

Fin Spring

EDUC 460.15: Specialization I - Secondary Mathematics Winter, 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: Monday and Friday, January 13 - March 14, 2025

No Class: Term Break, February 16 – 22, 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:

The intent of the Specialization I Seminar is to introduce students to the concepts, theory, and design planning related to teaching within the specializations of Secondary Mathematics. Theory as connected to an understanding of practical classroom experiences will particularly inform the course curriculum and will be explored through course readings, analysis of teaching/learning artifacts, and through the design of discipline-based learning and assessment plans. Topics in teaching and learning will include teaching inclusively and addressing the needs of diverse learners, effective integration of technology, and discipline-based inquiry. Assignments will present the opportunity for students to develop an understanding of short-term instructional design and to begin to examine curriculum shifts in the province.

LEARNER OUTCOMES:

By the end of the semester, students will:

- 1) Develop a foundational understanding of the nature of discourse in the discipline, as related to teaching and learning, including specialized language, concepts, and terminology.
- 2) Understand teacher as designer of learning and assessment plans and use of the resources available for designing learning and assessment.
- 3) Explore and apply introductory theory related to the teaching of the discipline with an emphasis on: designing discipline-based tasks and assessment processes and creating an adaptive classroom learning environment to better meet the needs of today's diverse learners.



4) Successfully design short-term learning and assessment plans to deepen understanding of key ideas/concepts within the discipline.

COURSE DESIGN AND DELIVERY: This course will be delivered face-to-face on campus with possible engagement in a D2L environment. It is designed based on a design and inquiry-focused learning approach. Student participation is crucial to the knowledge building in this course.

REQUIRED RESOURCES

- Alberta Education (2014). *Program of Study: Mathematics Kindergarten to Grade 9*. Edmonton: Government of Alberta. <u>https://education.alberta.ca/media/3115252/2016_k_to_9_math_pos.pdf</u>
- Alberta Education (2008). *Program of Study: Mathematics Grade 10 to Grade 12*. Edmonton: Government of Alberta. <u>https://education.alberta.ca/media/564028/math10to12.pdf</u>
- Artigue, M., & Blomhøj, M. (2013). Conceptualizing inquiry-based education in mathematics. *ZDM Mathematics Education*, 45(6), 797–810. <u>https://link-springer-</u> com.ezproxy.lib.ucalgary.ca/article/10.1007/s11858-013-0506-6
- Bishop, J. P., Hardison, H., Przybyla-Kuchek, J., & Hassay E. (December 2020). Leveraging Student Thinking to Foster Productive Discussions. *The Mathematics Teacher*, 113(12), 995 – 1016. <u>https://ucalgary.alma.exlibrisgroup.com/leganto/public/01UCALG_INST/citation/24322695910004336?auth</u> <u>=SAML</u>
- Boaler, J. (2016). *Mathematical Mindsets* [Chapter 3, pp. 21-32]. San Francisco, CA: Jossey-Bass. *Available in Ebook Central <u>https://ebookcentral-proquest-com.ezproxy.lib.ucalgary.ca/lib/ucalgary-</u> ebooks/reader.action?docID=4444210&ppg=39
- Beyranevand, M. L. (2014). The different representations of rational numbers. *Mathematics Teaching in the Middle School*, 19(6), 382-385. <u>https://www-jstor-</u> org.ezproxy.lib.ucalgary.ca/stable/10.5951/mathteacmiddscho.19.6.0382
- Davis, B. (2015). The mathematics that secondary teachers (need to) know. Revista Espanola de Pedagogia, 73(261), 321-342. <u>https://www-jstor-org.ezproxy.lib.ucalgary.ca/stable/24711297</u>
- Ernest, P. (2000). Why teach mathematics. In J. White & S. Bramall (Eds.), *Why learn mathematics*. London: London University Institute of Education. <u>https://www.exeter.ac.uk/research/groups/education/pmej/why.htm</u>
- Gilbert, J. M. & Coomes, J. (February 2010). What Mathematics Do High School Teachers Need to Know? *The Mathematics Teacher*, 103(6), 418-423. <u>http://www.jstor.org.ezproxy.lib.ucalgary.ca/stable/20876655</u>
- Jaworski, B. (2015). Teaching for mathematical thinking: inquiry in mathematics learning and teaching, Mathematics Teaching, 248, 28-34. <u>https://www.atm.org.uk/write/MediaUploads/Journals/MT248/MT248-15-11.pdf</u>
- Kilpatrick, J., Swafford, J., & Findell, B. (Eds.) (2001). Adding it up: Helping children learn mathematics. Washington, DC: National Academy Press. [Chapter 4, pp. 115 – 133] *Available in Ebook Central <u>https://ebookcentral-proquest-com.ezproxy.lib.ucalgary.ca/lib/ucalgary-ebooks/reader.action?docID=3375421&ppg=136</u>
- Manouchehri A. & Lapp D. A. (November 2003). Unveiling Student Understanding: The Role of Questioning in Mathematics Instruction. *The Mathematics Teacher*, 96(8), 562 566.



https://www-jstor-org.ezproxy.lib.ucalgary.ca/stable/20871434

- National Council of Teachers of Mathematics (2000). *Principles and Standards for School Mathematics* (pp. 52 <u>– 71).</u> Reston, VA: Author. <u>https://ucalgary.alma.exlibrisgroup.com/leganto/public/01UCALG_INST/citation/24322695780004336?aut</u> <u>h=SAML</u>
- National Council of Teachers of Mathematics (2014). *Principles to Actions: Ensuring mathematics success for all* (pp. 7-12). Author, Reston, VA. * *Available in E-book Central* <u>https://ebookcentral-proquest-</u> <u>com.ezproxy.lib.ucalgary.ca/lib/ucalgary-ebooks/reader.action?docID=6478900&ppg=18</u>
- Rutherford, F. J. & Ahlgren, A. (1991). *Science for all Americans* (Chapter 2, pp. 15-24). Oxford University Press, Oxford, UK. * *Available in E-book Central* <u>https://ebookcentral-proquest-com.ezproxy.lib.ucalgary.ca/lib/ucalgary-ebooks/reader.action?docID=737311&ppg=42</u>
- Staples M. & Colonis M. M. (November 2007). Making the Most of Mathematical Discussions. *The Mathematics Teacher*, 101(4), 257 261. <u>https://www-jstor-org.ezproxy.lib.ucalgary.ca/stable/20876107</u>
- Stein, C. C. (November 2007). Let's Talk: Promoting Mathematical Discourse in the Classroom. *The Mathematics Teacher*, 96(8), 285 289. <u>https://www-jstor-org.ezproxy.lib.ucalgary.ca/stable/20876113</u>
- Stockero, L. S, Van Zoest, L. R., Kinzel, M. & Cavey, L. (May 2011). Making Student Thinking Public. The Mathematics Teacher, 104(9), 704-709. <u>http://www.jstor.org.ezproxy.lib.ucalgary.ca/stable/20876997</u>
- Zhao M. & Lapuk K. (January/February 2019). Supporting English Learners in the Math Classroom: Five Useful Tools. *The Mathematics Teacher*, 112(4), 288 293. <u>https://doi-org.ezproxy.lib.ucalgary.ca/10.5951/mathteacher.112.4.0288</u>

ADDITIONAL RESOURCES:

- Alberta Education. (2011). *English as a Second Language Proficiency Benchmarks*. Retrieved from: <u>http://www.learnalberta.ca/content/eslapb/</u>
- Alberta Learning. (2010). *Making a difference: Meeting diverse learning needs with differentiated instruction*. Retrieved from: <u>https://open.alberta.ca/publications/9780778586012</u>

Alberta Education. (2013). Ministerial order on student learning (#001/2013). Retrieved from: https://open.alberta.ca/dataset/b3fee5d3-9d70-496c-9a95-75215a916723/resource/118fb68b-de42-4ff8-85ff-03ae4949e7c5/download/mostudentlearning.pdf

- Leahy, S., Lyon, C., Thompson, M., & Wiliam, D. (2005). Classroom Assessment: Minute by Minute, Day by Day. *Educational Leadership*, 63(3), 18-24. <u>http://ezproxy.lib.ucalgary.ca/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN= 18772694&site=ehost-live</u>
- McTighe, J. & Wiggins, G. (2014). *Improve curriculum, assessment, and instruction using the understanding by design framework*. ASCD White Paper http://www.ascd.org/ASCD/pdf/siteASCD/publications/ASCD_UBD_whitepaper.pdf
- Peat, F. D. (nd.). Blackfoot physics and European minds. Pari Center. <u>https://paricenter.com/library-new/indigenous-ways-of-knowing/blackfoot-physics-and-european-minds/</u>



Stavros, G. S., & Murphy, M. S. (2019). Identity-making through Cree mathematizing. *Canadian Journal of Education*, 43(3), 692-714 <u>https://journals.sfu.ca/cje/index.php/cje-rce/article/view/3851</u>

Wilder, R. L. (2012). *Introduction to the foundation of mathematics* (2nd ed., pp. 281-299), New York: Dover Publications.

 $\underline{https://ucalgary.alma.exlibrisgroup.com/leganto/public/01UCALG_INST/citation/24322695990004336?aut} \\ \underline{h=SAML}$

LEARNING TASK	DESCRIPTION OF LEARNING TASK	GROUP / Individual	WEIGHT	DUE DATE
Title 1	Exploration of Mathematics Processes	Group	30%	January 31, 2025
Title 2	Exploration of Mathematics Knowledge for Teaching Number Concepts (Junior High Grades)	Individual	25%	February 10, 2025
Title 3	Creation of Short-term Learning and Assessment Plan (Senior High Grades)	Individual	45%	March 10, 2025

LEARNING TASKS OVERVIEW

WEEKLY COURSE SCHEDULE:

Date	Торіс	Readings and Tasks	Due Dates	
Week 1	The nature of and conceptions/	Rutherford & Ahlgren		
Jan 13 - 17	beliefs about mathematics	(1991)		
		Alberta Education (2008)		
Week 2	Why teach/learn mathematics?	Ernest, P. (2000)		
Jan 20 - 24	Mathematics knowledge for teaching	Gilbert & Coomes (2010)		
		Beyranevand (2014)		
Week 3 Jan 27 - 31	Mathematics learners/learning	Boaler, J. (2016)		
	EAL learners in mathematics	Zhao & Lapuk (2019)		
	Mathematics knowledge for teaching	NCTM (2000)		
Week 4	Mathematical proficiency	NCTM (2000)	Learning task 1	
Feb 3 - 7	Mathematics knowledge for teaching	Kilpatrick et al. (2001)	[by January 31]	
		Davis (2014)		
Week 5	Inquiry-based teaching/learning	Artigue & Blomhøj (2013)		
Feb 10 - 14	of mathematics	NCTM (2014)		
	Principles for mathematics teaching			
Feb 16 - 22	NO C	CLASSES - Term Break		



Week 6 Feb 24 - 28	Inquiry-based teaching/learning of mathematics Productive mathematics discussion/ discourse	Jaworski (2015) Stockero et al. (2011) Bishop et al. (2020)	Learning Task 2 [by February 10]
Week 7 Mar 3 - 7	Designing inquiry-based lesson plans	Manouchehri & Lapp (2003) Staples & Colonis (2007)	
	Productive mathematics discussion/ discourse	Stein 2007	
Week 8	Designing inquiry-based lesson		Learning Task 3
Mar 10 - 14	plans		[by March 10]

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 AND ASSESSMENT

Generative AI :

- AI tools can be used for creating assignment outlines or critiquing drafts, but the final work must be original.
- Students must not copy or paraphrase from AI applications for assignments
- AI tools will be prohibited for major assignments, or research papers but allowed for information gathering.
- All other considerations for AI use must be cleared with the instructor.

There are 3 required Learning Tasks for this course. Students must pass each learning task in order to successfully complete the course.

NOTE: Further details of the 3 Learning Tasks and any clarification needed will be provided in class.

LEARNING TASK 1: EXPLORATION OF MATHEMATICS PROCESSES (GROUP, 30%) – DUE JANUARY 31, 2025

The National Council of Teachers of Mathematics [NCTM] and Alberta Mathematics Program of Studies [APoS] highlight several mathematics processes that are central to teaching, learning, and doing mathematics. This learning task is intended for you to develop understanding of these processes, which are also important to learning tasks 2 and 3.

Working in groups of 3-4, you will explore a mathematical process assigned to your group and present your findings to engage the class through an activity and explain the meaning of the process. The class will provide constructive feedback on the presentation regarding the extent to which the activity deepened their understanding of the process.

Your presentation will include a (1) description of the activity, (2) explanation of how the activity illustrates the meaning of the process, and (3) a minimum of 2 references, in addition to the APoS, that you used to support your work. You may also want to draw upon group/class-discussions and course readings. Upload the powerpoint to D2L dropbox by midnight on the due date.

Group members will receive the same grade.



CRITERIA FOR ASSESSMENT OF LEARNING TASK 1

The following criteria will be used to assess the work:

• Quality of presentation, based on:

Informative design and design elements of presentation Clarity and sufficiency of information provided Significance and relevance of references Coherent explanation to reflect collaboration and not isolated pieces of information Appropriate length [words] where specified Significance and relevance of references Correct use of APA7

• Quality of activity, based on:

Appropriateness and meaningfulness of activity to support learning of the *process* Level of engagement of the class in the activity Peer assessment of effectiveness of the activity to their learning of the *process* Clarity and sufficiency of description of the activity Appropriate use of required time for the activity and oral explanation of *process*

• Quality of learning, based on:

Well-developed depth of understanding of the *process* shown through:

- the content and quality of the activity and accuracy of the explanation of the process
- meaningful and relevant connections to theory and practice

LEARNING TASK 2: EXPLORATION OF MATHEMATICS KNOWLEDGE FOR TEACHING NUMBER CONCEPTS (JUNIOR HIGH SCHOOL) (INDIVIDUAL, 25%) – DUE FEBRUARY 10, 2025

Mathematics knowledge for teaching [MKT] is a special type of knowledge mathematics teachers need to plan and teach mathematics to engage students meaningfully to learn and develop conceptual understanding of mathematics. This assignment allows you to explore and develop MKT for rational numbers in Junior High School [G 7 to 9] and develop an understanding of what to consider in planning meaningful mathematics lessons for any grade to foster deep understanding of mathematics concepts.

Working individually, you will investigate MKT for rational numbers with a focus on fractions. You are expected to draw on in-class work on MKT for numbers, course readings, and your own research of related resources.

Your report should include all aspects of the guideline for MKT for numbers discussed in class and organized with clear headings and subheadings based on the guideline. It should be typed; diagrams and mathematical expressions/relationships can be done by hand if neat and legible.

CRITERIA FOR ASSESSMENT OF LEARNING TASK 2

The following criteria will be used to assess the work:

• Quality of report, based on:

Well organized, informative design and design elements of report Clarity and sufficiency of information provided Neatness and clarity of diagrams/pictures Legible mathematics symbols/expressions



Appropriate length [words] where specified Correct use of APA7

• Quality of learning, based on:

Depth of understanding of rational number properties shown through accuracy of the key elements for the 4 operations.

Depth of understanding of meaning of rational numbers [fractions] shown through accuracy of 4 different meanings and multiple representations of them

Depth of understanding of meanings of the 4 operations and procedures of fractions shown through accuracy of meanings of the operations, the procedures, and multiple representations of them

Depth of understanding of application of fractions shown through meaningful and appropriate contextual problems for the 4 operations

Depth of understanding of relevant historical information of fractions shown through situations meaningful to students

Depth of understanding of students' misconceptions of fractions shown through at least 4 possible meaningful examples

<u>Learning Task 3</u>: Creation of short-term learning and assessment plan (Senior high school Grades) (individual, 45%) – Due date: march 10, 2025

Lesson plans are central to imagine and facilitate meaningful classroom experiences to support students' learning and doing of mathematics and development of mathematical thinking, procedural fluency, and conceptual understanding of mathematics. This assignment allows you to learn how to create such lesson plans by applying your understanding of inquiry-based teaching/learning and MKT for a senior high school concept (G 10 - 12).

Working individually, you will select a secondary level mathematics concept from the Alberta Mathematics Program of Studies (G 10 - 12) and design a lesson plan for an 80-minute class. Your plan should follow a clear and comprehensive template and include a plan for learning and assessment that promotes mathematical thinking and deep understanding of the concept.

In the lesson plan, you will also add annotations that provide explanations behind your thinking, choices, and MKT relevant to developing the lesson plan based on the guideline discussed in class. Simply put, you will record on the lesson plan the reasons for the choices that you have made, how this lesson plan fits into the broader context of a unit as described in the Program of Studies, and the intended results of creating the lesson in the manner in which you have done. You should justify the pedagogical choices you make with references to the course readings, class discussions, and other sources.

CRITERIA FOR ASSESSMENT OF LEARNING TASK 3

The following rubric will be used to assess the work:

Category	A+ / A	A-/ B+	B / B-	C+ / lower
Design	- All links to PoS	- Many links to	- Few links to PoS	- Links to the PoS
Curricular	are clear and	PoS are clear and	are clear and	are unclear and/or
Outcomes	appropriate – All	appropriate	appropriate	inappropriate
	relevant PoS	- Many relevant	- Few relevant PoS	- No relevant
	curricular outcomes	PoS curricular	curricular	curricular outcomes



links to	for a mathematica	out comes for a	outcomes for a	for a math concent
-IIIKS to	ior a mamematics	moth concent and	math appart and	and mathematical
Flogram of	mathematical	math concept and	math concept and	
Studies (105)	nrocesses are	nrocesses	nrocesses are	correctly represented
	correctly	correctly	correctly	concerny represented
	represented	represented	represented	
Instructional	Plan demonstrates	Plan	Plan demonstrates	Plan demonstrates
Dolivory	excellent level of	- 1 Iali demonstrates very	good level of	- 1 fair defilonstrates
Denvery	disciplinary	good level of	disciplinary	level of disciplinary
-nlan	knowledge	disciplinary	knowledge.	knowledge
demonstrates	- Lesson highly and	knowledge	- Lesson	- Lesson is teacher-
disciplinary	meaningfully	- lesson	moderately	centered and does
knowledge	engaging and	moderately	engaging and not	not engage students
engagement.	clearly student-	engaging	student-centered	meaningfully
student-	centered	meaning-fully and	- Lesson	- Lesson unclear and
centeredness,	- Lesson extremely	partly student-	moderately clear	not well ordered,
organization,	clear and well-	centered	and well-ordered,	does not flow well;
integration	ordered, high	- Lesson mostly	good level of	low level of
across lesson	degree of	clear and well-	integration among	integration among
sections	integration among	ordered, very	lesson sections	lesson sections (hard
	lesson sections	good level of	(easy to envision	to envision how it
	(exceptionally easy	integration among	how some of it will	would unfold)
	to envision how it	lesson sections	unfold)	- Most important
	will unfold)	(easy to envision	- Many important	elements missing
	- All important	how most of it	elements of plan	
	elements of plan	will unfold)	missing	
	included	- Most important		
		elements of plan		
		included		
Deep	- Learning tasks are	- Learning tasks	- Learning tasks	- Learning tasks are
Understandin	highly effective for	are moderately	have a low level of	not effective for
g	supporting	effective for	effectiveness in	supporting
-learning	thinking and	supporting mathe-	supporting	thinking and
opportunities	ninking and	matical trinking	thinking and	nna and
lor deep	students' concentual	and processes and	minking and	processes and students' concentual
of curriculum	understanding of	tual	students'	understanding of
objectives	content objectives	understanding of	concentual	content objective
objectives	- Tasks are clearly	content objective	understanding of	- Tasks are not
	inquiry-based	- Tasks are partly	content objective	inquiry-based
	learner-centered.	inquiry-based.	- Tasks are partly	learner-centered and
	and support initial	learner-centered.	or fully inquiry-	are for practicing the
	learning of a new	and support initial	based, learner-	concept
	concept	learning of a new	centered, but do not	1
	1	concept	support initial	
			learning of a new	
			concept	
Assessment	A variety of highly	Some variety of	Formative	Formative
	effective formative	effective	assessment options	assessment options
	assessments are	formative	are limited and	lacking and/or shows



-integrated	clearly integrated	assessments are	shows little	lack of under-
formative	into lesson	integrated into	understanding of	standing of
assessments		lesson	what constitutes	appropriate and
			effective	effective assessment
			assessment	
Narratives	Narrative	Narrative	Narrative	Narrative
	explanations have	explanations have	explanations have	explanations lack
-depth of	excellent depth and	excellent depth	very good depth	depth and
analysis/under	demonstrate clear	and demonstrate	and demonstrate	demonstrate little
-standing	understanding of all	understanding of	some	understanding of
	of the guideline	many of the	understanding of	most of the guideline
	items for lesson	guideline items	some of the	items for lesson
	planning and design	for lesson	guideline items for	planning and design
		planning and	lesson planning and	
		design	design	
Writing	The lesson plan and	The lesson plan	The lesson plan	The lesson plan and
quality	narratives are	and narratives are	and narratives are	narratives are
	clearly written and	relatively clearly	some-what	unclearly written and
	stand as a superior	written and	unclearly written	contains many errors
	example free of	contains few	and contains errors	that impede
	errors.	errors	that impede	understanding.
			understanding.	
References	Clearly stated;	Stated; APA 7	unclear;	Not stated or
	Accurately APA 7	referenced with	Referenced but not	unclear; not
	referenced.	minor errors.	APA.	referenced.

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.

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.

RADING				
Grade	GPA Value	%	Description per U of C Calendar	
A+	4.0	95-100	Outstanding	
А	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		

GRADING

F

Academic Misconduct

0.0

49 and lower

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.

Fail - Unsatisfactory performance

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-academicmisconduct-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/a89ecfbf758841b5983c4b67746e7846

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

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

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 Claire Gillis, esa@ucalgary.ca.

Werklund SU Representative is Tracy Dinh, educrep@su.ucalgary.ca.