; Include 1 photo down Sackville Street, looking towards the harbor)
2. *A1.2 Process Building Models*
3. *Plans, Sections, Elevations* (Multiple Scales as req'd, Show Context)
4. *A1.1 Deliverables and Revisions*
5. *Design Statement*

### **A1.2 Description**

The bathing program consists of clusters of Heat-Cool-Rest bathing cycles. All the heating spaces **are not** in one part of the building with all the cooling spaces in another. Instead, people go between heating and cooling spaces without walking long distances. They can walk long distances between *cycles*, but they will typically need to complete a heat-cool-rest cycle in each location of your bathing program. The *Term Binder* shows some examples of how other architects have organized multiple clusters of heating, cooling, and resting spaces.

To adapt your design to the city, A1.2 begins by multiplying your A1.1 design at different scales in relationship to a large civic gathering space. This organization between public and private space serves as an armature for coordinating secondary program elements of *Front of House*, *Administration*, and *Service*. This overall programmatic organization will then be adapted to the specific context of the project's waterfront site.

### **Multiple Bathing Cycles**

This first part of A1.2 expands the design of one cycle to a network of multiple cycles at various scales. What was one cycle for a small group of people can be repeated and aggregated for multiple spaces with different sized groups of people, carrying through a consistent idea.

Some organizing approaches you can explore include stacking, grouping around a courtyard, or linking in a row. You can also think about their relationship in section and whether they are above ground, below ground, or at grade. Although they will be multiplied, your bathing cycles can overlap and intermix.

Two sets of criteria to consider in your organization are:

1. *Climate*: How exposed to the elements should people be in their access between cycles? Do you want to nest energy intensive programs or expose them? How much surface area do you want to expose in your building?
2. *Circulation*: A network of corridors, room-to-room circulation, a large meandering open space or some combination of these impacts the social and technical dynamics of your project. How do you move between cycles? Do you follow long corridors? Pass through courtyards? Through other rooms? Or do you wander through an open environment? *This includes managing the wet-to-dry sequencing.*

### **Civic Gathering Space**

A civic gathering space links the intimate activities of bathing to the public flows of the city. It relates to the activities of the bathhouse and serves as an organizing armature for them. The criteria for this space are described in Section III of the *Term Binder*.

### **Administration, Service, and Front-of-House**

Once you have tried a few relationships between the bathing cycles and civic space, then consider their implications for the rest of the building program: *Front-of-House*, *Administration*, and *Service*. These spaces can support, reinforce, or build off the basic organization of your bathing / civic space prototype.

### **Site**

Review Section IV of the *Term Binder* to familiarize yourself with detailed information and specific criteria for the site. With your programmatic organization more clearly understood, you can begin to adapt this organization to meet the site's particular requirements and opportunities. Perhaps in A1.1 you considered how the building addresses the street and the water. Now you can orient it towards specific views, landmarks, and pedestrian flows. In A1.1 you may have considered solar orientation. Now you can test this in relationship to specific adjoining buildings.

The specific site criteria your project must address are:

1. *Urban Context*: Street, Plaza, Harbor, and Harborwalk
2. *Social Context*: Pedestrian flows, Gathering spaces, Views
3. *Climate and Energy*: Solar orientation, Winds, Daily and Seasonal temperatures

## Design Statement

The Design Statement is intended to help you organize your thoughts around your design project as well as situate it within the larger context of the term and the practice of architecture. It will be started in A1.2 and completed in A2. You will present the deliverables at your A1.2 and A2 review and use them to help you organize your presentation statement.

You will be introduced to the Design Statement during A1.2. There will be two sessions in studio (one during A1.2 and one during A2) to review the statement with your Theory instructor and Design instructor. You may review it further with either as required by appointment.

### 1. Organization

1) Assignment introduction during A1.2.

2) Design tutors, their studio groups, and Theory instructor will discuss the statements during tutorials two times during the term.

Tuesday: 2:00-3:00 DB, 3:00-4:00 MP, 4:30-5:30 SF

Friday: 3:00-4:00 TS, 4:30-5:30 CV

### 2. Process

a) Which three keywords are most important to your project?

- |            |             |             |                  |
|------------|-------------|-------------|------------------|
| - form     | - context   | - structure | - something else |
| - function | - character | - material  |                  |
| - users    | - order     | - history   |                  |
| - public   | - space     | - nature    |                  |

These keywords are also seminar topics in B5 Architectural Theory and Interpretation, drawing from chapters in Adrian Forty, *Words and Buildings*.

b) For each of your three keywords, what is your main intention?

For each intention, write 50 words. To consider different types of intentions, ask yourself:

- Does the design solve any problems?
- Does the design pursue any opportunities?
- Does the design borrow and “test drive” any characteristics from previous buildings?
- Is the design motivated by any writings in architecture or another discipline?
- Whom (or what) would benefit most from the design?

c) How is each intention achieved through the design?

For each intention, make a 3” x 4” sketch that represents a related design feature clearly and vividly.

- The sketch could be a diagram, a composition of elements, a significant detail, etc.
- The technique could be a hand drawing, a collage, a digital drawing, a photomontage, etc.

### 3. Product

An 11” x 17” sheet with “Design Statement,” your name, and the date at the top, followed by:

Keyword 1	Keyword 2	Keyword 3
Intention 1 (50 words)	Intention 2 (50 words)	Intention 3 (50 words)
Sketch 1	Sketch 2	Sketch 3

The design statement will be updated throughout the term and included in your Process Portfolio.

## A1.1 & A1.2 RUBRIC

This assessment sheet is a guide to student performance, not a point scoring system. Evaluation for a single criterion evaluation may be a composite of different standards. For instance, under Program a project may be marked “Excellent” for “Coherent organization,” and “Good” for “Needs to clarify...” The standards are based on university undergraduate grading standards, and each one captures a grading range. For instance, “Excellent” captures marks from A- to A+. Therefore, it is possible for nearly identical standard assessments to result in different criteria grades. The final calculated grade will be based on an overall weighting of standards met within the different criterion.

Criteria	Excellent	Good	Satisfactory	Marginal Pass	Inadequate
Design Process 1 (Concept)	Exceptionally demonstrates a coherent idea and design criteria, grounded in a close study of phenomenological and/or social characteristics of architecture.	Coherent idea and design criteria. Addresses phenomenological and/or social characteristics of architecture. Needs development in one or more of these areas.	Proposes an idea / design criteria. Limited address of phenomenological and/or social characteristics of architecture. Needs significant development in one or more areas.	Minimally acceptable concept development. Does not constructively address instructor feedback.	Insufficient basis for evaluation. Little to no evidence of concept development.
Design Process 2 (Iteration)	Demonstrates iterative design process developing multiple representations that relate to one another and/or explore parallel ideas.	Attempts iterative design process, creates multiple models for A1.1 and A1.2. Needs development in linking these productively.	Limited evidence of iterative design process. I.e. creates only one model per A1.1 and one per A1.2 and some sketches.	Minimally acceptable evidence of iterative design process. Barely legible models and sketches.	Insufficient basis for evaluation. Little to no evidence of iterative design process.
Program	Coherent organization of spaces and circulation according to design criteria and program requirements. Clear H-C-R strategy.	Demonstrates organization of spaces and circulation. Needs to clarify aspects of program development.	Organizes spaces, but overlooks significant program requirements (such as civic gathering space, clear h-c-r cycle development).	Minimally acceptable development Program elements are present in drawings and or models.	Insufficient basis for evaluation. Little to no evidence of program organization.
Site	Coherently links program with urban context and climate according to design criteria.	Links program with urban context and climate. Needs technical and / or conceptual development in these areas.	Recognizes urban context or climate. Needs significant technical and / or conceptual development in these areas. Limited connections to design concept.	Minimally acceptable development of urban context or climate.	Insufficient basis for evaluation. Little to no evidence of urban context or climate.
Design Output 1 (Communication)	Models, drawings, presentation, and statement clearly and vividly communicate the design ideas and process	Models, drawings, presentation, and statement clearly developed. Need development in one or more areas.	Models, drawings, presentation, and statement developed. Missing significant aspects of each, and / or requires substantial work.	Minimally acceptable development of models, drawings, presentation, and statement.	Insufficient basis for evaluation. Little to no evidence of models, drawings, and presentation.
Design Output 2 (Context)	Models, drawings, and presentation clearly consider site, occupation, and context.	Models, drawings, and presentation require some further consideration of site, occupation, and context.	Models, drawings, and presentation significantly lack consideration of site, occupation, and context.	Minimally acceptable development of site, occupation, and context.	Insufficient basis for evaluation. Little to no evidence of site, occupation, and context.

## A2. BUILDING INTEGRATION

Assigned: Tuesday, Feb 25

Due: A2 11x17 Submission & Digital Presentation Upload: 11:59 pm Tuesday, Apr 7 (Upload to PRESENTATIONS SUBMISSION FOLDER)

A2 Presentation: Wednesday or Thursday, April 8 or 9

A2 Process Portfolio: 11:59 pm Saturday, Apr 11 (Upload to Brightspace Process Portfolio Folder)

Duration: 6.5 weeks

### Deliverables

- |                             |                             |
|-----------------------------|-----------------------------|
| 1. Site Drawings:           | Site Sections, Site Plan    |
| 2. Building Drawings:       | Plans, Sections, Elevations |
| 3. Process Building Models  | fit to Site Model           |
| 4. Final Model              | fit to Site Model           |
| 5. Photos/Renderings        | Key Project Views           |
| 6. Updated Design Statement |                             |

Include in your A2 Presentation:

- Representation Assignment 3
- BSI Assignment 2

### A2 Description

In assignment A2 you will develop your program, site, and massing intentions from A1.2 through the detailed design of integrated building systems. This includes the continuation of an iterative design process prototyping, analyzing, and evaluating your design through multiple versions of drawings and models. This includes the social and cultural as well as technical aspects of your project. You will prepare two presentations of this work: a penultimate presentation and a final presentation. Prioritize the criteria below with your studio instructor according to the unique needs of your project.

### Systems Integration

In *Thermal Delight in Architecture*, Lisa Heschong asks 'How might the solar house incorporate some of the richness of the hearth?' How can technologically advanced systems today assume the character we typically associate with traditional technologies like the hearth? Seen through this lens, systems integration refers to how structure, mechanical, and envelope systems work together to express a design idea and create a sense of place.

Elements of structure, mechanical, and envelope systems can be visually and spatially coordinated as *interdependent* pieces with nested or inter-related functions. For example, a wall that is both heat source and structure; or a light filtering screen supported by a structural frame. This nesting can impact the social and cultural characteristics of your design project. For instance, by creating heated spaces in winter or shaded spaces in summer which encourage social gathering.

### Whole Building Section

The Whole Building Section is a detailed section through a significant organizing moment in your building that tells the story of your design project. This is not necessarily a 'typical' section. Rather, it is one that clearly shows significant organizing strategies at play, including: passive ventilation, structural configuration, and social relationships. It can serve several important functions listed below and be a process document that you work and rework using it as a design tool. Consult references for how to show your ideas and for technical support on understanding strategies.

- 1) *Template*. Use the Whole Building Section to work out typical details, lineweights, representational techniques.
- 2) *Integration*. As you develop details consider how mechanical, structural, and envelope components interrelate. Do they pass by one another, travel over or under, are they embedded?
- 3) *Climate*. Study how sunlight enters the building, how air circulates through it, and how the envelope impacts these dynamics. Clearly show passive strategies in play of buoyancy ventilation, cross-ventilation, daylight penetration, etc. You may choose to show site strategies (rain water collection, grey water filtration, sewage heat exchange, ground heat exchange, etc.) which enhance your building systems strategies. Make sure your ways of showing air, wind, light, etc. are clear and legible.
- 4) *Social Dynamics*. This section should also show occupation: people and how they are using the spaces. Demonstrate how people interact in the space. Where are they looking? Where can people from the outside see inside? Where do they gather? Where are they alone? A draft will be reviewed in B5 BSI A2.1.

## A2 RUBRIC

This assessment sheet is a guide to student performance, not a point scoring system. Evaluation for a single criterion evaluation may be a composite of different standards. For instance, under Program a project may be marked “Excellent” for “Coherent organization,” and “Good” for “Needs to clarify...” The standards are based on university undergraduate grading standards, and each one captures a grading range. For instance, “Excellent” captures marks from A- to A+. Therefore, it is possible for nearly identical standard assessments to result in different criteria grades. The final calculated grade will be based on an overall weighting of standards met within the different criterion.

Criteria	Excellent	Good	Satisfactory	Marginal Pass	Inadequate
Design Process 1 (Design Development)	Exceptional to considerable evolution of Assignment 1 through a close study of technical and experiential aspects of building systems, program, and site.	Coherent design development. Addresses technical and experiential aspects of building systems, program, and site. Needs development in one or more of these areas.	Evidence of design development and address of technical and experiential aspects of building systems, program, and site. Needs significant development in one or more areas.	Minimally acceptable design development and address of technical and experiential aspects of building systems, program, and site.	Insufficient basis for evaluation. Little to no evidence of design development.
Design Process 1 (Iteration)	Exceptional to considerable iterative design process with highly productive prototyping, analyzing, and evaluating outcomes.	Reasonable understanding of iterative design process. Needs development in prototyping, analyzing, and / or evaluating work.	Evidence of iterative design process. Needs significant development in prototyping, analyzing, and / or evaluating work.	Minimally acceptable evidence of iterative design process.	Insufficient basis for evaluation. Little to no evidence of iterative design process.
Integration	Overall design execution demonstrates exceptional to considerable systems integration guided by design criteria.	Overall design execution shows reasonable understanding of systems integration guided by design criteria.	Overall design execution shows evidence of some understanding of systems integration guided by design criteria.	Overall design execution shows minimally acceptable familiarity systems integration guided by design criteria.	Insufficient basis for evaluation. Little to no evidence of systems integration guided by design criteria .
Design Output 1 (Communication)	Models, drawings, presentation, and statement holistically and vividly communicate design ideas and spatial characteristics.	Models, drawings, presentation, and statement show promise and reasonable ability to communicate design ideas and spatial characteristics.	Models, drawings, presentation, and statement show simple evidence of design ideas and spatial characteristics.	Minimally acceptable evidence of design ideas and spatial characteristics.	Insufficient basis for evaluation. Little to no evidence of design ideas and spatial characteristics.
Design Output 2 (Context)	Representations show exceptional to considerable grasp of program, site context and social dynamics.	Representations show reasonable understanding of program, site context and social dynamics.	Representations show simple evidence of program, site context and social dynamics.	Minimally acceptable evidence of program, site context and social dynamics.	Insufficient basis for evaluation. Little to no evidence of program, site context and social dynamics.
Design Output 3 (Craftsmanship)	Representations show exceptional to considerable precision and craftsmanship.	Representations show promise and reasonable ability in precision and craftsmanship.	Representations show simple evidence of precision and craftsmanship.	Minimally acceptable evidence of precision and craftsmanship.	Insufficient basis for evaluation. Little to no evidence of precision and craftsmanship.

### A3. COURSE ENGAGEMENT DESCRIPTION, RUBRIC AND ASSESSMENT

Student Name: \_\_\_\_\_

Grade: \_\_\_\_\_

Assigned: Tuesday, Jan 6  
Due: Thursday, April 9  
Duration: 14 weeks

#### Description

Course engagement encompasses your contributions to the class as a whole, your studio section, and your own personal creative process. This is a value in the collegiality of your efforts as well as the responsibility you assume for the success of your own and others' work. This can take many forms including productive and constructive feedback to your peers, attentiveness and contributions at class critiques, equitable contributions to course discussions, assisting in section or course-wide needs, constructive engagement with your instructor, regular commitment to your physical presence in studio, and demonstrating an ongoing and consistent work ethic. **You will receive an ungraded progress evaluation after week 6.**

**High A.** Leads class discussions. Does not always speak, but leaves room for others' voices and solicits critical debate and others' engagement. Always in attendance and on-time. Asks critical questions and follows up with answers researched independently. Brings new knowledge to the class by bringing in information from other courses, disciplines, and experience by bringing in specific texts, samples, or examples. Provides significant troubleshooting and insight on peers' projects. Exceptionally efficient use of studio time. Exceptional preparation for desk critiques with critical, relevant, original questions demonstrating outstanding grasp of subject matter. Exceptional project development between meetings. Exceptional response to project critiques. Is able to move project forward or troubleshoot even if not speaking first with instructor. Actively engaged during lectures, reviews, and peers' presentations, participating and generating discussion. Sketchbook demonstrates exceptional evidence of engagement with lectures, reviews, classmates' presentations, and project development.

**Low A.** Contributes constructively to class discussions. Does not need prompting. Leaves room for others' comments. Always in attendance, late once or twice. Asks critical questions based in evidence or knowledge, not blind assumptions. Brings outside knowledge through mentioning projects and resources. Contributes knowledge in conversation from other disciplines, courses, and experience, but may not bring in evidence. Addresses peers' projects in conversation with constructive feedback. Considerably efficient use of studio time. Considerable preparation for desk critiques with original questions and considerable project development between meetings. Considerable response to project critiques. Makes efforts to move project forward or troubleshoot even if not speaking first with instructor. Engaged during lectures, reviews, and peer's presentations. Sketchbook demonstrates considerable evidence of engagement with lectures, reviews, classmates' presentations, and project development.

**High B.** Reasonably contributes to class discussions. Contributions may benefit from further research. Misses few classes and rarely late. Freely asks clarifying questions and demonstrates uptake of responses. Reasonable contribution of relevant knowledge to the class. Contributes to peers' work with relevant feedback. Productive use of studio time. Productive preparation for desk critiques with questions demonstrating a critical understanding of subject matter. Productive responses to project critiques demonstrating promise and analytical ability. Consistent presence at reviews. Sketchbook demonstrates ability in critical engagement with lectures, reviews, classmates' presentations, and project development.

**Low B.** Contributes to discussions usually only when called on. Reasonable attendance. Freely asks clarifying questions. Reasonable contribution of knowledge to the class. Contributes to peers' work in class discussions when asked. Reasonable use of studio time. Reasonable preparation for desk critiques with questions demonstrating a reasonable understanding of subject matter. Productive responses to project critiques demonstrating understanding of relevant issues. Reasonable presence at reviews. Sketchbook demonstrates reasonable engagement with lectures, reviews, classmates' presentations, and project development.

**High C.** Some evidence of class discussion participation. Sufficient attendance. Some attempts to seek clarification. Some contribution to new knowledge in class demonstrating some understanding of subject matter. Some contribution to classmates' work demonstrating some understanding of subject matter. Some use of studio time for project development. Some evidence of preparation for desk critiques and response to fundamental project critiques demonstrating grasp of subject matter. Sufficient attendance at reviews. Sketchbook demonstrates abilities and understanding of subject matter in engagement with lectures, reviews, classmates' presentations, and project development.

**Low C.** Limited evidence of participation in discussions or engagement with peers' work. Some limited participation in class discussion. Sufficient attendance. Absences affect performance. Some attempts to seek clarification, but would benefit from further efforts. Some contribution to knowledge in class. Some contribution to classmates' work. Some use of studio time for project development, would benefit from more efficient use of time. Some preparation for desk critiques and some response to project critiques. Some evidence of attending reviews. Sketchbook demonstrates engagement with lectures, reviews, classmate's presentations, and project development.

**D.** Evidence of minimally acceptable attendance, participation in discussions, and preparations for desk critiques. Minimally acceptable use of studio time and efforts to clarify questions. Minimally acceptable desk critique preparation. Sketchbook demonstrates minimally acceptable evidence of engagement with lectures, reviews, classmates' presentations, and project development.

**F.** Limited or no attendance. Insufficient effort or contributions to evaluate performance.

#### Comments:

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### Theory

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### Bathing Reference

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