Tall Buildings

Dr. Brian R. Sinclair

Fall 2013







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Introduction

Architectural design is a complex, challenging yet remarkable activity. Architecture holds exceptional promise to impart satisfaction, wellness and meaning to users while concurrently contributing in significant ways to the identity, fabric and quality of cities. In our modern world the intricacies of realizing a building prove staggering, including complicated dimensions such as aesthetics, economics, legal concerns, cultural aspects and social factors. Increasingly our built environment is deemed to be too static and too intractable. There are, nonetheless and in response, pioneering efforts to challenge the status quo and introduce demonstrable change. Rigid approaches, fragmentation and separation are being replaced with more dynamic methods, integration and holism. Within this ethos bright directions such as open building, systems thinking and integrated design offer extraordinary mindsets + methods to create more appropriate, agile and potent architecture. Coupled into the equation are spectacularly shifting features of the design milieu including heightened pluralism, ecosystem assault, financial uncertainty and a rapidly globalizing planet. Within such a realm architects, engineers, developers and others in the design & construction industry attempt to navigate turbulent waters, innovate process, advance product and improve the quality of spaces, places, buildings and cities.

Objectives

- > To critically explore topics and effectively research issues that can meaningfully inform, influence and inspire design.
- To consider architectural design in a more integrated and holistic manner, attending to multiple scales and balancing competing and/or complementary demands & expectations.
- To examine, understand and deploy principles of open building, agile architecture, spatial mutability, prefabrication and systems-approaches to design + construction.
- > To develop skills and awareness in architectural and urban design through the exercise of creating and conveying via expanded viewpoints, multiple methods & mixed media.

Teaching Approach

Pedagogical approaches to studio include fundamentally a close coupling of research & analysis with design & synthesis – with an overarching goal of considering the roles, influences and impacts of evidence + theory to architecture, design + construction. An appropriate balance is sought between support activities such as lectures, films, and field trips and core studio instruction. Innovation, resourcefulness and exploration are key pursuits within the studio milieu, especially considering the expressed desire to tackle emergent & experimental building systems. A range of techniques, deliverables, and strategies are deployed in an effort to more fully consider and develop inventive + apt designs. Students are expected to be disciplined, professional and motivated as they engage in the studio culture, interact with the class and advance their projects from concept to resolution.

Content: Topic Areas

- > Evidence-Based Design
- Mixed-Used Building
- Urban Development
- Density & Intensity
- ➤ High-Rise Construction
- Open Building | Agile Architecture
- ➤ Integration & Holism
- Building Performance
- Identity | Meaning
- Sustainability | Symbiosis

Means of Evaluation

The course evaluation will be based on the following assignments completed during the term, which includes research efforts and design presentations/submissions. There will be no final examination.

Research Exercise	15%
Site Selection & Analysis	10%
Precedent Studies Conceptual Design	15%
Intermediate Design	20%
Final Design (including: EVDS Research Summary Report @ 10%)	40%
Total	100%

Grading Scale

Letter Grade	4-Point Scale	4-Point Range	Percent	Description
A+	4.00	4.00	92.5-100	Outstanding - evaluated by
				instructor
Α	4.00	3.85-4.00	85-92.49	Excellent - superior
				performance showing
				comprehensive
				understanding of the subject
	2.70	2.50.2.04	22.24.22	matter
A-	3.70	3.50-3.84	80-84.99	Very good performance
B+	3.30	3.15-3.49	76-79.99	Good performance
В	3.00	2.85-3.14	73-75.99	Satisfactory performance
B-	2.70	2.50-2.84	70-72.99	Minimum pass for students
				in the Faculty of Graduate
				Studies
C+	2.30	2.15-2.49	66-69.99	All final grades below B- are
				indicative of failure at the
				graduate level and cannot be
				counted toward Faculty of
				Graduate Studies course
				requirements.
С	2.00	1.85-2.14	63-65.99	
C-	1.70	1.50-1.84	60-62.99	
D+	1.30	1.15-1.49	56-59.99	
D	1.00	0.50-1.14	50-55.99	
F	0.00	0-0.49	0-49.99	

Notes:

A student who receives a "C⁺" or lower in any one course will be required to withdraw regardless of their grade point average (GPA) unless the program recommends otherwise. If the program permits the student to retake a failed course, the second grade will replace the initial grade in the calculation of the GPA, and both grades will appear on the transcript.

Required Textbook

Ascher, Kate. <u>The Heights: Anatomy of a Skyscraper</u> (1st Edition). New York: Penguin Press, 2011.

Recommended Textbook

Johnson, Scott. <u>Tall Building: Imagining the Skyscraper</u> (1st Edition). Glendale CA: Balcony Press, 2008.

Important Notes

- 1. Written work, term assignments and other course related work may only be submitted by e-mail if prior permission to do so has been obtained from the course instructor.
- 2. It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. (http://www.ucalgary.ca/drc/node/46) Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.
- Plagiarism Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Most commonly plagiarism exists when:(a) the work submitted or presented was done, in whole or in part, by an individual other than the one submitting or presenting the work (this includes having another impersonate the student or otherwise substituting the work of another for one's own in an examination or test),(b) parts of the work are taken from another source without reference to the original author,(c) the whole work (e.g., an essay) is copied from another source, and/or,(d) a student submits or presents work in one course which has also been submitted in another course(although it may be completely original with that student) without the knowledge of or prior agreement of the instructor involved. While it is recognized that

scholarly work often involves reference to the ideas, data and conclusions of other scholars, intellectual honesty requires that such references be explicitly and clearly noted. Plagiarism is an extremely serious academic offence. It is recognized that clause (d) does not prevent a graduate student incorporating work previously done by him or her in a thesis. Any suspicion of plagiarism will be reported to the Dean, and dealt with as per the regulations in the University of Calgary Graduate Calendar.

- 4. Information regarding the Freedom of Information and Protection of Privacy Act (http://www.ucalgary.ca/secretariat/privacy) and how this impacts the receipt and delivery of course material
- 5. Emergency Evacuation/Assembly Points (http://www.ucalgary.ca/emergencyplan/assemblypoints)
- 6. Safewalk information (http://www.ucalgary.ca/security/safewalk)
- 7. Contact Info for: Student Union (http://www.su.ucalgary.ca/page/affordability-accessibility/su-structure/contact-info); Graduate Student representative(http://www.su.ucalgary.ca/page/quality-education/academic-services/student-rights).

CACB Student Performance Criteria:

The following CACB Student Performance Criteria will be covered in this course at a primary level (other criteria will be covered at a secondary level): A1. Critical Thinking Skills; A2. Research Skills; B1: Design Skills; B2: Program Preparation; B3: Site Design; B4. Sustainable Design; B5. Accessibility; B6. Life Safety; B7: Structural Systems; B8. Environmental Systems; B9. Building Envelope; B10. Building Services; B11. Building Materials; C1: Detailed Design Development; C2. Building Systems Integration. (see CACB SPC matrix for further details)

Special Budgetary Requirements

Mandatory Fees | The University has approved supplemental fees for the following courses:

2012/2013 SUPPLEMENTARY COURSE FEES

ARST 484/EVDA 580/EVDS 603 - Studio I Design Thinking	\$92.00
ARST 444/EVDA 582 - Studio II in Architecture	\$92.00
EVDA 682.02 – Intermediate Studio	\$92.00
EVDA 682.04 - Comprehensive Arch. Studio	\$92.00
EVDA 782 - Senior Arch. Studio (all sections)	\$92.00
EVDS 624 – Impact Assessment and Risk Management	\$35.00
EVDS 626 – Landscape Planning and Ecological Design	\$70.00

Contact & Office Information

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Please contact the instructor or TA with any questions or concerns. Meetings by appointment.



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