

Frin Spring

EDUC 521: Design For Learning Fall 2025

**LAND ACKNOWLEDGEMENT:** The University of Calgary, located in the heart of Southern Alberta, both acknowledges and pays tribute to the traditional territories of the peoples of Treaty 7, which include the Blackfoot Confederacy (comprised of the Siksika, the Piikani, and the Kainai First Nations), the Tsuut'ina First Nation, and the Stoney Nakoda (including Chiniki, Bearspaw, and Goodstoney First Nations). The City of Calgary is also home to the Métis Nation of Alberta (Districts 5 and 6).

CLASS DATES: September 2 – October 24, 2025

**LAST DAY TO ADD/DROP/SWAP:** Due to the non-standard dates associated with this program, please check your Student Centre for the important dates pertaining to your section.

**PRE-REQUISITE:** Due to the multiple pathways in the Bachelor of Education, please consult Undergraduate Programs in Education for questions related to pre-requisite courses.

**OFFICE HOURS:** By appointment only

**EMAIL:** Students are required to use a University of Calgary (@ucalgary.ca) email address for all correspondence.

#### **COURSE DESCRIPTION:**

This course focuses on expanding your view of design and your role and goals as a designer for the students in front of you. Teachers are designers not just enactors – Design is an everyday act for teachers. Design is a continuous process that opens up possibility in the curriculum.

Central to the idea of design in this course is the possibility of reframing and reconsidering how we think about our roles, our students, and the curriculum. Curricular design is a public space/enactment of public/world making. Fundamental challenges can't be addressed within the frame in which they arose.

New Frames can create new ways of seeing and acting on challenges. New frames modify how we conceive of the goals, the roles of participants, and the structures that support and guide participants' actions and interactions.

This course will explore how we might reconceptualize the curriculum in terms of Indigenous perspectives, Third Space, the Arts, Transdisciplinarity, Interdisciplinarity, and Alternative Ways of Knowing.

All design is political because designers explicitly or implicitly prioritize certain perspectives, stakeholders, frames, and ways of looking at the world. With that understanding, teachers should engage as critical practitioners looking to support all students with a commitment to advocating the voices and experiences of those who have been historically silenced or omitted by traditional teaching practices and curricula.

This course focuses on exploring these goals within the context of schools, the program of studies, and the demands within which teachers navigate. The emphasis is on exploring how the perspectives of this course can not only co-exist within your role and life as a teacher but enhance and improve your life and impact as a teacher for the students in front of you in the classrooms where you will teach.

#### **LEARNER OUTCOMES:**

- 1. Understand the role of design for your students and their experiences.
- 2. Understand the Program of Studies (formalized curriculum documents) and design as supportive of teachers and students living curriculum well together.
- 3. Understand the advantages in design of being open to new frames and alternative ways of knowing and learning.
- 4. Understand how Indigenous perspectives and perspectives on Third Space, the Arts, Interdisciplinarity, and Transdisciplinarity can bring new frames to our design as teachers and develop capacities to reimagine disciplinary learning through design.
- 5. Understand that problems are often not solved from within the context and associated ways of thinking in which they arose.
- 6. Experience being a reflexive practitioner (encompassing co-design and co-reflection with colleagues of different perspectives) who publicly shares and receives feedback to improve and strengthen ideas and works in progress.
- 7. Experience designing an interdisciplinary/transdisciplinary activity that leverages the lenses and perspectives of this course within the context of a curricular topic/theme/unit leveraging perspectives on third space, alternative ways of knowing, and/or reframing.

**COURSE DESIGN AND DELIVERY:** Sections 1-10 will be delivered face-to-face on campus with possible engagement in a D2L environment. Sections 27-32 will be delivered through Zoom with possible engagement in a D2L environment. Students will require access to a computing device that contains current software and hardware capable of running D2L. If you are in a campus-based section and do not own a personal device, there are computers available for student use in the Doucette library and the Taylor Family Digital Library.

**REQUIRED AND ADDITIONAL RESOURCES:** See weekly course schedule. No materials need to be purchased – all are linked in the weekly course schedule.

# LEARNING TASKS OVERVIEW

| LEARNIN<br>G TASK | DESCRIPTION OF<br>LEARNING TASK | GROUP /<br>INDIVIDUAL | WEIGHT | DUE DATE                              |
|-------------------|---------------------------------|-----------------------|--------|---------------------------------------|
| Learning          | Design Reflections              | Individual            | 25%    | Initial Reflection: By Start of First |
| Task #1           | (Learning Outcomes 1-5)         |                       |        | Class (posted in D2L Discussion Forum |
|                   |                                 |                       |        | or in D2L dropbox as determined by    |
|                   |                                 |                       |        | Instructor)                           |
|                   |                                 |                       |        | Final Reflection: October 24 (In D2L  |
|                   |                                 |                       |        | Dropbox)                              |
| Learning          | Facilitate Two Course           | Individual            | 30%    | Syntheses of Reading Discussions You  |
| Task #2           | Reading Discussions             |                       |        | Facilitate: Due Within One Week of    |
|                   | Using Discussion                |                       |        | Discussion in D2L dropbox and         |
|                   | Protocols                       |                       |        | emailed to your reading group.        |
|                   | (Learning Outcomes 3-5)         |                       |        |                                       |
| Learning          | Explore a Design                | Group                 | 45%    | Part 1: October 3 (In D2L Dropbox –   |
| Task #3           | Challenge Within and            |                       |        | Submitted as PDF not a URL)           |
|                   | Beyond the Curriculum           |                       |        |                                       |
|                   | (Learning Outcomes 1-7)         |                       |        | Part 2: October 24 (In D2L Dropbox –  |
|                   |                                 |                       |        | Submitted as PDFs not a URLs)         |

A student's final grade for the course is the sum of the separate assignments. In addition, all Learning Tasks must be completed with a passing grade in order to pass the course. Further clarification is included later in this course outline with regards to grading and groupwork.

## **DETAILED COURSE SCHEDULE AND READINGS**

| DETAILED COURSE SCHEDULE AND READINGS   |   |  |  |  |  |
|---|---|--|--|--|--|
| Themes and Guiding Questions and Objectives                                     | Readings and Resources  |  |  |  |  |
| Week 1: Designing With and For<br>The Students In Front of You<br>September 2-5 | <u>DUE LT1:</u> Initial Design Reflection submitted to D2L Dropbox on or before first day of class and shared with classmates as determined by <u>Instructor.</u>   |  |  |  |  |
| Teachers are designers not just enactors.                                       | Reading Groups Discuss:   |  |  |  |  |
|   | Principles of human-centered design (Don Norman):   |  |  |  |  |
| Design is an everyday act for teachers.   | https://www.youtube.com/watch?v=rmM0kRf8Dbk   |  |  |  |  |
|   | Clark, D. B., Scott, D., DiPasquale, J. P., & Becker, S. (2024).  |  |  |  |  |
| You should design for the students  | Reframing Design in Education: Proposing a Framework to Support   |  |  |  |  |
| in front of you.  | Pre-Service Teachers in Adopting Designerly Stances. <i>Journal of the Learning Sciences</i> . [Distilled version with a focus on practice created  |  |  |  |  |
| Curricular design is a public space   | for this course]  |  |  |  |  |
| / enactment of a public/world   | https://drive.google.com/file/d/11R8M8RHs0bCfsu5e41pJ0xGYvCarZY   |  |  |  |  |
| making.   | 7c/view?usp=sharing   |  |  |  |  |
| Design is a continuous process  |   |  |  |  |  |
| within affordance and constraints.  | Additional Resources:   |  |  |  |  |
| Design opens up possibility in curriculum                                       | CBC Radio. (2019, November 8). <i>Disabled people want disability design – not disability dongles (listen to podcast from 25:00-33:52)</i> . Retrieved from <a href="https://www.cbc.ca/radio/spark/disabled-people-want-disability-design-not-disability-dongles-1.5353131">https://www.cbc.ca/radio/spark/disabled-people-want-disability-design-not-disability-dongles-1.5353131</a> |  |  |  |  |

Video by Library on research and start looking for sources of interest: Stakeholder Research Explanation and Tutorial from the Werklund Librarians

https://yuja.ucalgary.ca/V/Video?v=34244&node=213521&a=8852720

Design Council (2021). Beyond net zero: a systemic design approach. Design Council: London, UK. (pgs 43-51)

 $\frac{https://www.designcouncil.org.uk/fileadmin/uploads/dc/Documents/Beyond\%2520Net\%2520Zero\%2520-$ 

%2520A%2520Systemic%2520Design%2520Approach.pdf

# Week 2: Designing With and For The Students In Front of You September 8-12

Seeing the Program of Studies (formalized curriculum documents) and design as supportive of teachers and students living curriculum well together.

Seeing curriculum as constraints and resources for design.

Navigating tensions between Other's curriculum vs Our curriculum.

## Reading Groups Discuss:

[Two of this week's readings are by Ted Aoki. He spent much of his life in Alberta. Here is a brief bio. This bio is not an official reading for the discussion, but it provides interesting background]: https://tedaoki.wordpress.com/about/

Aoki, T. (2005). Teaching as indwelling between two curriculum worlds. In W. Pinar & R. Irwin (Eds.), Curriculum in a new key: The collected works of Ted T. Aoki (pp. 159-165). Lawrence Erlbaum. <a href="https://ebookcentral-proquest-com.ezproxy.lib.ucalgary.ca/lib/ucalgary-ebooks/reader.action?docID=234228&ppg=180">https://ebookcentral-proquest-com.ezproxy.lib.ucalgary.ca/lib/ucalgary-ebooks/reader.action?docID=234228&ppg=180</a>

#### https://www-taylorfrancis-

com.ezproxy.lib.ucalgary.ca/chapters/edit/10.4324/9781410611390-10/teaching-indwelling-two-curriculum-worlds-1-1986-1991-william-pinar-rita-irwin

Henriksen, D., & Richardson, C. (2017). Teachers are designers: Addressing problems of practice in education. *Phi Delta Kappan*, 99(2),60-64.

https://journals-sagepub-

com.ezproxy.lib.ucalgary.ca/doi/full/10.1177/0031721717734192

Aoki, T. (2005). Inspiriting the curriculum. In W. Pinar & R. Irwin (Eds.), Curriculum in a new key: The collected works of Ted T. Aoki (pp. 357-365). Lawrence Erlbaum.

https://www-taylorfrancis-

com.ezproxy.lib.ucalgary.ca/chapters/edit/10.4324/9781410611390-28/inspiriting-curriculum-1-1987-william-pinar-rita-irwin

Lalonde, S. (2023). The Relational Model for Teaching and Learning. In Y. Poitras Pratt & S. Bodnaresko, S. (Eds.) *Truth and Reconciliation Through Education: Stories of Decolonizing Practices*. Brush Education Publishers, Edmonton.

See Leganto list

#### Additional Resources:

Markides, J. (2021). Examining the Ethical Implications and Emotional Entailments of Teaching Indigenous Education: An Indigenous Educator's Self-Study. In Self-Study and Diversity III (pp. 103-121). Brill.

https://brill-

com.ezproxy.lib.ucalgary.ca/view/book/9789004505216/BP000014.xml

Aoki, T. (1999). Interview: Rethinking curriculum and pedagogy. Kappa Delta Pi Record, 35(4), 180-181. *See Leganto list* 

Lifshitz, J. (2019, July 29). Helping students to see the beauty in a place like Baltimore. [Blog post] Retrieved from <a href="https://crawlingoutoftheclassroom.wordpress.com/2019/07/29/helping-students-to-see-the-beauty-in-a-place-like-baltimore/">https://crawlingoutoftheclassroom.wordpress.com/2019/07/29/helping-students-to-see-the-beauty-in-a-place-like-baltimore/</a>.

The Education Act (2019). Alberta Education, <a href="https://manuals.alberta.ca/guide-to-education/education-act/">https://manuals.alberta.ca/guide-to-education/education-act/</a>
The Role of the Teacher.

# Week 3: Reframing Challenges in Education to Support More Equitable and Productive Learning Environments September 15-19

Fundamental Challenges Cannot Be Addressed in The Frame in which they arose.

New Frames can create new ways of seeing and acting on challenges.

New frames modify how we conceive of the goals, the roles of participants, and the structures that support, influence, and guide participants' actions and interactions.

# Week 4: Reframing Challenges in Education: Third Space and the Arts September 22-26

How can design that centers the Third Space or the Arts help teachers reimagine disciplinary

## Reading Groups Discuss:

Donald, D. (2010). On what terms can we speak? *Aboriginal-Canadian relations as a curricular and pedagogical imperative*. In Big Thinking Lecture Series for the Canadian Federation for the Humanities and Social Sciences. <a href="https://vimeo.com/21534649">https://vimeo.com/21534649</a> (watch 19:17- 26:04 -- Please think about the reframings that Donald proposes as you read and watch Dorst)

Dorst, K. (2012). *How design can improve public spaces (video)*. <a href="https://youtu.be/dPsmww461pI">https://youtu.be/dPsmww461pI</a>

[Notes by MC Shanahan on Dorst – These notes are not an official reading to discuss for the week but may be useful in thinking about the Dorst reading]:

https://drive.google.com/file/d/1vhRIxT7hSg26aW14t6tIXRGthbsbGigw/view?usp=sharing

Dorst, K. (2015). *Frame innovation: The frame creation model* (Chapter 4: pp. 73-98). MIT Press https://ebookcentral-proquest-com.ezproxy.lib.ucalgary.ca/lib/ucalgary-

#### Reading Groups Discuss:

Gutiérrez, K. D. (2008). Developing a sociocritical literacy in the third

https://ila-onlinelibrary-wiley-

ebooks/detail.action?docID=3339962

com.ezproxy.lib.ucalgary.ca/doi/abs/10.1598/RRQ.43.2.3

space. Reading research quarterly, 43(2), 148-164.

learning in ways that modify goals, roles, and structures?

[Notes by DB Clark on Gutiérrez Reading – These notes are not an official reading for the week to discuss but may be useful in thinking about the Gutiérrez Reading]:

https://drive.google.com/file/d/1q1kAxCAt85vD8DOwd7NYsNAtiEvs VL1Z/view?usp=sharing

Eisner, E. W. (2004). What Can Education Learn from the Arts about the Practice of Education?. *International Journal of Education & the Arts*, 5(4), 1-13. <a href="https://files.eric.ed.gov/fulltext/EJ808086.pdf">https://files.eric.ed.gov/fulltext/EJ808086.pdf</a>

#### Additional Resources:

Overcoming Deficit-Oriented Approaches to Teaching (Kris. Gutiérrez):

https://www.youtube.com/watch?v=BZl3q0wr-JQ

ZOPD as Wise Pedagogy (Kris. Gutiérrez):

https://www.youtube.com/watch?v=pZdU4QUHi1w&t=2s

Eisner, E. W. (2002). *The arts and the creation of mind*. Yale University Press. (Chapter 2) [As you read, think about how Eisner's proposals about the role of the arts might reframe how students engage in other disciplines in school]

https://ebookcentral-proquest-com.ezproxy.lib.ucalgary.ca/lib/ucalgary-ebooks/detail.action?docID=3420063

Piazza, S. V. (2009). First step toward third space. Language Arts Journal of Michigan, 25(1), 4.

https://scholarworks.gvsu.edu/cgi/viewcontent.cgi?article=1084&context=lajm

Sawyer, R. K. (2017). Teaching creativity in art and design studio classes: A systematic literature review. *Educational Research Review*, 22, 99-113 <a href="https://www-sciencedirect-">https://www-sciencedirect-</a>

com.ezproxy.lib.ucalgary.ca/science/article/pii/S1747938X17300271

Martin, B. H., Snook, B., & Buck, R. (2018). Creating the Dance and Dancing Creatively: Exploring the Liminal Space of Choreography for Emergence. *Journal of the Canadian Association for Curriculum Studies*, *16*(1), 162–174. Retrieved from

https://jcacs.journals.yorku.ca/index.php/jcacs/article/view/40369

# Week 5: Reframing Challenges in Education: Indigenous Perspectives September 29-October 3 No Class September 30 How might we reframe using Indigenous perspectives in ways that modify goals, roles, and structures?

## Reading Groups Discuss:

Donald, D. (2022). A curriculum for educating differently. Education Canada

https://www.edcan.ca/articles/a-curriculum-for-educating-differently/

https://ezproxy.lib.ucalgary.ca/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN=159152110&site=ehost-live

Dwayne Donald - Homo Economicus and Forgetful Curriculum:

Remembering other ways to be a human being 0:00-38:22 <a href="https://www.youtube.com/watch?v=VM1J3evcEyQ">https://www.youtube.com/watch?v=VM1J3evcEyQ</a>

Archibald, J. A. (2008). *Indigenous storywork: Educating the heart, mind, body, and spirit*. UBC press. [Chapter 6: Storywork Pedagogy] <a href="https://www-degruyterbrill-com.ezproxy.lib.ucalgary.ca/document/doi/10.59962/9780774855440-008/html">https://www-degruyterbrill-com.ezproxy.lib.ucalgary.ca/document/doi/10.59962/9780774855440-008/html</a>

#### Additional Resources:

Western and Northern Canadian Protocol for Collaboration in Education (2013). Our Way is a Valid Way. https://education.alberta.ca/media/563981/our-way-is-a-valid-way.pdf

Donald, D. (2021). We Need a New Story: Walking and the Wâhkôhtowin Imagination. *Journal of the Canadian Association for Curriculum Studies*, 18(2), 53-63. https://jcacs.journals.yorku.ca/index.php/jcacs/article/view/40492/3665

https://jcacs.journals.yorku.ca/index.php/jcacs/article/view/40492/3665

Mandel, U. & Teamey, K. (2015). Re-learning the Land: A Story of Red Crow College (This one hour video provides an example of how one group reframed education through an Indigenous lens at a community college in Alberta along with their rationale and the sociohistorical context).

https://vimeo.com/128091605

UCalgary Reconciliation Approach <a href="https://www.ucalgary.ca/indigenous/about-ii-taapohtop">https://www.ucalgary.ca/indigenous/about-ii-taapohtop</a>

Werklund School of Education Indigenous Education Resources <a href="https://werklund.ucalgary.ca/teaching-learning/indigenous-education-resources">https://werklund.ucalgary.ca/teaching-learning/indigenous-education-resources</a>

Taylor Institute Resources

https://taylorinstitute.ucalgary.ca/resources/indigenous

<u>https://fnmied.blogspot.com/</u> (website of Solange Lalonde which highlights many excellent resources including):

Our Way is a Valid Way Educator Resource Document
Our Way is a Valid Way Educator Reflection Guide Document
Walking Together Digital Resource
Walking Together Directory for Educators (DRAFT)

CBE Indigenous Education Team Holistic Lifelong Learning Framework:

 $\frac{https://school.cbe.ab.ca/school/niitsitapi/teaching-learning/program-approach/holistic-framework/pages/default.aspx$ 

NRLC Infusing Indigenous Knowledge into Curriculum https://sites.google.com/arpdc.ab.ca/infusingindigenousknowledge

Canadian Council on Learning. (2007). Redefining how success is measured in First Nations, Inuit and Metis learning.

https://canadacommons-

ca.ezproxy.lib.ucalgary.ca/artifacts/1185913/redefining-how-success-is-measured-in-first-nations-inuit-and-metis-learning/1739037/

## CoDesigning Schools Toolkit:

 $\frac{\text{https://www.codesigningschools.com/?} \underline{-\text{hstc=}218427590.5f8b5d084da}}{04938f464f167c80699f7.1653598824626.1653598824626.1653598824}{626.1\& \underline{-\text{hscc=}218427590.1.1653598824626\&}} \underline{-\text{hsfp=}239846683}}$ 

Expanding your Senses activity on pages 300-304 in Young, J., Haas, E., & McGown, E. (2010). Coyote's guide to connecting with nature (2nd Edition). Shelton, Wash: OWLLink Media. *See Leganto* 

# Week 6: Reframing Challenges in Education: Transdisciplinarity and Co-Design October 6-10

How might interdisciplinary or transdisciplinary lenses modify goals, roles, and structures in classrooms?

How might co-design facilitate reframing?

# Reading Groups Discuss:

Interdisciplinarity and Transdisciplinarity

Shanahan, M.-C. (2022). What are disciplines and what is interdisciplinarity?

https://uofc-

my.sharepoint.com/:b:/g/personal/mcshanah\_ucalgary\_ca/ESwAM9K-5ddHtijwvBNZyZkBUKGo3CqV1OwCvml2sfe-iQ?e=cniwdE

SERC (n.d.) Why teach with an interdisciplinary approach? https://serc.carleton.edu/sp/library/interdisciplinary/why.html

## Co-Design with Students

Vander Els, J. G., & Benson, S. (2019, July 15). *How can students and teachers co-design learning?*. Next Generation Learning Challenge. <a href="https://www.nextgenlearning.org/articles/how-can-students-and-teachers-co-design-learning">https://www.nextgenlearning.org/articles/how-can-students-and-teachers-co-design-learning</a>

Peruzzi, D. (2018). Codesigning science projects with students. *Science Scope*, 41(6), 8-10.

https://ezproxy.lib.ucalgary.ca/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=sch&AN=127651403&site=ehost-live

#### Additional Resources:

Co-creating curriculum with students (Website of Resources and Frameworks for Higher Education but also applies to K12): <a href="https://itali.uq.edu.au/teaching-guidance/curriculum-design-and-review/transforming-curriculum/co-creating-curriculum-students">https://itali.uq.edu.au/teaching-guidance/curriculum-design-and-review/transforming-curriculum/co-creating-curriculum-students</a>

Strong, L., Adams, J. D., Bellino, M. E., Pieroni, P., Stoops, J., & Das, A. (2016). Against neoliberal enclosure: Using a critical transdisciplinary approach in science teaching and learning. *Mind*,

*Culture, and Activity, 23*(3), 225-236. <a href="https://www-tandfonline-com.ezproxy.lib.ucalgary.ca/doi/full/10.1080/10749039.2016.1202982">https://www-tandfonline-com.ezproxy.lib.ucalgary.ca/doi/full/10.1080/10749039.2016.1202982</a>

Takeuchi, M. A., & Marin, A. (2022). "Globalization," coloniality, and decolonial love in STEM education. *Oxford Research Encyclopaedia of Education*, <a href="https://doi-</a>

org.ezproxy.lib.ucalgary.ca/10.1093/acrefore/9780190264093.013.1655

Radakovic, O'Byrne, W. I., Negreiros, M., Hunter-Doniger, T., Pears, E., & Littlejohn, C. (2022). Toward Transdisciplinarity: Constructing Meaning Where Disciplines Intersect, Combine, and Shift. *Literacy Research*, 1-20. [This Reading may be switched for a different one about interdisciplinarity and transdisciplinarity] <a href="https://ucalgary.primo.exlibrisgroup.com/permalink/01UCALG\_INST/1503ob6/cdi\_sage\_journals\_10\_1177\_23813377221113515">https://ucalgary.primo.exlibrisgroup.com/permalink/01UCALG\_INST/1503ob6/cdi\_sage\_journals\_10\_1177\_23813377221113515</a>

# Week 7: All design is political October 14-17 October 13: Thanksgiving (no classes)

All design is political because all design prioritizes certain perspectives. stakeholders, frames, and ways of looking at the world.

No design is neutral.

With that understanding, teachers should engage as aware and critical practitioners.

# Reading Groups Discuss:

Winner, L. (1980). Do artifacts have politics? *Daedalus*, 109(01), 121-136. [When reading this article, remember that your curricular activities, units, and program of studies are artifacts designed by people that (consciously or unconsciously) highlight certain perspectives, skills, knowledge, abilities, and goals as well as provide differential access, support, and engagement to different groups of people. If the tomato picking machine and underpasses in the article have politics, what are the implications for your curricular activities, units, and program of studies? The point of this article for this class is not about whether the technologies you use in your lessons have politics. The point is that the curricular activities and classroom structures you create are themselves artifacts. Do the curricular activities and classroom structures we create have politics in terms of highlighting certain perspectives, skills, knowledge, abilities, and goals as well as providing differential access, support, and engagement to different groups of people?] https://wwwjstor-org.ezproxy.lib.ucalgary.ca/stable/20024652

Readings on AI in the Classroom will also be assigned for this week once the semester begins based on upcoming publications scheduled to release at the end of Summer 2025.

#### Additional Resources:

Emdin, C. (2008). The three C's for urban science education. *Phi Delta Kappan*, 89(10), 772-775. [When reading this article, how does this approach change the politics from the perspective of Winner?] <a href="https://journals-sagepub-com.ezproxy.lib.ucalgary.ca/doi/abs/10.1177/003172170808901018">https://journals-sagepub-com.ezproxy.lib.ucalgary.ca/doi/abs/10.1177/003172170808901018</a>

Yang, S. J., Ogata, H., Matsui, T., & Chen, N. S. (2021). Human-centered artificial intelligence in education: Seeing the invisible through the visible. *Computers and Education: Artificial Intelligence, 2*. https://doi.org/10.1016/j.caeai.2021.100008

|  | https://www-sciencedirect-<br>com.ezproxy.lib.ucalgary.ca/science/article/pii/S2666920X21000023?vi<br>a%3Dihub  |
|--|---|
|  | Design Justice: A talk with Sasha Costanza-Chock, Catherine D'Ignazio, and Jaleesa Trapp (2020) [19:49-25:45 about affordances and burdens of design unequally distributed][49:50 Jaleesa Trap talks about the importance of engaging with participants] <a href="https://youtu.be/Yrb6q-NDd50">https://youtu.be/Yrb6q-NDd50</a>                              |
|  | Buolamwini, J. (2016). How I am fighting bias in Algorithms. <a href="https://www.ted.com/talks/joy_buolamwini_how_i_m_fighting_bias_in_algorithms">https://www.ted.com/talks/joy_buolamwini_how_i_m_fighting_bias_in_algorithms</a>  |
|  | Buolamwini, J., Ordóñez, V., Morgenstern, J., Learned-Miller, E. (2020). Facial Recognition Teachnologies: A Primer. Algorithmic Justice League. <a href="https://assets.website-files.com/5e027ca188c99e3515b404b7/5ed1002058516c11edc66a14_F">https://assets.website-files.com/5e027ca188c99e3515b404b7/5ed1002058516c11edc66a14_F</a> RTsPrimerMay2020.pdf |
| Week 8: Project Sharing<br>October 20-24 | Project Sharing  **Additional Resources:* https://www.edutopia.org/blog/teachers-are-learning-designers-andrew-miller*  |

#### **CHANGES TO SCHEDULE:**

Please note that changes to the schedule may occur to meet the emerging needs and dynamics of the participants in the course. Furthermore, course instructors may replace a listed reading with an alternative reading to cover the same core ideas if they feel that it will work better for their course and participants.

#### LEARNING TASKS AND ASSESSMENT

## Statement on student use of Generative AI

Students are permitted to use artificial intelligence tools, including generative AI, to gather information, review concepts or to help produce assignments. However, students are ultimately accountable for the work they submit as if they are the author (e.g., responsible for all matters related to copyright, academic misconduct, etc.), and any content generated or supported by an artificial intelligence tool must be cited appropriately. Furthermore, students are required to disclose the nature of their usage of AI for any assignments on which they employ AI.

There are three required Learning Tasks for this course.

## Learning Task 1: Design Reflections (25% Individual)

**Due:** Initial Design Reflection (The initial design reflection does not get marked directly – just pass/fail and on-time/late -- and instead is part of the overall scoring rubric for LT1 once the Final Design Reflection is submitted) – Posted in D2L Discussion Forum to share with classmates before start of the first class or in D2L dropbox as determined by the Instructor).

Due: Final Design Reflection—Submitted to D2L Dropbox on or before October 24.

In this learning task you will have opportunities to demonstrate scholarly and professional thinking about the principles, commitments, and practices of designing for learning. You will also have opportunities to reflect upon the scholarship and practicalities of design decisions that reflect students' voices, designers' intentions, and the learning possibilities those decisions make more and less possible. Your instructor will provide further information and a rubric in D2L.

#### Initial Design Reflection

Who are you as a designer? Before the first day of the course, you will begin with a reflective description of your current thinking about the role of the teacher as a designer of student learning. This written piece should be 400-600 words in length. The initial design reflection does not get marked directly and instead is part of the overall score rubric for LT1 once the Final Design Reflection is submitted. It will be used as a point of reference for early course conversations, a way to get to know one another, and as a resource for the course's final reflection which will be submitted for assessment at the end of the semester.

Guiding questions for the Initial Course Reflection

- Drawing on your experiences and current understanding of the role of the teacher, student, and curriculum, how do you see the idea of *designing* learning being similar to or distinct from ideas of covering curriculum, delivering curriculum, implementing instruction, or ensuring learning?
- Why or how might a design perspective be important? Why or how might it need to be undertaken carefully?
- What pedagogical values and commitments do you hold that might be supported by taking a design approach to planning and instruction?

## Final Design Reflection

In this final reflection (650-750 words), you have the opportunity to consider how your understanding of design in education has evolved and changed over the period of this course.

You should also paste in your initial design reflection so that both are in the same document (Note the initial design reflection is not part of the 650-750 word count range).

- Your response to these questions should include multiple connections to the required course resources (include citations) and your collaborative design experience.
- Your reflection should explore how the ideas, commitments, and values you described in your initial design reflection been strengthened, extended, challenged, or altered through your study and design work? (Below are some prompts -- you don't need to cover all of them they are just suggestions about how you might approach your reflection):
  - Clearly state 1-3 ideas that you have learned or understood in new ways through the course.
  - How might your future practice as a teacher be influenced by thinking about teaching as design work and teachers as designers?
  - When you now consider how you will take up design in your future practice based on this new understanding, what are some specific examples of the kinds of activities and practices you could engage in?

#### Learning Task 2: Facilitate Two Course Reading Discussions Using Discussion Protocols

**Due:** See sign-up sheet ahead of Week 1

**Due:** Synthesis of the first reading discussion you facilitate (Individual 15%) posted in D2L dropbox within one week of discussion and shared with your group by email

**Due:** Synthesis of the second reading discussion you facilitate (Individual 15%) posted in D2L dropbox within within one week of discussion and shared with your group by email

In this assignment, you are asked to work within a professional learning community created by your instructor to employ a discussion protocol to facilitate discussions for two sets of required course readings. Your course instructor will determine which readings will be included as the focus in each discussion. Please note that some discussions may involve two or more readings. Discussion leaders are responsible for all readings in a set for which they sign up. Some discussions in online course sections may be conducted asynchronously as determined by the course instructor. The goal is to deepen understanding of the required course readings and the ideas for the class. The purpose of this task is to connect scholarly and theoretical principles from design studies to professional thinking and practices in education. The task is also meant to contribute to your design work in LT3. Within your discussion your group should:

- a) Talk about connections of key insights from the reading to the design project
- b) Talk about connections of key insights from the reading to current issues in education and the new curriculum
- c) Talk about connections of key insights from the reading in terms of practical realities of the classroom

Specifically, you are asked to lead a small group of your colleagues through a discussion protocol. You can adopt an existing discussion protocol or create one of your own. You shouldn't repeat a protocol that has already been used multiple times by your group because the goal is for everyone to experience different approaches.

- Harvard Graduate School of Education. (n.d.). Teaching & learning lab: Discussion protocols: *See Leganto*
- Cult of Pedagogy. (2015, October 15). The big list of class discussion strategies: https://www.cultofpedagogy.com/speaking-listening-techniques/
- School Reform Initiative. (n.d.). Protocols: <a href="https://www.schoolreforminitiative.org/protocols/">https://www.schoolreforminitiative.org/protocols/</a>
- A guide in Prism with alternatives for asynchronous discussion forums that could provide good models: https://prism.ucalgary.ca/handle/1880/113403

Following each discussion, the leader is then asked to provide a synthesis of the conversation to be posted in D2L dropbox and shared with your group by email. Even if there are multiple leaders for a day, each leader needs to individually complete and submit a synthesis. As noted above, if a reading set includes multiple readings, the leader(s) needs to support discussions of all of the readings for that set, even if there is only one leader for the set. Please also upload any materials you created for the discussion and any artifacts the group produced (pictures or screenshots are fine). DO NOT just report on what the group said. The post discussion synthesis is designed to reflect a rich discussion, drawing together multiple insights, questions, and breakthroughs that helped your professional learning community deepen their understanding of designs for learning. Your instructor will provide further information and a rubric on D2L.

## Learning Task 3: Explore a Design Challenge Within and Beyond the Curriculum

**Due**: Part 1 – Explore and Reframe phases (Group 25%) – Submitted to D2L dropbox (only one person needs to submit for the whole group but the last names of all members of the group need to be in alphabetical order in the title of the submitted file. Submitted as PDF not a URL) – October 3

**Due**: Part 2 – Create and Catalyze phases (Group 20%) – Submitted to D2L dropbox (only one person needs to submit for the whole group but the last names of all members of the group need to be in the title of the submitted file. Submitted as PDFs not a URLs) – October 24

In this assignment you will explore a problem of practice within and beyond the curriculum as a group of 3 or 4 collaborators. The problem of practice should focus on better serving a group of students who have not been traditionally well served. You can define your focal group in very general terms such as "students who don't like math" or "students who are native speakers of a language different from the language of instruction" or "Indigenous students" or "students who identify as female in a science classroom" or "students who have challenges reading" or "students whose families are immigrants to Canada" or "students who are not part of the historically hegemonic Canadian culture", or within more specific terms/codes such as "students diagnosed as ADHD" or "students diagnosed with autism" or other specific codes. You will design an interdisciplinary / transdisciplinary activity spanning 1-3 days through the lenses and perspectives of this course within the context of a curricular topic/theme/unit in a way that contributes to better supporting that group of students while also supporting all students and teaching specific curricular content in the program of studies. Your approach should incorporate perspectives on third space, alternative ways of knowing, and/or other ways of reframing curricular activities and their goals. The objective of LT3 is to explore possibilities for reframing curricular activities in a way that better serves students, particularly those who have not been well served, while also addressing the program of studies because teachers sometimes (incorrectly) feel that they have to choose between better serving students and addressing the program of studies. The purpose of LT3 is therefore to explore the possibility of doing both.

It is important that your project focuses on changes and design that you will be able to enact in your own classroom in the future as a teacher. You should not focus on changes at the school, district, or provincial level for this project because while you may exert influence, changes at these levels will likely be beyond your direct control. The purpose of this project is to explore actionable design of changes that you will be able to enact to better support your students while also addressing the program of studies.

We suggest that you form your group to have a diversity of perspectives, expertise, interests, and subject foci but with some aspect of commonality (e.g., similar grade teaching). You will document, through a mix of both text and images, your process working through a design challenge exploring how curriculum (i.e., within) can be built on students' lived experiences and cultural resources (i.e., beyond) to create third spaces and/or other powerful reframings drawn from this course and beyond. The purpose of this Learning Task focuses specifically on leveraging the lenses and ideas from this course to explore ways that you can expand the framings of the Program of Studies to better engage and support your students. This project therefore differs from what you are doing in your specialization course in terms of the emphasis on reframing through the lenses explored in this course, including the third space, alternative ways of knowing, and trans-/inter-disciplinarity. Your instructor will provide further information and a rubric on D2L.

- Your design work will focus on creating a class activity or activities within a large context of a curricular topic/theme/unit.
- Your design work should clearly show the reframing of the challenge/issue/problem that you encounter in the context of enacting curriculum.
- You will design the activity or activities in detail, but you can describe the larger curricular context in much less detail.
- The activities should reframe traditional approaches or conceptions of the discipline and classrooms in alignment with the ideas of the third space, alternative ways of knowing, and trans-/inter-disciplinarity, or other reframings of traditional approaches to roles, goals, and structures.
- The activities should affirm and build on students' lived experiences to address learning goals in the program of studies.
- The activity or activities should result in something (artifact, performance, behavior, or experience) that demonstrates student learning and could be assessed in terms of student learning from the perspectives of the program of studies.
- You will share your project with other members of the class and potentially other classes at the end of the course.
- Your instructor will provide more specific instructions, templates, and rubrics.

#### THE EXPECTATION OF EXCELLENCE IN PROFESSIONAL WORK

Please review the Academic Calendar carefully. It describes the program and provides detailed schedules and important dates. It contains information on expectations for student work and professional conduct. In addition, procedures are described regarding concern about student performance in the program. Please pay especially careful attention to details and descriptions in the following topic areas:

## • The Importance of Attendance and Participation in Every Class

As this is a professional program, experiences are designed with the expectation that all members will be fully involved in all classes and in all coursework experiences. As you are a member of a learning community your contribution is vital and highly valued, just as it will be when you take on the professional responsibilities of being a teacher. We expect that you will not be absent from class with the exception of documented instances of personal or family illness or for religious requirements.

# • Engagement in Class Discussion and Inquiry

Another reason for the importance of attendance and participation in every class is that the course involves working with fellow students to share ideas and thinking. For example, each class you will work with a small group to engage fellow students in discussions on work being considered in class. You will also help other groups by providing ideas for scholarly inquiry in assignments. If you find that you are experiencing difficulties as a group collaborating, please inform the instructor.

#### **EXPECTATIONS FOR WRITING**

All written assignments (including, to a lesser extent, written exam responses) will be assessed at least partly on writing skills. Writing skills include not only surface correctness (grammar, punctuation, sentence structure, etc.) but also general clarity and organization. Sources used in research papers must be properly documented. If you need help with your writing, you may use the writing support services in the Learning Commons. For further information, please refer to the official online University of Calgary Calendar, Academic Regulations, E. Course Information, E.2: Writing Across the Curriculum:

https://calendar.ucalgarv.ca/pages/2c2d1ce47b8c4d008aec9cc3da49876e

#### COMPLETION OF ALL LEARNING TASKS REQUIRED TO PASS THE COURSE

All Learning Tasks must be completed with a passing grade in order to pass the course. If a Learning Task is missing or receives a grade below passing, students must communicate with the instructor about what is needed to complete the Learning Task with a passing grade.

#### MISSING OR LATE SUBMISSIONS

All late submissions of assignments must be discussed with the instructor **prior to the due date** or marks will be deducted. A deferral of up to 30 days may be granted at the discretion of the Associate Dean of Undergraduate Programs prior to the end of the course with accompanying written evidence. https://calendar.ucalgary.ca/pages/jyekfh6xwhoHwxcetCil

#### **GROUP TASKS AND GRADING**

With respect to group work, if your group is having difficulty collaborating effectively, please contact the instructor immediately. If a group is unable to collaborate effectively or discuss course materials online in a timely manner, the instructor may re-assign members to different groups or assign individual work for completion. All members of a group who are members of the group at the time of submission to D2L will receive the same grade.

#### STATEMENT ON INSTRUCTOR INTELLECTUAL PROPERTY

Course materials created by instructors (including presentations, notes, case studies, assignments etc.) remain the intellectual property of the instructor. These materials may NOT be shared, 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.

## STATEMENT ON STUDENT USE OF GENERATIVE AI

Students are permitted to use artificial intelligence tools, including generative AI, to gather information, review concepts or to help produce assignments. However, students are ultimately accountable for the work they submit as if they are the author (e.g., responsible for all matters related to copyright, academic misconduct, etc.), and any content generated or supported by an artificial intelligence tool must be cited appropriately. Furthermore, students are required to disclose the nature of their usage of AI for any assignments on which they employ AI.

## **GRADING:** https://calendar.ucalgary.ca/pages/fc4adb8643f84441ab32300237b80df1

| Grade | <b>GPA Value</b> | %            | Description per U of C Calendar  |  |
|-------|------------------|--------------|--|--|
| A+    | 4.0              | 95-100       | Outstanding  |  |
| A     | 4.0              | 90-94        | Excellent – Superior performance showing comprehensive understanding of the subject matter |  |
| A-    | 3.7              | 85-89        |  |  |
| B+    | 3.3              | 80-84        |  |  |
| В     | 3.0              | 75-79        | Good - clearly above average performance with knowledge of                                 |  |
|       |                  |              | subject matter generally complete  |  |
| B-    | 2.7              | 70-74        |  |  |
| C+    | 2.3              | 65-69        |  |  |
| С     | 2.0              | 60-64        | Satisfactory - basic understanding of the subject matter                                   |  |
| C-    | 1.7              | 55-59        |  |  |
| D+    | 1.3              | 52-54        | Minimal pass - Marginal performance  |  |
| D     | 1.0              | 50-51        |  |  |
| F     | 0.0              | 49 and lower | Fail - Unsatisfactory performance  |  |

## **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://www.ucalgary.ca/legal-services/university-policies-procedures/student-academic-misconduct-policy

https://www.ucalgary.ca/legal-services/university-policies-procedures/student-non-academic-misconduct-policy

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

#### Academic Accommodation

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: https://ucalgary.ca/student-services/access/prospective-students/academic-accommodations.

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: <a href="https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf">https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf</a>

Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree based on a Protected Ground other than Disability, should communicate this need, preferably in writing, to the designated contact person in their faculty. The course outline should clearly list the appropriate Faculty contact person(s) and their contact details. For further information see E.1 C. Course Policies and Procedures <a href="https://calendar.ucalgary.ca/pages/a89ecfbf758841b5983c4b67746e7846">https://calendar.ucalgary.ca/pages/a89ecfbf758841b5983c4b67746e7846</a>

#### Research Ethics

Students are advised that any research with human participants — \_including any interviewing (even with friends and family), opinion polling, or unobtrusive observation — \_must have the approval of the Conjoint Faculties Research Ethics Board (https://research.ucalgary.ca/conduct-research/ethics-compliance/human-research-ethics/conjoint-faculties-research-ethics-board-cfreb) or the Conjoint Health Research Ethics Board https://research.ucalgary.ca/conduct-research/ethics-compliance/human-research-ethics/conjoint-health-research-ethics-board-chreb)

In completing course requirements, students must not undertake any human subjects research without discussing their plans with the instructor, to determine if ethics approval is required. Some courses will include assignments that involve conducting research with human participants; in these cases, the instructor will have applied for and received ethics approval for the course assignment. The instructor will discuss the ethical requirements for the assignment with the students.

For further information see E.5 Ethics of Human Studies https://calendar.ucalgary.ca/pages/627ed88eb4b041b7a2e8155effac3501

## **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. For more information, please see: <a href="https://www.ucalgary.ca/legal-services/access-information-privacy">https://www.ucalgary.ca/legal-services/access-information-privacy</a>

## **Copyright Legislation**

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (https://www.ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy) 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 <a href="https://www.ucalgary.ca/legal-services/university-policies-procedures/student-non-academic-misconduct-policy">https://www.ucalgary.ca/legal-services/university-policies-procedures/student-non-academic-misconduct-policy</a>.

## **Sexual and Gender-Based 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 <a href="https://www.ucalgary.ca/legal-services/university-policies-procedures/sexual-and-gender-based-violence-policy">https://www.ucalgary.ca/legal-services/university-policies-procedures/sexual-and-gender-based-violence-policy</a>

## **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

The Freedom of Information Protection of Privacy Act prevents instructors from placing assignments or examinations in a public place for pickup and prevents students from access to exams or assignments other than their own. Therefore, students and instructors may use one of the following options: return/collect assignments during class time or during instructors' office hours, students provide instructors with a self-addressed stamped envelope, or submit/return assignments as electronic files attached to private e-mail messages.

For additional resources including, but not limited to, those aimed at wellness and mental health, student success or to connect with the Student Ombuds Office, please visit <a href="https://www.ucalgary.ca/registrar/registration/course-outlines">https://www.ucalgary.ca/registrar/registration/course-outlines</a>

Education Students Association (ESA) President for the academic year is Tracy Dinh, esa@ucalgary.ca

Werklund SU Representative is Siena Yee, educrep@su.ucalgary.ca