DESIGNING FOR EVERY BODY

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We acknowledge that the School of Architecture is located on the traditional territory of the Neutral, Anishinaabeg and Haudenosaunee peoples. The University is situated on the Haldimand Tract, the land promised to the Six Nations that includes 10 kilometres on each side of the Grand River. (see references here: https://uwaterloo.ca/engineering/about/territorial-acknowledgement)

> *Every day every body is at odds with the built environment. Bodies come up against stairs and sinks and subway platforms, sometimes with ease and grace and sometimes blundering and awkward, over hurdles, even in a sudden clash.*
>
> Sara Hendren, *What Can a Body Do?*

> Autism is: "*seeing the world through a kaleidoscope and trying to listen to a radio station that is jammed with static at the same time. Add to that a broken volume control, which causes the volume to jump erratically from a loud boom to inaudible."*
>
> Temple Grandin*, Thinking in pictures: My Life with Autism*

> *…disabled people rejected their status as objects of knowledge for rehabilitation professionals and architects, asserting disability as a kind of expert knowledge and critical making. When disabled people enact politics, these narratives suggest, they also design and build new worlds.*
>
> Aimi Hamraie, *Building Access Universal Design and the Politics of Disability*

1.0 INTRODUCTION AND PREMISE

Design for Disability

Designing for disability, or rather, for multiple abilities, and for multiple bodies, should be neither remedial, nor compensatory, but rather, asks: what is an architecture of care, innovation, and inclusion? How might we design beyond the checklist, without relying on building code minimums and standards as the sole driver for accessible design? In this studio, we learn from diverse ways of being in the world and critique the idea of the "norm." Designing for multiple abilities and bodies is an opportunity to challenge current assumptions about building types, institutional organizations, and societal values more broadly. It is an invitation to innovate, to question the basic elements of architecture – a wall, a door, a window, the materials we use, the way bodies move through space and how different people experience and perceive spaces and their stimuli. The intent is to explore what we might take for granted in the design process and what we value in the final outcomes. Sarah Hendren's question: "what can a body do" moves us away from the idea that a body is projected to move in certain ways. The studio similarly ask what architecture can do when it is unmoored from narrow expectations of what a body is or how our bodies perform.

Numerous architects and theoreticians have explored the intersection of architecture and the haptic, architecture and perception, architecture and psychology. Architectural theorist David Gissen, in "Disabling Form" analyses how the architectural historian Heinrich Wofflin developed a language and understanding of architecture deeply intertwined with the language of the body, and assumptions of

bodily and architectural beauty, symmetry, etc., which haunts the profession to this day.[1] More recently, architects Shusaku Arakawa and Madeline Gins explored, through their radical experiments, how architecture could stimulate the body and defer the ultimate challenge—death. Their work "was a prompt to understand how to live to your fullest, to understand all of your body's capacities, how it interacts with the world on every single level: through your sense, through your mind and how your mind can construct the world around you."[2] Designer and disability activist Alice Sheppard asks us to think deeply about the standards and ideologies that have come to define our expectations of bodies and minds. She suggests that we build environments that defy these standards and expand a horizon of possibilities [3]

Disability Justice and the Social Model of Disability

Discussions of disability now intersect with disability justice, a social justice movement which examines disability and ableism as they relate to other forms of oppression and identity such as race, class and gender. It was developed in 2005 by the Disability Justice Collective; the movement argues that ableism supports other forms of prejudice and systems of oppression and suggest that disability justice must be understood as operating at the intersection understanding of disability, human rights, and justice movements. Disability Justice also works within the social model of disability which posits that people are disabled by barriers created by society. These barriers can be physical or architectural elements like curbs and steps, but they can also be systemic conditions that lead to erroneous beliefs about disability in general. Therefore, change occurs when these barriers at all scales of society are mitigated.

Alternative Education Models

We will use the school as a building type to explore and test ideas about inclusive and design and notions of access. The program of the elementary school allows to consider questions of individual and collective experience, play, socialization, and learning, and to think about the building which helps construct new communities, but also deeply engrained in the physical and social fabric of existing communities Herman Hertzberger, the Dutch architect of numerous junior schools in the Netherlands in the 1960s through the 1980s, saw the architecture of schools as one of making connections – visual, social, and spatial. He, like Aldo van Eyck, conceived of buildings (and schools) as fragments of cities, with all the social and spatial intricacies this required—spaces to gather, to socialize, to learn, to play.[4]

There have been numerous challenges to conventional education models across various countries and over many decades, addressing the needs of neurotypical children or those with specific, often multiple needs. TDSB for instance offers a number of specialized support areas. [5] TDSB, following

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[1] Gissen, David, "Disabling Form," *E-Flux Architecture*, May 2022.

2 Dante A. Ciampaglia, " These Architects Sought to Solve the Ultimate Human Design Flaw—Death," *Metropolis Magazine*. May 30, 2018.
https://metropolismag.com/viewpoints/arakawa-madeline-gins-achitecture-death-exhibition/

[3] Alice Sheppard, "Staging Bodies, Performing Ramps: Cultural-Aesthetic Disability Technoscience," in *Catalyst: Feminism, Theory and Technoscience.* 2019 5(1): 1-12.
https://catalystjournal.org/index.php/catalyst/article/view/30459/24815

4 https://architectureandeducation.org/2017/08/29/interview-with-herman-hertzberger-2017-architecture-as-visual-and-social-connection/

5 Toronto District School Board types of Exceptionality Intensive Support Programs:
Autism; Behaviour; Deaf and Hard of Hearing; Developmental Disability; Giftedness; Learning Disability; Mild Intellectual Disability; Physical Disability.

international models, has outlined a principle of inclusive education, where children with special needs are integrated into classrooms, and given additional support. While ideal, this model has proven challenging, due to limited funding and human resources put in place to support children's needs.[6] Developmental psychologists believe that early childhood is a particularly critical time for development of all children, but particularly for children on the autism spectrum. Stimulation – sounds, touch, taste, small, sight – are all critical to develop. These needs evolve as children get older.

Examples of Alternative Approaches

Montessori education is characterized by an emphasis on "independence, freedom within limits, and respect for a child's natural psychological development."[7] Key elements are mixed age classrooms, student's choice student choice of activity from a prescribed range of options, specialized educational material, a discovery model of learning, and uninterrupted blocks of work time.[8] Scandinavian Forest Schools were inspired by the work of Froebel, the inventor of the kindergarten, which encourages children to learn and develop outdoors, based on humanistic vision of children's relationship to family and society. Generally for pre-school aged children, the natural surrounding provide a starting point for activities inside and out. Initiatives such as CARD (Community Association for Riders with Disabilities) advocates for the Physical, Cognitive and Emotional benefits of riders and horses, to build up physical capacity, communication skills, and social interaction, among other benefits.

Similarly, there have been radical experiments in children's playgrounds, and the relationship between safety, adventure and exploration. In the 1940s' Dutch architect Aldo Van Eyck, who built over 700 playgrounds across war-ravaged Amsterdam, conceived of the playground as the place where the child could be "lord of the city." Rather than conventional and prescriptive swings or slides, van Eyck's play sculptures invited the child to actively explore the numerous possibilities.
Child advocate Lady Marjory Allen developed the idea of "junk playgrounds," inspired by the work of Danish architect, architect Carl Theodor Sørensen. A contemporary to van Eyck, Allen later focused her attention specifically on junk playgrounds for children with various disabilities. Other exploratory and adventure or risk building' playgrounds have followed suite, particularly in Germany.[9] Each of these examples embrace new models of education, play, learning and socialization for children for all needs, and invite new spatial typologies and new programmatic hybrids.

Similar ideas were espoused by Simon Nicholson in the early 1970s, around the idea of "loose parts theory" which argued that children should be able to impact their physical environment through creative engagement. A built environment that allows for children to tinker, rearrange, recreate, and design elements as they play, encourages them to be active agents in the world in which they belong. The Brazilian writer Paolo Freire coined the term "critical pedagogy", which links similar notions of agency to the classroom environment, arguing that students are not empty vessels, but rather participants in the transformation of their world. Beyond simply the playground, might we imagine our buildings and classroom and gyms as equally adaptable and provocative? What might a classroom

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[6] "A Case for Inclusive Education," Organizational Development/Research & Information Services , Toronto District School Board,12/13-09.

7 Ref: mariamontessoriacademy.net

8 https://www.educationrevolution.org/store/resources/alternatives/mapoflandscape/
https://purelypacha.com/11-models-of-alternative-education-worth-studying/

[9] In Berlin, Kolle 37, was a mini-metropolis of tree forts, walkways and dens, built entirely by children.
https://www.theguardian.com/world/2021/oct/24/why-germany-is-building-risk-into-its-playgrounds

that can adapt to times of day, seasons, ages, learning imply? How might we move beyond the standard and the norm?

02: STUDIO STRUCTURE & METHODOLOGY

The studio will be grounded by in-depth research and observation in the first weeks of the studio and is organized such that research and design continue to feedback on each other through most of the term. The studio encourages speculations, independent thinking, and the positioning of architecture within larger disciplinary and inter-disciplinary discussions. The studio also intends to reflect on, and challenge, our current design and representational tools and how these serve to reify specific design outcomes.

The course will be structured around a **single project, broken into four phases**, moving from research and precedent study to studies of how architecture enables and resists the movements of many bodies, to the design of building elements, and then building design. Detailed descriptions will introduce each phase of the project. The course will be structured to enable students to move effectively across scales, with the term project divided into several sub-phases.

Students will select a focus for their school – in terms of age range, site, and need they are addressing - based on what best supports potent conceptual and design explorations.

1. There will be 3/4 possible sites in Toronto offering different opportunities and challenges, some deeply engaged in different landscapes, others much more urban.
2. Students will also select what age range their schools address—(and for instance include a daycare and cover age range K-3) or slightly older children (Grade 4 through 6)—and how this might influence design.
3. Students in the studio will select what issues of accessibility their inclusive school might address: the needs of children on the autism spectrum, with physical disability, blind or low-sighted, deaf/hard of hearing/Deaf.

Students are encouraged to work in pairs. Below is the outline of key studio phases in greater detail:

P1: RESEARCH ON DISABILITY THEORY, DESIGN FOR DISABILITY & PRECEDENTS: *[*
The first project will involve intensive research examining disability theory, creating a timeline of key developments in the field of disability, spatial and environmental needs for various people with disabilities, and we will analyze key precedents relevant to school design and disability design. The first month of studio will also be grounded in numerous lectures, readings and discussions. Students will work individually or in groups, depending on the topic.

P2: A TALE OF MOVING BODIES
This short exercise will invite students to create a short 1 page graphic novel describing a body with specific needs, moving through a particular space. It can be a space you know, or an imagined one. Students will be asked to use the graphic novel to think and identify moments of friction in current design. Students can work alone or in pairs.

P3: NEW ELEMENTS OF ARCHITECTURE
Building in part on Rem Koolhaas' elements of architecture for the 2014 Venice Biennale, as well as Stuart Brandt's Whole Earth Catalogue, students will work together to develop a catalogue of new architecture elements – walls, doors, thresholds, windows, seating, stairs, ramps, desks, lighting, etc. which consider the needs of multiple bodies. Students will work individually for this project.

P4.1 RETHINKING THE SCHOOL
We will explore new design methods – models, bas relief models, three-dimensional drawings, to develop schematic design with a focus on movement, spatial sequences, diversity of spaces addressing specific needs. Students can work individually or in groups.

P4.2 SCALES OF INTERACTION
We will consider various forms of interaction – from individual learning and playing, to one on one, to small group activities to large group events as a device for thinking about the multiple individual and collective activities that happen in School. Again, alternative representational tools such as animations, models, graphic novels, etc. will be privileged. Students can work individually or in groups.

03: PEDAGOGICAL OBJECTIVES

This studio will operate as a design research laboratory, in which the initial collective research of the studio will allow each student to formulate a thesis question centered on the studio's premise. The intention of the option studio is to prepare students for the Master's thesis; to encourage students to engage in independent, critical thinking and to develop - through rigorous preliminary research - a specific site and program within the larger framework of the studio. However, each assignment will be framed in such a way as to help students focus their work and efforts in the most effective way possible.

By the end of the studio, students should be able to demonstrate a clear ability to:

- understand the role of RESEARCH in generating ideas about culture, site, program, and tectonics.
- develop and articulate a CRITICAL POSITION relative to discourse, site and program and material expression.
- develop a CLEAR SPATIAL AND MATERIAL STRATEGY for a building and site.
- develop a project across a range of SCALES—from site strategy through to structural and tectonic considerations.
- exhibit dexterity and understanding of SCALE, CRAFT, and ARCHITECTURAL LANGUAGE
- work through a range of REPRESENTATION modes, from drawing to model making to animation.
- demonstrate a degree of ARCHITECTURAL LITERACY with regard to precedent and strategies in architecture.

The studio fulfills the following **CACB accreditation** requirements:

A1 Design Theories, Precedents and Methods; A2 Design Skills; A3 Design Tools; A4 Program Analysis; A5: Site Context and Design; B1 Critical Thinking, B3 Architectural Theory; B4 Cultural Diversity and Global Perspectives; C2 Materials; E2 Ethical Responsibilities Analysis (and Dev)

04: SCHEDULE AND STUDIO ATTENDANCE

Studio hours: Mondays and Thursdays:
9:30am-12:30pm, 1:30pm – 5:30pm

Office Hours: on request

Week 01	Priorities			
SEPT	RESEARCH	M 05	am	NO CLASSES
			pm	
	TB	Th 08	am	**STUDIO INTRO and LECTURE**
			pm	**P1 HANDOUT** – **DOCUMENTING** (Individual) (discussion/ fear/ why this studio)
Week 02				
SEPT	RESEARCH	M 12	am	Reading Discussion
			pm	Desk crits
	[TB]	Th 15	am	Desk Crits
			pm	Desk Crits
Week 03				
SEPT	RESEARCH	M 19	am	PIN UP
			pm	Guest Lecture: Amanda Motyer
	[TB]	Th 22	am	**P1 REVIEWS**
			pm	**P2 HANDOUT – GRAPHIC NOVEL**
Week 04				
SEPT		M 26	am	Desk Crits
			12pm	Guest Lecture: Dan Fischer, TDSB Principal
		Th 29	am	Guest Lecture: Bethany Brewin, Autism Ontario
			pm	Desk Crits
Week 05				
OCT	[TB]	M 03	am	**P2 REVIEW**
			pm	**P3 – charette (elements of architecture)**
		Th 06	am	Desk Crit
			pm	
Week 06				
OCT		M 10	am	Thanksgiving
			pm	**Reading Week**
		Th 13	am	**Reading Week**
			pm	
Week 07				
OCT	[TB]	M 17	am	**P3 REVIEW**
			pm	**P4.1 HAND OUT**
		Th 20	am	Site visit to Toronto
			pm	
Week 08				
OCT	SPATIAL RELATIONSHIPS	M 24	am	Desk Crits
			pm	
		Th 27	am	Desk Crits
			pm	

Week 09				
OCT	SPATIAL SEQUENCES	M 31	am pm	Desk Crits
	MOVEMENT	Th 03	am pm	Desk Crits
Week 10				
NOV	STRUCTURE	M 07	am pm	Desk Crits
	[TB]	Th 10	am pm	**P4.1 MID REVIEW - SCALES OF LEARNING**
Week 11				
NOV	MATERIALS	M 14	am pm	Desk Crits
		Th 17	am pm	Desk Crits
Week 12				
NOV	SPATIAL FRAGMENT [TB]	M 21	am pm	Desk Crits
		T 24	am pm	Desk Crits
Week 13				
NOV	ATMOSPHERES [TB]	M 28	am pm	**PIN UP – SPATIAL FRAGMENT**
		Th 01	am pm	Desk Crits
Week 14				
DEC	TYING IT TOGETHER	M 05	am pm	Last day of classes Desk Crits
		Th 08	am pm	Desk crits (voluntary)
Week 15				
DEC		M 11	am pm	**Plotting Deadline to ACM**
	[TB]	W 13	am pm	**P4.2 FINAL REVIEW- TBC**

Studio attendance: The studio will be entirely in-person unless new COVID restrictions are put in place. We cannot stress enough how important is it to work in studio, to benefit from peer-to-peer learning. You are expected to be in studio all day on studio days. (Breaks for lunch, coffee, library or lab use is, of course, permitted.) If you miss desk-crits, reviews, lectures, without a satisfactory explanation, this will also result in a 0 in your participation grade. Class attendance and participation play a key part in the course & will form part of the participation grade.

We will encourage peer-to-peer learning, asking students to join in discussions about fellow student's projects, ask questions, and participate in regular, but more informal pin-up sessions. The studio sessions will include lectures, individual desk-critiques, group discussions, pin-ups and formal reviews. Detailed descriptions will introduce each project. Lectures and other presentations will be given in conjunction with each introduction.

05: COURSE DELIVERY PLATFORMS & COMMUNICATION

To organize materials and communication outside of in-person sessions, we will use the following:
LEARN – Official communication, work submission, and grade recording and release.
MS TEAMS – Used for supplementary discussions outside of in-person class time. Students will be added to the course team in the first week of class.
The studio will be entirely in-person unless new COVID restrictions are put in place. Should this occur, we will switch to online platforms.

Course Time Zone

All dates and times communicated in the document are expressed in Eastern Time. Eastern Standard Time (EST, UTC−05:00) applies November to March and Eastern Daylight Time (EDT, UTC−05:00) applies from March to November.

COVID-19 Special Statement

Given the continuously evolving situation around COVID-19, students are to refer to the University of Waterloo's developing information resource page (https://uwaterloo.ca/coronavirus/) for up-to-date information on academic updates, health services, important dates, co-op, accommodation rules and other university level responses to COVID-19.

Fair Contingencies for Emergency Remote Teaching

To provide contingency for unforeseen circumstances, the instructor reserves the right to modify course topics and/or assessments and/or weight and/or deadlines with due and fair notice to students. In the event of such challenges, the instructor will work with the Department/Faculty to find reasonable and fair solutions that respect rights and workloads of students, staff, and faculty.

Accommodation: Should students require accommodation due to illness, they must provide a Verification of Illness Form to support their requests. [Check https://uwaterloo.ca/registrar/current-students/accommodation-due-to-illness for more information.]

Student Notice of Recording

There is no plan to record any lectures, classes, presentations at the time of writing this syllabus. Should COVID rules change and recording be necessary, the course's official *Notice of Recording* document is found on the course's LEARN site. This document outlines shared responsibilities for instructors and students around issues of privacy and security. Each student is responsible for reviewing this document.

05: EVALUATION

Students will be graded on the work performed during this course. Grading will be based on the degree to which submitted work satisfies the requirements and objectives of each assignment. In addition, grading will reflect student participation, commitment, effort and improvement over the 13 weeks of the course. The weighting of the projects throughout the term is as follows:

Project 1 (research):	15%
Project 2 (graphic novel):	15%
Project 3 (elements):	10%
Project 4.1 (mid-term):	15%
Project 4.2 (final project):	40%
Participation:	5%
Total:	**100%**

Each project will be graded in part on weekly progress, as well as final outcomes. Class attendance and participation play a key part in the course and will form part of the participation grade.

The specific basis for the evaluation of each project will be identified in individual project handouts. Grades will be posted on LEARN within 2 weeks of deadline/review.
Note: You must receive a passing grade in P4.2in order to pass the course.
The passing grade for ARCH 393 is 60%.

Presentation at Final Reviews: While studio reviews are not evaluated per se, attendance and presentation of work is mandatory. Students who fail to present their work without prior agreement with a studio professor will receive a 10% grade deduction on the project, over and above any late penalties that might apply.

Hand-In and Digital Submissions:
You are required to have hard copy print-out for all pin-ups and formal reviews unless otherwise noted. We will also ask you to print out (B&W tiling is fine) for every desk crit or present working models, depending on the phase of the project. This enables better discussions and feedback.

For all digital upload submissions, it is the students' responsibility to verify that the upload worked, that the file size and preview of the upload are correct.

Late Work
Assignments that are handed in late will receive an initial penalty of 20% on the first calendar day late and a 5% penalty per calendar day thereafter. After 4 calendar days, the assignment will receive a 0%. Only in the case of a justified medical or personal reason will these penalties be waived, and only if these have been officially submitted to the Graduate Student Services Co-Ordinator and accepted by the Graduate Office.

Students seeking accommodations due to COVID-19, are to follow Covid-19-related accommodations as outlined by the university here: (https://uwaterloo.ca/coronavirus/academic-information#accommodations).

06: RESOURCES

Communication with Studio Coordinator and Faculty
During the course of the term, the professor may need to send communications to ARCH 393 students. It is required that each student confirm their current active email address with the Undergraduate Student Service Coordinator during the first week of class. Any correspondence regarding studio matters can be addressed to **lsheppard@uwaterloo.ca or tmbissett@uwaterloo.ca**

Mental Health Support
All of us need a support system. We encourage you to seek out mental health supports when they are needed. Please reach out to Campus Wellness (https://uwaterloo.ca/campus-wellness/) and Counselling Services (https://uwaterloo.ca/campus-wellness/counselling-services).
We understand that these circumstances can be troubling, and you may need to speak with someone for emotional support. Good2Talk (https://good2talk.ca/) is a post-secondary student helpline based in Ontario, Canada that is available to all students.

Equity, Diversity and Inclusion Commitment
The School of Architecture is committed to foster and support equity, diversity and inclusion. If you experience discrimination, micro-aggression, or other forms of racism, sexism, discrimination against 2SLGBTQ+, or disability, there are several pathways available for addressing this:

A) If you feel comfortable bringing this up directly with the faculty, staff or student who has said or done something offensive, we invite you, or a friend, to speak directly with this person. People make mistakes and dealing them directly in the present may be the most effective means of addressing the issue.

B) you can reach out to either the Undergraduate office, or Director (Maya Przybylski). If you contact any of these people in confidence, they are bound to preserve your anonymity and follow up on your report.

C) You can choose to report centrally to the Equity Office. The Equity Office can be reached by emailing equity@uwaterloo.ca. More information on the functions and services of the equity office can be found here: https://uwaterloo.ca/human-rights-equity-inclusion/about/equity-office.

D) Racial Advocacy for Inclusion, Solidarity and Equity (RAISE) is a student-led Waterloo Undergraduate Student Association (WUSA) service launching in the Winter 2019 term. RAISE serves to address racism and xenophobia on the University of Waterloo campus with initiatives reflective of RAISE's three pillars of Education and Advocacy, Peer-to-Peer Support, and Community Building. The initiatives include but are not limited to: formal means to report and confront racism, accessible and considerate peer-support, and organization of social events to cultivate both an uplifting and united community. You can report an incident using their online form.

07: AVOIDANCE OF ACADEMIC OFFENSES

Academic Integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. [Check https://uwaterloo.ca/academic-integrity/ for more information.]

Grievance: Students, who believe that a decision affecting some aspect of their university life has been unfair or unreasonable, may have grounds for initiating a grievance. Students should read Policy #70, Student Petitions and Grievances, Section 4. When in doubt, students must contact the department's/school's administrative assistant who will provide further assistance.

Discipline: Students are expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for their actions. Students who are unsure whether an action constitutes an offense, or who need help in learning how to avoid offenses (e.g., plagiarism, cheating) or about 'rules' for group work/collaboration should seek guidance from the course instructor, academic advisor, or the Associate Dean of Science for Undergraduate Studies. For information on categories of offenses and types of penalties, students should refer to Policy #71, Student Discipline. For information on typical penalties, students should check Guidelines for the Assessment of Penalties.

Appeals: A decision or penalty imposed under Policy 33 (Ethical Behavior), Policy #70 (Student Petitions and Grievances) or Policy #71 (Student Discipline) may be appealed, if there is a ground. Students, who believe they have a ground for an appeal, should refer to Policy #72 (Student Appeals).

Exam Period Travel*:* Student travel plans are not considered acceptable grounds for granting an alternative examination time.

08: NOTE FOR STUDENTS WITH DISABILITIES

AccessAbility Services, located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If students require academic accommodations to lessen the impact of their disability, they should register with AccessAbility Services at the beginning of each academic term.

Accommodation: Should students require accommodation due to illness, they must provide a Verification of Illness Form to support their requests. [Check https://uwaterloo.ca/registrar/current-students/accommodation-due-to-illness for more information.]

09: RECOMMENDED READINGS

Disability

The following from *Keywords for Disability Studies:*

-Bess Williamson, "Access," Ed., Rachel Adams and David Serlin, and David H Serlin. *Keywords for Disability Studies*. New York: NYU Press, 2015, 14-1

-Rachel Adams, Benjamin Rice, David Serlin, "Disability" Ed., Rachel Adams and David Serlin, and David H Serlin. *Keywords for Disability Studies*. New York: NYU Press, 2015

Jos Boys, "Diagramming for a Dis/Ordinary Architecture," Disability, Space, Architecture, 2017, p.135-302; Routledge

Jos Boys, "Doing Disability Differently," *The Architectural Review.* September 6, 2014

Jay Dolmage, *From Steep Steps to Retrofit to Universal Design, from Collapse to Austerity. Neo-Liberal Spaces of Disability*. London, New York : Routledge, Taylor & Francis Group, 2017.

Gissen, David, "Disabling Form," *E-Flux Architecture*, May 2022

Aimi Hamraie, "Introduction to Critical Access Studies," *Building Access: Universal Design and the Politics of Disability*. Minneapolis: University of Minnesota Press," 2017.

Aimi Hamraie, "Sloped Technoscience Curb Cuts, Critical Frictions, and Disability (Maker) Cultures" *Building Access: Universal Design and Politics of Disability*. University of Minnesota Press, 2017.

Sara Hendren, "Introduction. Who is the World Built For?" *What Can a Body Do? How we Meet the Built World.* Penguin, USA, 2020.

Georgina Kleege, "What the Ramp Teaches" https://alicesheppard.com/what-the-ramp-teaches-by-georgina-kleege/

Temple Grandin, Oliver Sacks, *Thinking in Pictures And Other Reports from My Life with Autism*. New York: Vintage Books, 1996

Tanya Titchkosky, *The Question of Access*. *Disability, Space, Meaning.* University of Toronto Press, Toronto, 2011. Especially "Introduction: Access as an Act of Perception" & "Towards a Politics of Wonder in Disability Studies"

Additional references

Kristi Gaines, Angela Bourne, Michelle Pearson, Mesha Kleibrink, *Designing for Autism Spectrum Disorders. New York:* Routlege, 2016.

https://www.gsd.harvard.edu/2022/04/designing-with-and-not-just-for-people-with-atypical-bodies-and-minds/

https://www.stalled.online/

https://www.archdaily.com/936397/architecture-for-people-with-hearing-loss-6-design-tips

3.
Skim: Interboro, *Arsenal of Exclusion and Inclusion,* New York, Actar, 2017.

Designing for Children

Mark Dudek, Children's Spaces. Elsevier Publishers, 2005.