



UNIVERSITY OF CALGARY
SCHOOL OF ARCHITECTURE,
PLANNING AND LANDSCAPE

ARCH 680.25 Lec 05 | Elective

Dan Hapton

Fall 2022 | MF 11:00 – 12:30

Location | RM PF 3177

CACB SPC: design tools (primary)/design skills (secondary)

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“OBVIOUSLY, IT’S DIGITAL”

Or is It?



INTRODUCTION

Obviously, it's digital... or is it? This is the ethos of Architecture's Post-Digital era. A certain uncertainty about our relationship to the digital is a game the new generation plays. It is somewhere between sincerity and irony because we know that everything today is digital. Yet we are sincerely interested in the uncertainties that digital mastery has enabled us to discover. We have expanded beyond traditional coherences and linear thinking. It is a new frontier of imagination where unlikely combinations, strange familiarities, and impossible entropies collide.

The inaugural term of "Obviously, It's Digital" will take on the age-old false dichotomy of culture versus nature. In the form of a Visual Studies Seminar, we will explore advanced digital design and representational techniques to produce drawings, models, images, and animations that trouble common assumptions—especially the assumption of architecture's transcendence over nature. Our work will be informed by both theory and skill-building workshops. The resulting body of work will represent our collective ruminations on architecture's troubled relationship to nature, and will hopefully include some surprising discoveries.

Students in this course can expect to learn and develop skills in advanced 3D modeling, digital drawing, procedural (aka generative) modeling, rendering, rigging, animation, and compositing. We will use Blender in combination with other design software. The course will include reading discussions, software tutorials, and group pin-ups/reviews.

Experience with 3D modelling software is required for this course: The course assumes that students are comfortable with 3D modelling and have a capable computer. Required course software includes Blender, Rhino 3D, the Adobe Software Suite, and Miro. Free plug-ins for these programs will be used as needed.

OBJECTIVES

- To develop and demonstrate advanced digital design skills for both speculative and practical applications.
- To develop and demonstrate advanced visual representation skills
- To develop and refine critical thinking and its relationship to visual/spatial thinking.

CONTENT: TOPIC AREAS & CLASS SCHEDULE (Subject to change)

Detailed class schedules, pamphlet topics and project weighting will be provided at the start of each pamphlet.

PAMPHLET ONE	Sept 9 – Sept 30	30%
A BRIEF HISTORY OF ARCHITECTURAL BEASTS THEORY, MESH PROCEDURAL MODELING, SCIENTIFIC DRAWINGS		
PAMPHLET TWO	Oct 10 – Nov 4	30%
IT'S ALIVE! CHARACTER RIGGING, ENVIRONMENT DESIGN, RENDERINGS		
PAMPHLET THREE	NOV 14 – DEC 02	30%
BEASTIOUS ARCHITECTURAL ANIMATION & COMPOSITING		
MONOGRAPH		
DOCUMENTATION COURSE BOOK		10%

READINGS

A selection of required and suggested readings that will be assigned throughout the course. This list is subject to change and might be expanded to include additional essays, books, films and podcasts.

Gokhan Kodalak & Sandford Kwinter | *The Return of Nature*

Young & Ayata | *The Estranged Object*

Adam Kotsko | *Creepiness*

Viktor Schlovsky | *Art as Technique*

TEACHING APPROACH

The course will be conducted in a blended format. In person sessions combined with on-line sessions via Zoom and Miro and will utilize a series of assigned readings, tutorials, design charrettes, informal and formal reviews, and guest resources. Detailed assignments with corresponding deliverables and deadlines will be disseminated at the beginning of each pamphlet. Success will rely on the development and execution of pamphlet specific methodologies, iterative exploration, observation, and critical reflection. Students are expected to produce new work in advance of all classes, with all new work uploaded to the Miro board prior to the start of class. Students should come to all scheduled meetings prepared to discuss their work and constructively critique the work of their peers.

EMAIL POLICY

Please note that all course communications must occur through your @ucalgary email, and the teaching team will respond to emails sent via the student's @ucalgary email within 48 hours.

MEANS OF EVALUATION

Specific deliverables and their corresponding due dates will be provided at the commencement of each pamphlet. Students are expected to complete all required work by the assigned dates and show up to all scheduled reviews, lectures, and presentations on time and ready to discuss their work. Unless otherwise noted, all grades will take into consideration:

- *Participation & Completeness* – all project deliverables are present, completed and submitted on time following a coherent naming convention. Students present and actively participate in all reviews and discussions.
- *Graphics & Communication* - all visualizations and produced artifacts are carefully considered in their production and their presentation.
- *Technique & Craft* - The project demonstrates proficiency in the tools, workflows and methods introduced. All techniques are rigorously and iteratively deployed to solve problems. All project deliverables are well-crafted, overall care is evident.
- *Critical Thinking & Iteration* – Students utilize an iterative workflow based on exploration, critical thinking, and reflection. The student's work engages the course subject matter and takes a position.

GRADING SCALE

The SAPL standard grading scale will be used in all evaluations for this course.

A+ (95.0-100.0); **A** (90.0-94.99); **A-** (85-89.99); **B+** (80.0-84.99); **B** (75.0-79.99); **B-** (70.0-74.99); **C+** (65.0-

69.99); **C** (60.0-64.99); **C-** (55.0-59.99); **D+** (50.0-55.99); **D** (45.0-49.99); **F** (0-44.99).

Final grades will be reported as letter grades, with the final grade calculated according to the 4-point range." All project phases will be evaluated by percentage grades, with their letter grade equivalents as shown.

NOTE: 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. If a student receives a grade less than B- for any assignment worth 30% or more, the student will receive an F grade for the course.

CANADIAN ARCHITECTURAL CERTIFICATION BOARD (CACB) STUDENT PERFORMANCE CRITERIA (SPC)

The following CACB Student Performance Criteria will be covered in this course at a *primary* level:

A3. Design Tools

The student must demonstrate an ability to use the broad range of design tools available to the architectural discipline, including a range of techniques for two-dimensional and three-dimensional representation, computational design, modeling, simulation, and fabrication.

The following CACB Student Performance Criteria will be covered in this course at a *secondary* level:

A2. Design Skills

The student must demonstrate an *ability* to apply design theories, methods and precedents to the conception, configurations, and design of buildings, spaces, building elements, and tectonic components.

B1. Critical Thinking and Communication

The student must demonstrate an ability to reach clear and precise questions; record, assess and comparatively evaluate information; synthesize research findings and test potential alternative outcomes against relevant criteria and standard; reach well-supported conclusions related to a specific project or assignment; and write, speak, and use visual medial effectively to appropriately communicate on subject matter related to the architectural discipline with the profession and general public.

TECHNOLOGY REQUIREMENTS

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Broadband internet connection
- Software:
 - Blender (+ assignment specific plugins)

- Rhino / Grasshopper (+ assignment specific plugins)
- Adobe Suite (Illustrator, Photoshop, InDesign, etc.)

ADDITIONAL CLASSROOM CONDUCT AND RELATED INFORMATION

Guidelines for Zoom Sessions in Online Classes

Students are expected to participate actively in all Zoom sessions and to turn on their webcam. Please join our class in a quiet space that will allow you to be fully present and engaged in the Zoom sessions. Students must behave in a professional manner during the session, including paying attention to their Zoom background [whether real or virtual]. Students, employees, and academic staff are also expected to demonstrate behaviour in class that promotes and maintains a positive and productive learning environment.

To help ensure Zoom sessions are private, do not share the Zoom link or password with others, or on any social media platforms. Zoom links and passwords are only intended for students registered in the course. Zoom recordings and materials presented in Zoom, including any teaching materials, must not be shared, distributed or published without the instructor's permission.

Zoom is a video conferencing program that will allow us to meet at specific times for a "live" video conference, so that we can have the opportunity to meet each other virtually and discuss relevant course topics as a learning community.

The use of video conferencing programs relies on participants to act ethically, honestly and with integrity; and in accordance with the principles of fairness, good faith, and respect (as per the [Code of Conduct](#)). When entering Zoom or other video conferencing sessions (such as MS Teams), you play a role in helping create an effective, safe and respectful learning environment. Please be mindful of how your behaviour in these sessions may affect others. Participants are required to use names officially associated with their UCID (legal or preferred names listed in the Student Centre) when engaging in these activities. Instructors/moderators can remove those whose names do not appear on class rosters. Non-compliance may be investigated under relevant University of Calgary conduct policies (e.g. [Student Non-Academic Misconduct Policy](#)). If participants have difficulties complying with this requirement, they should email the instructor of the class explaining why, so the instructor may consider whether to grant an exception, and on what terms. For more information on how to get the most out of your zoom sessions visit: <https://elearn.ucalgary.ca/guidelines-for-zoom/>

If you are unable to attend a Zoom session, please contact your instructor in advance to arrange an alternative activity for the missed session (e.g., to review the recorded session). Please be prepared, as best as you are able, to join class in a quiet space that will allow you to be fully present and engaged in Zoom sessions. Students will be advised by their instructor when they are expected to turn on their webcam (for group work, presentations, etc.).

The instructor may record online Zoom class sessions for the purposes of supporting student learning in this class – such as making the recording available for review of the session or for students who miss a session. Students will be advised before the instructor initiates a recording of a Zoom session. These

recordings will be used to support student learning only and will not be shared or used for any other purpose.

UNIVERSITY OF CALGARY POLICIES AND SUPPORTS

COVID-19 PROCEDURE FOR SICK STUDENTS: <https://ucalgary.ca/risk/sites/default/files/Covid-19%20Folder/COVID-19-Procedure-for-Sick-Students.pdf>

ACADEMIC ACCOMMODATION

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The Student Accommodations policy is available at <https://ucalgary.ca/student-services/access/prospective-students/academic-accommodations>. Students needing an accommodation based on disability or medical concerns should contact Student Accessibility Services (SAS) in accordance with the Procedure for Accommodations for Students with Disabilities (<https://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities.pdf>). Students who require an accommodation in relation to their coursework based on a protected ground other than Disability should communicate this need in writing to their Instructor.

SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities, visit www.ucalgary.ca/access/.

ACADEMIC MISCONDUCT

Academic Misconduct refers to student behavior which compromises proper assessment of a student's academic activities and includes: cheating; fabrication; falsification; plagiarism; unauthorized assistance; failure to comply with an instructor's expectations regarding conduct required of students completing academic assessments in their courses; and failure to comply with exam regulations applied by the Registrar.

For information on the Student Academic Misconduct Policy and Procedure please visit:

<https://ucalgary.ca/policies/files/policies/student-academic-misconduct-policy.pdf>

<https://ucalgary.ca/policies/files/policies/student-academic-misconduct-procedure.pdf>

Additional information is available on the Academic Integrity Website at <https://ucalgary.ca/student-services/student-success/learning/academic-integrity>.

COPYRIGHT LEGISLATION:

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright.pdf) and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorised sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy (<https://www.ucalgary.ca/pubs/calendar/current/k.html>).

INSTRUCTOR INTELLECTUAL PROPERTY

Course materials created by instructors (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the instructor. These materials may NOT be reproduced, redistributed or copied without the explicit consent of the instructor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.

FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY

Student information will be collected in accordance with typical (or usual) classroom practice. Students' assignments will be accessible only by the authorized course faculty. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary.

SEXUAL VIOLENCE POLICY

The University recognizes that all members of the University Community should be able to learn, work, teach and live in an environment where they are free from harassment, discrimination, and violence. The University of Calgary's sexual violence policy guides us in how we respond to incidents of sexual violence, including supports available to those who have experienced or witnessed sexual violence, or those who are alleged to have committed sexual violence. It provides clear response procedures and timelines, defines complex concepts, and addresses incidents that occur off-campus in certain circumstances. Please see the policy available at

<https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf>

UNIVERSITY STUDENT APPEALS OFFICE: If a student has a concern about the course, academic matter, or a grade that they have been assigned, they must first communicate this concern with the instructor. If the concern cannot be resolved with the instructor, the student can proceed with an academic appeal, which normally begins with the Faculty. <https://www.ucalgary.ca/secretariat/student-appeals>

OTHER IMPORTANT INFORMATION

Please visit the Registrar's website at: <https://www.ucalgary.ca/registrar/registration/course-outlines> for additional important information on the following:

- Wellness and Mental Health Resources
- Student Success
- Student Ombuds Office
- Student Union (SU) Information
- Graduate Students' Association (GSA) Information
- Emergency Evacuation/Assembly Points
- Safewalk

MEDIA AND RECORDING IN LEARNING ENVIRONMENTS

Part 1

University Calendar: <https://www.ucalgary.ca/pubs/calendar/current/e-6.html>

Recording of lectures (other than audio recordings that are pre-arranged as part of an authorized accommodation) is not permitted. Students may not record any portion of a lecture, class discussion or course-related learning activity without the prior and explicit written permission of the course instructor or authorization from Student Accessibility Services. For any other use, whether by duplication, transcription, publication, sale or transfer of recordings, written approval must be obtained from the instructor for the specific use proposed. Any use other than that described above constitutes academic misconduct and may result in suspension or expulsion.

Part 2

The instructor may use media recordings to capture the delivery of a lecture. The instructor will notify all students and guests in the class that the event is being recorded. If a student or guest wants to take steps to protect privacy, and does not want to be recorded, the instructor will provide the individual (s) with an alternative means of participating and asking questions (e.g., passing written notes with questions). Students cannot be penalized for choosing not to be recorded in situations where participation is part of the course. Students must be offered other ways of earning participation credit that do not involve recording. Any video-recording would be intended to only capture the instructor and the front of the classroom. Students/other participants would not necessarily be visible on video recordings.

UNIVERSITY OF CALGARY POLICIES AND SUPPORTS Academic Accommodation

Students seeking an accommodation based on disability or medical concerns should contact Student

Accessibility Services; SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities, visit www.ucalgary.ca/access/. Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their Instructor. The full policy on Student Accommodations is available at <http://www.ucalgary.ca/policies/files/policies/student-accommodation-policy.pdf>.

Academic Misconduct

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, (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. Any suspicion of plagiarism will be reported to the Dean, and dealt with as per the regulations in the University of Calgary

Graduate Calendar. For information on academic misconduct and its consequences, please see the University of Calgary

Calendar at <http://www.ucalgary.ca/pubs/calendar/current/k.html>

COPYRIGHT LEGISLATION

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-bycopyright.pdf) and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C42/index.html>) to ensure they are aware of the consequences of unauthorised sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

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More student support and resources (e.g. safety and wellness) can be found here: <https://www.ucalgary.ca/registrar/registration/course-outlines>