

EDUC 535.07/.15/.22 – Specialization II Mathematics
Summer 2025*Erin Spring*

In the spirit of reconciliation, I would like to honour and acknowledge Moh'kinsstis, and the traditional Treaty 7 territory and oral practices of the Blackfoot confederacy: Siksika, Kainai, Piikani, as well as the Îyâxe Nakoda (including the Chiniki, Bearspaw, and Goodstoney First Nations) and Tsuut'ina nations. I acknowledge that this territory is home to the Métis Nation of Alberta, Region 3 within the historical Northwest Métis homeland.

Class Dates: MTWRF, July 07–18

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: The intent of the Specialization Seminar II is to deepen students' understanding of the practical aspects of teaching within the specialization and to connect this practice with specific theoretical concepts. While this second specialization course focuses more on practical knowledge, students will also refine their knowledge of discourse and theory within the discipline and develop a deeper understanding of ways to enact this theory in a classroom context. Students will additionally become familiar with any relevant Ministry documents associated with the Alberta Curriculum and draw on practical classroom observation from the field experience to participate in meaningful discussion and to connect these observations with a vision for their own teaching. The emphasis of the course is on designing for student learning (subject-specific; assessment to strengthen student learning and improve instruction; and designing for inclusion, differentiation, and inquiry).

LEARNER OUTCOMES: Over the course of the semester, students will:

- 1) Further develop a deeper conceptual understanding of the historical, socio-cultural, political contexts of the discipline of Math Education, and relate this to curriculum planning in the specialization area.
- 2) Identify and critique the key learning perspectives (as outlined in the front matter of the Programs of Studies) and intentions (learning objectives) across the units in a grade from the Alberta Programs of Studies.
- 3) Successfully apply theoretical knowledge to the design of a longer-term unit and assessment plan.

COURSE DESIGN AND DELIVERY: This course will be delivered face-to-face on campus with possible engagement in a D2L environment.

TEXT-BASED RESOURCES: There is no required textbook for this course, but ...

- Assigned readings are drawn from professional and research journals, and they are listed by date of discussion in the **TENTATIVE COURSE OUTLINE**, below.
- Additional readings may be assigned.
- A supplementary **RECOMMENDED READING AND RESOURCE LIST** will be made available through D2L. That list will include a range of resources that should be useful to you as a mathematics teacher, but that are not immediately

essential in this course.

ONLINE RESOURCES: You should be aware of the following websites, several of which will be consulted within the course.

- From Alberta Education:
 - LearnAlberta (<https://curriculum.learnalberta.ca/home/en>) – This site gives access official K–6 curriculum materials and to approved resources. Note that, **FOR FULL ACCESS** to this site, (1) you **MUST** use your UCalgary email account to **REGISTER FOR AN “EDUCATOR” ACCOUNT** and (2) your registration must be approved by Alberta Education, so it can take some time. **MAKE SURE THAT YOU DO THIS WELL IN ADVANCE OF THE COURSE.**
 - Alberta Education Programs of Study for Mathematics: *Mathematics K to 6*; *Mathematics 7 to 9*; and *Mathematics 10 to 12* (available at <https://www.alberta.ca/programs-of-study.aspx>)
 - Alberta Education’s (2007) *Mathematics Kindergarten to Grade 9 Program of Studies*. Available at https://education.alberta.ca/media/3115252/2016_k_to_9_math_pos.pdf
 - Alberta Education’s (2008) *Mathematics Grades 10–12 Program of Studies*. Available at <https://education.alberta.ca/media/564028/math10to12.pdf>
 - Alberta Education’s (2016) *Competencies: Descriptions, Indicators and Examples*. Available at <https://education.alberta.ca/media/3272998/competency-indicators-september-30-2016.pdf>
- From the Alberta Teachers’ Association:
 - ATA’s (2020) *Foundational Knowledge for Indigenous Education*. Available at <https://teachers-ab.libguides.com/foundationalknowledge/math>
- From the National Council of Teachers of Mathematics:
 - NCTM’s journals, policy statements, “Standards” documents, etc. Available at <https://nctm.org>
- From the UCalgary’s Math Minds research initiative:
 - Register at <https://www.structuringinquiry.com>
 - Additional videos will be made available through D2L
- From JUMP Math (Note: you’re encouraged to examine and draw from other Ministry-approved resources during the course—but, for the sake of coherence and continuity, JUMP Math will serve as our “anchor” resource.):
 - <https://jumpmath.org/ca/educators/dedicated-ab-csp/> [Password: Alberta (case sensitive)]

MANIPULATIVE MATERIALS: We’ll be using several “kits” through the course, all of which have a “make it yourself” component. Please ensure that you have access to scissors and a glue stick.

- Basic Manipulatives Kit – a PDF template with “Assembly Instructions” will be available through D2L. **PLEASE PREPARE THIS KIT BEFORE THE COURSE BEGINS.**
- Fraction Kit – You will be provided with the construction materials for this kit on the first day of class.
- Multiplication Kit – a PDF template of this kit will be made available through D2L sometime during the course.
- Polynomial Kit & Radicals Kit – (secondary only) PDF templates will be made available through D2L.

USING AI RESOURCES: The roles of emergent technologies in school mathematics has been an issue for centuries, and debates on the matter have been especially intense over the last 50 years. (E.g., Should slide rules be allowed? Calculators? Graphing calculators? Personal computers? Robotics? Etc.) There is no consensus on the matter, BUT each wave of new tools eventually prompts significant revisions to curriculum contents and teaching practices.

AI is no exception. The field is struggling with where and how it will fit in – and this struggle will be an explicit topic of discussion in different parts of this course. In the meantime, you’re invited to use artificial intelligence tools, including generative AI, to gather information, review concepts, and/or to help produce assignments. However, (1) it is your responsibility to inform me *in writing* of the intention to use such technology *in advance* of its use; (2) you’re ultimately accountable for the work you submit; and (3) any content generated or supported by an artificial intelligence tool must be cited appropriately.

TENTATIVE COURSE SCHEDULE:

Date	Topic/Activities	In advance of the session ...
Mon July 7	<ul style="list-style-type: none"> • Introductions and Overview • Alberta Education: expectations, resources • “Ravel” – Mathematics tells us something about how it should be taught 	<ul style="list-style-type: none"> • READ: Skemp, R. (1976). Relational understanding and instrumental understanding. <i>Mathematics Teaching</i>, 77, 20–26. Re-published in <i>Mathematics Teaching in the Middle School</i>, 12(2), Sep 2006, pp. 88–95. (https://www-jstor-org.ezproxy.lib.ucalgary.ca/stable/41182357)

	<ul style="list-style-type: none"> Exploring the “Basic Manipulatives Kit” Getting started on Learning Task 1 	<ul style="list-style-type: none"> PREPARE: “EDER535 Basic Manipulatives Kit”
Tue July 8	<ul style="list-style-type: none"> “Critical discernments” – Appreciating the nodes and links in the network of math Exploring “Folding Fractions” Block Lesson vs. Many-Mini-Lessons What to look for in a resource partner Getting started on Learning Task 2 	<ul style="list-style-type: none"> WATCH: “C1 Ravel.mp4” and two other “C1” video on D2L. REGISTER: at https://www.structuringinquiry.com, and ... COMPLETE: Unit 1, Session 1
Wed July 9	<ul style="list-style-type: none"> Insights from neuroscience on human possibility (brain plasticity) and limitations (working memory) Mini-Lessons as Prompting–Interpreting–Deciding cycles Exploring “Fraction Kits” 	<ul style="list-style-type: none"> READ: Brower, T. (2021), “Learning is a sure path to happiness: Science proves it.” In <i>Forbes Magazine</i> (October 17). (https://www.forbes.com/sites/tracybrower/2021/10/17/learning-is-a-sure-path-to-happiness-science-proves-it/?sh=2f713209768e) READ: Boaler, J. (2013). Ability and mathematics: The mindset revolution that is reshaping education. <i>FORUM</i>, 55(1), 143–152. (http://dx.doi.org.ezproxy.lib.ucalgary.ca/10.2304/forum.2013.55.1.143) PREPARE: “Fraction Kit”
Thu July 10	<ul style="list-style-type: none"> Analyzing PID Cycles in observed lessons Getting started on Learning Tasks 2 and 3 Getting started on Learning Task 4 	<ul style="list-style-type: none"> WATCH: “C2 PID Cycles.mp4” on D2L. READ: Rosenshine, B. (2012), “Principles of instruction: Research-based strategies that all teachers should know.” In <i>American Educator</i> (Spring), pp. 12–19. (https://www.aft.org/sites/default/files/Rosenshine.pdf)
Fri July 11	<ul style="list-style-type: none"> Variation: The science of noticing Noticing “features” vs. “associations” Devising strategies for pedagogical impasses 	<ul style="list-style-type: none"> WATCH: “C3 Structured Variation.mp4” on D2L. READ: Metz, M. (2024). Learning to play, learning from play: The Math Minds Initiative. In A. Youmans & L. Colgan (Eds.), <i>Beyond 1, 2, 3: Strengthening Early Mathematics Education</i> (pp. 135–149). Canadian Scholars. (A PDF of a pre-publication draft will be made available through D2L.) https://ebookcentral-proquest-com.ezproxy.lib.ucalgary.ca/lib/ucalgary-ebooks/detail.action?docID=30735179
Mon July 14	<ul style="list-style-type: none"> Presentations of Learning Task 1 Levels of variation Getting started on Task 5 	<ul style="list-style-type: none"> DUE: Learning Task 1, including in-class presentation component
Tue July 15	<ul style="list-style-type: none"> Presentations of Learning Task 2 Presentations of Learning Task 3 Working together on Task 5 	<ul style="list-style-type: none"> DUE: Learning Tasks 2 and 3
Wed July 16	<ul style="list-style-type: none"> The “math wars” Arbitrary vs. Necessary Mathematics-for-Teaching Concept study of “number” (inc. counting rice) “Amounting Cup” 	<ul style="list-style-type: none"> READ: Ansari, D. (2016). No More Math Wars, An evidence-based, developmental perspective on math education. <i>Education Digest</i>, 81(7), 4–10. (https://www.edcan.ca/articles/no-more-math-wars/) READ: Hewitt, D. (1999). Arbitrary and necessary, Part 1: A way of viewing the mathematics curriculum. <i>For the Learning of Mathematics</i>, 19(3), 2–9. (https://www.jstor-org.ezproxy.lib.ucalgary.ca/stable/40248303)
Thu July 17	<ul style="list-style-type: none"> Concept study of “multiplication Computational thinking (coding) Working together on Tasks 4 and 5 	<ul style="list-style-type: none"> WATCH: “C4 Mathematics-for-Teaching.mp4” on D2L. READ: Davis, B. (2008). Is 1 a prime number? <i>Mathematics Teaching in the Middle School</i>, 14(2), 86–91. (http://www.jstor-org.ezproxy.lib.ucalgary.ca/stable/41182638) READ: Davis, B. (2015). Exponentiation: A new basic? <i>Mathematics Teaching in the Middle School</i>, 21(1), 34–41. (https://www-jstor-org.ezproxy.lib.ucalgary.ca/stable/10.5951/mathteachmidscho.21.1.0034) PREPARE: “EDER535 Multiplication Kit”
Fri July 18	<ul style="list-style-type: none"> Being a critical consumer of “research” in mathematics education Organizations you should know about: NCTM; MCATA; NCSM Working together on Tasks 4 and 5 	<ul style="list-style-type: none"> READ: <i>How AI could save (not destroy) education</i>, TED Talk, Sal Khan (https://www.youtube.com/watch?v=hJP5GqnTrNo) READ: “Objections to Jo Boaler’s take on neuroscience and math education,” Daniel Willingham & Daniel Ansari (http://www.danielwillingham.com/daniel-willingham-science-and-education-blog/march-13th-2019) READ: “Peter Liljedahl wants to make kids think about math,” Greg Ashman (https://fillingthepail.substack.com/p/peter-liljedahl-wants-to-make-kids)

(Detailed descriptions of each task are provided in the next section.)

#	Title of Learning Task*	Weight	Due Date
1	Exploring the ravel of a concept	25%	Monday, July 14
2	Introducing a physical manipulative not already included in the course	10%	Tuesday, July 15
3	Introducing a digital tool not already included in the course	10%	Tuesday, July 16
4	Designing a many-mini-lessons introduction to a concept	30%	Tuesday, July 22
5	Using structured variation	25%	Friday, July 25

* Learning tasks may be undertaken *individually or collaboratively*. If you're planning to work in a group for any task, you must inform me *in advance* – preferably when the task is first discussed during class time. Groups cannot exceed 3 people.

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.

LEARNING TASKS – BRIEF DESCRIPTIONS

(As indicated in the **TENTATIVE COURSE SCHEDULE**, above, additional detail for each task will be presented in class.)

Learning Task 1	Exploring the ravel of a concept	Due: Monday, July 14	25%
<p>Working from the principles that “there’s no such thing as a grade-x concept” and “mathematics has a decentralized network structure,” this learning task is, in essence, about approaching a unit plan by taking a deep dive into the ravel of a single curriculum topic at a specific grade level.</p> <p>We’ll begin work on LT1 in our first session, and so you would be well-served by thinking about the topic you’d like to examine before the course starts. For the assignment, you’ll be required to generate three images and three brief explanations, illustrating the following:</p> <ol style="list-style-type: none"> The network of ideas in the unit of study: Create a graphic to show how your topic connects to the other concepts in the unit. Then provide a brief description (<150 words) that highlights key elements of that network. A network of concepts in the year of study: Create a graphic to show how your topic connects to the other topics at the grade level. Then provide a brief description (<150 words) that highlights key elements of that network. The multi-grade ravel: Create a graphic to show how your topic draws on and contributes to concepts in other grades – i.e., how it builds on prior concepts and anticipates upcoming concepts. Then provide a brief description (<200 words) that highlight key elements of that network. <p>There is also a presentation component to this learning task. On Monday, July 14, you’ll provide a 5-minute overview on your multi-grade ravel (i.e., a single image/slide of item c, above).</p> <p>Grading: Note that point-form is acceptable (and perhaps preferred) for your explanations/descriptions, given the number and variety of details that might need to be mentioned. Each component will be assessed on thoroughness (i.e., capturing critical details) and clarity (i.e., presenting information in an accessible manner). Points will be distributed as follows:</p> <ul style="list-style-type: none"> The network of ideas in the unit of study: graphic + description (5 points) A network of concepts in the year of study: graphic + description (5 points) The multi-grade ravel: graphic (5 points) and description (5 points) In-class presentation (5 points) 			

Learning Task 2	Introducing a physical manipulative	Due: Tuesday, July 15	10%
<p>Understanding begins with experience in the world, and so a major aspect of mathematics teaching involves designing physical experiences that might support conceptual development of abstract concepts. On this matter “manipulatives” have played a central role in the design of mathematics lessons since the 1980s.</p> <p>As indicated under CLASSROOM MATERIALS, above, several prominent manipulatives will be used to frame different topics in this course. For this learning task, you are to look for another mathematics manipulative – i.e., one that is <u>not</u> already included in the course – and prepare an up-to-10-minute introduction. (Note that the time limit may need to be adjusted, depending on course enrolment.) Preferably your presentation will afford opportunities for</p>			

your classmates to use/examine the manipulative directly, but it's acknowledged that access to these manipulatives may not always be possible.

This assignment will comprise

a) a three-slide presentation, with the following components:

SLIDE 1: Description of the manipulative and its use

SLIDE 2: Illustration and/or explanation of how it fits into the ravel

SLIDE 3: Critique

b) An in-class engagement of other course participants.

It is strongly recommended (but not required) that you undertake this task in groups, in part because it's often easier to identify affordances and constraints of these artifacts when engaged in conversation with others.

Grading: The main intention with this learning task is to expose course participants to a broader array of manipulative tools, so I will be not grading harshly or critically. Per the above description, I'll be looking for:

- an adequate description of the tool (3 points),
- attentiveness to possible shortcomings (2 points),
- appropriate linking to curriculum topics (2 points), and
- opportunity for course participants to be meaningfully engaged (3 points).

Learning Task 3	Introducing a digital tool	Due: Tuesday, July 15	10%
<p>At least since the introduction of the electronic calculator to high-school classes in the 1970s, school mathematics has been routinely affected by new waves of digital technologies. The current landscape includes, for example virtual manipulatives, video games, robotics, online tutoring, tools for virtual collaboration, and resources to support teachers in tracking learner sense-making. Many commentators anticipate that the current advent of AI applications will be profound.</p> <p>In brief, there's a lot out there – and it's way too much and too varied to even attempt a systematic review in a course like this. So, instead, we're going to take the tactic of "sharing interests and expertise." For this learning task, you're asked to select an app, an online resource, or some other digital technology (that's not already a focus of consideration in the course) and assemble a brief introduction to it.</p> <p>Given the immense variety of possible foci for this assignment, no format guidelines will be imposed, other than allotting a maximum of 10 minutes for each presentation-and-discussion. (Note that the time limit may need to be adjusted, depending on course enrolment.) As with LT3, group work is strongly recommended (but not required).</p> <p>Grading: I'll be looking for:</p> <ul style="list-style-type: none"> • an adequate description of the tool (4 points), • an appropriate linking to curriculum topics or teaching responsibilities, including opportunity for course participants to be meaningfully engaged if appropriate (4 points), • and an attentiveness to possible shortcomings (2 points). <p>This apportioning of points will be adjusted in cases where one or another aspect doesn't make much sense.</p>			

Learning Task 4	Designing a many-mini-lessons introduction to a concept	Due: Tuesday, July 22	30%
<p>For centuries, lesson planning in mathematics has been developed around a structure that involves three main components: (1) a "block" of frontal instruction, (2) some practice, and (3) an assessment of learning. As will be discussed in class, this model is troublesome for several reasons, as has been highlighted by both mathematicians and cognitive scientists.</p> <p>The "many-mini-lessons" model is an alternative that responds to most of the criticisms of the "block" lesson structure. It is preceded by a careful analysis of all discernments necessary to making sense of a concept, and it unfolds as a set of invitations to make and interweave those discernments. This assignment involves the development of a of many-mini-lessons to introduce a concept.</p> <p>We'll be discussing the fine-grained details of the task in class. Broadly speaking, your lesson will be described in a 5–8-minute video that comprises:</p> <ul style="list-style-type: none"> a) a brief (~1-minute) account of a "typical" lesson on the topic, and b) an illustrated sequence of mini-lessons in the form of well-structured "prompts," each focused on a distinct critical discernment. <p>Several illustrative examples of what's expected will be provided during the course and through D2L. It is STRONGLY encouraged that you attend to the style, tone, content, and pacing of those examples.</p> <p>Grading: I'll be looking at the following elements:</p>			

- account of typical “block-type” lesson (5 points)
- identification and sequencing of discernments necessary to the concept (10 points)
- crafting of prompts that are likely to be effective in channeling attentions to those discernments (10 points)
- “flow” of prompts (5 points)

Learning Task 5	Using structured variation	Due: Friday, July 25	25%
<p>No matter how well you design and implement a lesson, there’s always a possibility hitting a wall when a single critical discernment is missed by one or more students. Several examples of such events will be presented in class – and we’ll also be using those examples to talk about how math teachers might adapt on the fly without interrupting the flow of a lesson or singling out individual students.</p> <p>That’s what this task is about. It begins by choosing/identifying/inventing such a situation, perhaps drawn from an event from your own school mathematics learning experience. Based on that description, identify the critical discernment that you suspect has been missed and then design a structured-variation-based “intervention” that’s intended prompt awareness of that discernment. Your submission should comprise:</p> <ol style="list-style-type: none"> a concise description of the event (<100 words), explicit identification of the critical discernment that you suspect was missed (<50 words), an intervention that’s based on principles of structured variation, and a brief commentary on considerations around maintaining lesson flow and involving all learners. 			
<p>Grading: As with Learning Task 4, there will be a holistic aspect to the grading of this assignment – that is, the parts should cohere into a grander whole</p> <ul style="list-style-type: none"> • concise and informative description of the lesson speedbump (5 points) • clear and precise statement of an appropriate critical discernment (5 points) • intervention informed by structured variation that directly addresses the critical discernment (10 points) • attention given to (and commentary on) other critical factors, such as involving all learners, maintaining momentum, and attending to the ravel (5 points) 			

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: <http://www.ucalgary.ca/pubs/calendar/current/e-2.html>

MISSING OR LATE SUBMISSIONS

All late submissions of assignments must be discussed with the instructor **prior to the due date**. 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. Instructors can add penalties for late assignments here. <https://calendar.ucalgary.ca/pages/jyekfh6xwhoHwxetCi1>

ISSUES WITH GROUP TASKS

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.

GRADING: <https://calendar.ucalgary.ca/pages/fc4adb8643f84441ab32300237b80df1>

Grade	GPA Value	%	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	
B	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	
C	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: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf>

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 <https://calendar.ucalgary.ca/pages/a89ecbf758841b5983c4b67746e7846>

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-cfrehb>) or the Conjoint Health Research Ethics Board <https://research.ucalgary.ca/conduct-research/ethics-compliance/human-research-ethics/conjoint-health-research-ethics-board-chrehb>)

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/627ed88eb4b041b7a2e8155effac350>

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: <https://www.ucalgary.ca/hr/work-compensation/working-ucalgary/freedom-information-and-privacy-act>

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

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 <https://www.ucalgary.ca/legal-services/university-policies-procedures/sexual-and-gender-based-violence-policy>

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 <https://www.ucalgary.ca/registrar/registration/course-outlines>

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

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