CUST-MDST 4136H/CUST 5520H: Computational Arts
Fall 2024 | Trent University

Calendar Description

Examines diverse spatial media experiences with a focus on documentary, narrative and visual culture. Engaging through experimentation with mapping and GIS tools, location-based media, Augmented Reality and Virtual Reality, students will participate in a major project using digital resources both at The Moore Innovation and Research Hub and Traill College.

Course Description

Media labs are open spaces geared to collaborative work and creative outcomes. Moving beyond the idea of "genius" scholars working alone in their "ivory towers," the media lab concept favours curiosity-based inquiries that are tested and reworked through dialogue and peer support. In this workshop, we follow in the tradition of media labs by inviting you to develop projects that draw from your wildest imaginations, but with guidance, and the aim to acquire transferable skills and training in the media technologies available both at Traill College and Bata Library. We focus on eight major topic areas – map, image, location, experience, data, cinema, mobility, body – and we use these to ask the following questions: What is the relationship between narrative and spatial representations? How does artificial intelligence affect our visual culture? To what extent do media infrastructures shape perceptions of social reality? What ethical limits should we place on mediated forms of embodiment such as VR? Throughout the term, you will have the opportunity to explore at least two of these topic areas – first, in a lab experiment, which is a starter assignment that includes specific parameters, and second, a final project where you will be asked to develop a concept of your own from start to finish. With assistance provided by the digital scholarship librarian and the course instructor, this workshop challenges you to adapt your vision to building a capstone project that engages different media applications.

Class schedule

Three class hours per week. While time at the Moore Innovation and Research Hub has been scheduled, you may need to book additional studio time outside of class hours.

Learning Objectives

- Develop applied methods in visual studies and media studies.
- Enjoy and learn from hands-on, practical applications of media.
- Develop skills in mapping, image making, locative media, VR, and others.
- Read historical, critical, and theoretical perspectives on media.
- Build your skills working collaboratively in a group setting.

Texts

All required readings are available for free on Blackboard, online through World Wide Web (WWW), or through Trent Library's online resources, as indicated.

Evaluation criteria

Assignment	Due Date	Grade
Lab experiment	October 8	15%
Skills sharing workshop	October 15	5%
Project proposal	November 5	10%
Final project	November 26	30%
Artist statement (presentation)	December 3	10%
Class presentation	Ongoing (Weeks 2-5 and 8-11)	10%
Participation	Ongoing	20%

1. Lab Experiment

Deadline: October 8 | Grade: 15%

Rather than writing a conventional academic paper, this assignment requires that you produce an artistic work, or a work of "research-creation," that draws from resources in our media labs.

In Part I of the course, we engage readings and seminar discussion on four subject areas – map, image, location, and experience. You will be asked to concentrate on at least one of these themes in a Lab Experiment.

Be mindful of the approach you are taking and remember to anchor your Experiment in a research problem, creative question and/or methodology. Consider how your work contributes to the goals of practice-based research as outlined in Gerard Vilar's text from our first week's required reading.

The work you set out to complete may inspire you to develop additional skills. For example, you may need to become familiar with a specific software application or production device. Give yourself adequate time to complete this assignment and be reasonable with your goals. Check in regularly with the course instructor if you have any specific technical challenges.

If you are having difficulty finding an appropriate subject for this assignment, consider some of these options (but don't hesitate to modify them if you wish):

> *Story map. Using dedicated ArcGIS software, you will be able to develop a multimedia narrative by curating maps, images and other digital materials. The theme of your story will depend on your interests, the kind of material that you want to work with (i.e. personal archive vs. generated material), and time limitations. Construct a story that highlights the spatial dimensions of your chosen subject.*
>
> *AI images. You can use image generators and virtual assistants like ChatGPT for your assignment, but these projects must critically engage their technologies, use patterns, histories, or results. Simply generating images to express a topic, concept, subject, or feeling will not be accepted. Creativity and criticality is essential.*
>
> *Critical infrastructure walking tour or mobility experiment. This option invites you to develop a walking tour map that features a location of your choice. Complete the map*

by touring the space you have chosen, marking out areas such as parks, walkways, major intersections, public amenities, and zoning restrictions. Identify the infrastructures that are present and/or hidden in this space, connecting them to specific purpose-built features or designs. These may include aspects of the built environment, such as light fixtures, sewage systems, and building materials like asphalt, concrete and steel; and media infrastructures, like cell towers, telephone wires, and handheld devices. Locate the broader web of these infrastructures on your map.

Drawing and printing in 3 dimensions. This option allows you to experiment with the VR tools available in the Odette Critical Making Studio, focusing on the VR drawing application and 3D printer in particular. Develop a concept for your constructed object(s) before getting to work. Bear in mind both the limits and possibilities of the VR interface, as well as printer specifications.

3D scanning. Use the 3D scanner to develop unique spatial perspectives, explore questions about the relationship between simulation and reality, and/or critically examine issues of reproduction and remediation.

* A short, written statement of 500 words will accompany your Lab Experiment. This should be uploaded to Blackboard. Delivery of your experiment will depend on the shape of your work.

2. Skills sharing workshop

Deadline: October 15 | Grade: 5%

We all have unique skills that others don't. For this assignment, provide a short presentation and/or activity that focuses on a skill that might be helpful to others as they develop their own creative work. For example, you might want to share a software application or programming language that you are familiar with. Maybe you have lots of experience working with video editing tools. Maybe you have been working with specific artistic materials that others would benefit from learning about. Perhaps you would like to share an artistic technique that you have developed. You might also want to share different strategies for completing research. While being mindful of the course parameters, feel free to define "skills" in the broadest way, and come to class ready to learn from your peers.

3. Project proposal

Deadline: November 5 | Grade: 10%

After you have completed the Lab Experiment, you should have a rough idea of the kind of work you want to complete for the Final Project. Choose a subject area/theme that is different from the one you focused on for the experiment OR one that develops it in new and interesting ways.

You should submit a written statement prior to presenting your proposal in class on Week 6. The written statement should include the following:

a) Your research questions (~200 words). What brought you to the work you have set out to do? What goals or objectives do you have in mind? What theories or concepts are

most important? Are there any precedents/influences? And, if necessary, how does your proposed work depart from and/or develop on the experiment that you completed?

b) Production notes (~200 words). What form will it take? What resources do you need? What technical skills do you need to acquire and/or build upon, if any? And how will you exhibit the work?

c) Personal development (~100 words). What do YOU want to get out of this project? Where do you want to take your work/research after the course has ended? How will this project push boundaries for you?

Once your proposal has been delivered in class, you will have approximately six (6) weeks to complete the final project.

4. Final project

Deadline: Nov 26 | Grade: 25%

The Final Project is the result of many weeks of preparation, starting with developing the concept through peer dialogue, presenting on academic research in the field, and, of course, using the critical making tools at Traill College and/or Bata Library. We will investigate – and celebrate – these works on our final day in class, where you will deliver a short presentation during our crits.

5. Artist statement (presentation)

Deadline: December 3 | Grade: 10%

An artist statement is a short and concise document that clearly explains your artistic work, including the framework and parameters that you have chosen to work in. This document should not include lengthy explanations of concepts, ideas, or histories. Stay close to the "how" of your work. You will deliver a short presentation of your final project that is loosely based on your artist statement in the final week of class. Have a look at a useful how-to write artist statements offered by The Hamilton Arts Council.

6. Class presentations

Deadline: Ongoing | Grade: 10%

Each student will be asked to select one of the topics between Weeks 2 and 5 or 8 and 11 to deliver a class presentation. The presentation could help to clarify methodological questions that may arise in your projects, so you are encouraged to select a topic that roughly aligns with your interests (but matching your presentation topic to your lab work is not necessary). The presentation itself should about 5-7 minutes in length. No summaries of the texts, *please*. The focus of the presentation should be on the weekly topic/theme with readings as supporting evidence/illustration. However, be prepared to take questions on all the required reading for your chosen week, and how your presentation connects to them. Be creative and have fun!

7. Participation

Deadline: Ongoing | Grade: 20%

To repeat the first line of the syllabus, media labs are open spaces geared to collaborative work and creative outcomes. Participation is essential. That includes active, engaged, and informed seminar discussions as much as it includes consistently helping to provide a supportive environment for your peers.

Reading Schedule

Week 1 – Introduction
Sep 10

Required reading:

> Vilar, G., "Does Artistic Research Produce Knowledge?" *ESTUDIS ESCÈNICS*. 43 (2018): 1-9. (Blackboard)

Recommended reading:

> Emerson, L., Parikka, J., and Wershler, D. (2021) "Lab Space," in *The Lab Book: Situated Practices in Media Studies*, Minneapolis: University of Minnesota Press: link here.
>
> Scarlett, A., "Excavating the Origins of Network Art in Canada: Leslie Mezei, Peter Milojevic, and Computer Art Journalism in the 1960s and 1970s," *Variable Conditions: Paracomputational Arts in Canada, 1965-1995*, ed. Lauder, A., Montreal: McGill-Queen's University Press, 2023, pp. 58-85. (Bata Library Online)

Guests:

> Digital Scholarship Librarian at the Odette Critical Making Studio.
>
> Representative from the Maps, Data & Government Information Centre (MaDGIC).

* NB: The second half of this week's meeting will be held on the fourth floor of Bata Library.

MODULE 1: GROUNDWORK FOR THE LAB EXPERIMENT

Week 2 – (Map) Spatial media narratives
Sep 17

Required reading:

> Caquard, S. (2011) "Cartography I: Mapping narrative cartography," *Progress in Human Geography*, 37(1): pp. 135-144. (Blackboard)
>
> Kurgan, L. (2013) "Mapping Considered as a Problem of Theory and Practice," *Close Up at a Distance: Mapping, Technology, Politics*, Brooklyn: Zone Books: 9-19. (Blackboard)

Wilson, M. W. (2017) “Criticality: The Urgency of Drawing and Tracing,” *New Lines: Critical GIS and the Trouble of the Map*. Minneapolis: University of Minnesota Press: 25-46. (Bata Library Online)

In-class viewing: Radical Cartography, Torn Apart / Separados, Queering the Map, Abortion Laws by State, The Fruit Trees of Toronto.

Recommended reading:

Kitchin et al. (2017) “Understanding Spatial Media,” *Understanding Spatial Media*. London: Sage, pp. 1-25. (Blackboard)

Mattern, S. (2015) *Deep Mapping the Media City*, Minneapolis: University of Minnesota Press. (Kindle purchase for $6, or search “[title] + pdf” in Google).

Pickles, J. (2004) “The Cartographic Gaze, Global Visions and Modalities of Visual Culture,” *A History of Spaces: Cartographic Reason, Mapping and the Geo-Coded World*, New York: Routledge, pp. 75-92. (Blackboard)

Shields, R. (2018) “Bergson’s GIS: Experience, Time and Memory in Geographical Information Systems,” *Media Theory* 2(1): pp. 316-322. (Blackboard)

Stoler, A. (2010) “Writing and Its Imperial Mutations,” *Along the Archival Grain: Epistemic Anxieties and Colonial Common Sense*, Princeton: Princeton University Press, pp. 1-8. (Blackboard)

Week 3 – (Image) Photographic futures
Sep 24

Required reading:

Ted Chiang, “Why A.I. Isn’t Going to Make Art.” https://www.newyorker.com/culture/the-weekend-essay/why-ai-isnt-going-to-make-art

McQuire, S., Pfefferkorn, J., Sunde, E. K., Lury, C., & Palmer, D. (2024). Seeing Photographically. *Media Theory*, *8*(1), 01–18. Retrieved from https://journalcontent.mediatheoryjournal.org/index.php/mt/article/view/1066

Levitt, D. (2018) “Animatic Pop: Body-as-Image, Image-as-Body,” *The Animatic Apparatus: Animation, Vitality, and the Futures of the Image*, Zero Books: 83-109. (Blackboard)

In class viewing: This Person Does Not Exist, Sentient Muppet Factory, Clint Enns.

Recommended reading:

Hand, M., and Scarlett, A. (2023) “Introduction: The Politics and Practices of Computational Seeing.” *photographies*, 16:2: 155-171. (Blackboard)

McCosker, A., and Wilken, R. (2020) “Face Value,” in *Automating Vision: The Social Impact of the New Camera Consciousness*, New York: Routledge, pp. 34-55. (Blackboard)

Treccani, C. (2018) “How machines see the world: Understanding image annotation,” *NECSUS*, 7.1: 235.254: Link.

Zylinska, J. (2020) *AI Art: Machine Visions and Warped Dreams*. London: Open Humanities Press.

Training the Archive – Interview: Matteo Pasquinelli "Economic and Social Roots of AI"

Week 4 – (Location) Locative media
Oct 1

Required reading:

Farman, J. (2012) “Embodiment and the Mobile Interface.” *Mobile Interface Theory: Embodied Spaces and Locative Media*, New York and London: Routledge, pp. 16-35. (Blackboard)

Hemment, D. (2006) “Locative Arts.” *Leonardo*, 39(4): 348-355. (Blackboard)

Paquette, D., McCartney, A. “Soundwalking and the Bodily Exploration of Places.” *Canadian Journal of Communication* (2012): 37.1: 135-145. (Blackboard)

Wilken, R. (2019) “Introduction.” *Cultural Economies of Locative Media*. London: Oxford UP, pp. 1-20. (Bata Library Online)

In class viewing: Drone Aviary, Transborder Immigrant Tool, Border Crossing, Ambient Literature, Global Urban Wilds.

Recommended reading:

Behrendt, F. (2015) “Locative Media as Sonic Interaction Design: Walking through Placed Sounds.” *WI: Journal of Mobile Media*, 9(2). (Blackboard)

Smolicki, J., ed. *Soundwalking Through Time, Space, and Technologies*. New York: Routledge, 2023.

Verhoeff, N. (2012) “Introduction.” *Mobile Screens: The Visual Regime of Navigation*, Amsterdam: Amsterdam University Press. (Blackboard)

Goggin, G., and Wilken, R., excerpt from *Mobilizing Place*. London: Routledge. (Blackboard)

Week 5 – (Experience) Virtual walls
Oct 8

Required reading:

> Evans, L. (2018) "A (Brief) Cultural History of VR," *The Re-Emergence of Virtual Reality*, Routledge. (Blackboard)
>
> Li, J. (2018) "The Virtual Walls" (Blackboard)
>
> Pullen, T. M. (2016) "Skawennati's-Timetraveller™: Deconstructing the Colonial Matrix in Virtual Reality," *AlterNative: An International Journal of Indigenous Peoples*, 12(3): 236-249. (Blackboard)

In class viewing: Artificial Nature, Biidaaban: First Light, Timetraveller.

Week 6 – Skills sharing workshop
Oct 15

No required reading. Students will share skills with colleagues.

Reading break: Oct 22 (no class)

MODULE 2: BUILDING THE FINAL PROJECT

Week 7 – Workshopping the final project
Oct 29

No required reading. Students will workshop their proposals in class.

Guests: Laura Thompson, Media Equipment Manager, Dept of Cultural Studies.

*NB: We will meet at Traill College this week (location TBD).

Week 8 – (Data) Data visualization
Nov 5

Required reading:

> David Beer, excerpt from *The Data Gaze: Capitalism, Power and Perception*. London: SAGE, 2018. (Blackboard)
>
> Manovich, L. (2019) "Representing Phenomena as Data," in *Critical Terms in Futures Studies*, ed. Paul Heike, London: Palgrave. (Blackboard)

Takahashi, T. (2017) “Data Visualization as Documentary Form: The Murmur of Digital Magnitude,” *Discourse: Journal for Theoretical Studies in Media and Culture*: 39.3. (Blackboard)

In class: Shelly Jang, Laurie Frick, Hasan Elahi, U.S. Polling Data.

Week 9 – (Cinema) Expanded cinema
Nov 12

Required reading:

McGrath, J., excerpt from *In Praise of Disorder*. Toronto: Ukai Projects, 2024. (Blackboard)

Song, J., Wang, B., Wang, Z., and Kei-man Yip, D. (2023) “From Expanded Cinema to Extended Reality: How AI Can Expand and Extend Cinematic Experiences.” *Proceedings of The 16th International Symposium on Visual Information Communication and Interaction*. (Blackboard)

Peter Weibel (2003) “Expanded Cinema, Video and Virtual Environments.” *Future Cinema: The Cinematic Imaginary After Film*, eds. Peter Weibel and Jeffrey Shaw. Cambridge: The MIT press. (Blackboard)

In class: 21-22 Earth (Background information here), Forensic Architecture, The Great Catsby, Pizza Nuggets, Lord of the Rings by Wes Anderson, Ukai Projects, and others.

Week 10 – (Mobility) Seams and folds
Nov 19

Required reading:

Licoppe, C. (2016) “Mobilities and Urban Encounters in Public Places in the Age of Locative Media. Seams, Folds, and Encounters with ‘Pseudonymous Strangers,’” *Mobilities*, 11(1): pp. 99-116. (Blackboard)

Morley, D. (2017) “Sedentarism, Nomadology, and ‘New Mobilities,’” *Communications and Mobility: The Migrant, The Mobile Phone, and the Container Box*, London: Wiley-Blackwell, pp. 59-77. (Blackboard)

Recommended:

Urry, J., excerpt from *Mobilities*. London: Polity, 2007. (Blackboard)

Week 11 – (Body) Technologized touch
Nov 26

Required reading:

Crano, R. (2021). Room without Room: Affect and Abjection in the Circuit of Self-Regard. *M/C Journal*, *24*.3. https://doi.org/10.5204/mcj.2790

Salazar, C. (2023) "Challenging the 'Data Body' in New Media Art, 1990s-Present." *Afterimage*. 50.2: 11 pages. (Blackboard).

Parisi, D. (2018) "The Cultural Construction of Technologized Touch," in *Archaeologies of Touch: Interfacing with Haptics from Electricity to Computing*, Minneapolis: University of Minnesota Press. (Blackboard)

Recommended:

Huhtamo, E.(1995) "Encapsulated Bodies in Motion: Simulators and the Quest for Total Immersion," *Critical Issues in Electronic Media*, ed. Simon Penny, State University of New York Press: 159-186. (Blackboard)

Ihde, D. (2002) "Bodies, Virtual Bodies, and Technology," *Bodies in Technology*, Minneapolis: University of Minnesota Press: 3-15. (Blackboard)

In class: On Kawara, Anne Charlotte Robertson, Tehching Hsieh, Nicholas Felton.

MODULE 3: CRITS

Week 12 – Crits
Dec 3

Students will present on their final projects and/or their artist statement.