UNIVERSITY OF VICTORIA
DEPARTMENT OF PSYCHOLOGY

PSYC 513 (A01) CRN 31300
Quantitative Analysis:
Foundations of Structural Equation Modeling

Summer 2022

Time: MTWThF 10:30-12:20
Room: Clearihue A030   Zoom Meeting ID: 875 6388 8150   Password: 746880

Instructor: Stuart MacDonald, PhD   **Office:**   Cornett A261
Office Hours: Flexible (e.g., prior/following class);   **Phone:**   250-472-5297
                  By appointment   **E-mail:**   smacd@uvic.ca

We acknowledge and respect the ləkʷəŋən peoples on whose traditional territory the university stands and the Songhees, Esquimalt, and W̱SÁNEĆ peoples whose historical relationships with the land continue to this day.

COURSE DESCRIPTION	

This graduate course is designed to introduce you to the concepts and practical application of statistical methods for the analysis of manifest and latent variables. Core topics to be covered will include (a) definitions and methods for examining the factor structure and associations among manifest indicators, as well as (b) the application of structural equation models (*SEMs*) for testing explicit hypotheses about directional pathways between variables of interest. Among its strengths, SEM is a confirmatory (rather than exploratory) factor analytic technique, and also attempts to adjust for unreliability of measurement thereby yielding more accurate estimates of association among latent factors. A central feature of the course will be to provide you with a conceptual and practical understanding of structural equation models and select software packages (e.g., lavaan/R, Mplus 8+, AMOS/SPSS) so that you can compute analyses and interpret results from your own data. To maximize learning, as we proceed through the course topics, you should consider how each theme applies to your own data and research interests. Methodological advances in the social, behavioural, and educational sciences have made structural equation modeling an essential statistical research tool.

This is a practical/applied course that will emphasize:
- □ how SEM models represent a simple extension of what you already know (path analysis, exploratory factor analysis on observed variables)
- □ why SEM is beneficial (disattenuates measurement error, uses maximum likelihood (ML) estimation to derive population estimates)
- □ examples of how SEM can be used (confirmatory factor analysis of existing scales, second order factor models)

COURSE PREREQUISITES	

Although there are no official course prerequisites listed in the UVic calendar for PSYC 513, our discussions of path analysis, factor analysis, and structural equation modeling will assume prior knowledge of statistical concepts introduced in PSYC 532 (General Linear Model - Univariate) and PSYC 533 (General Linear Model - Multivariate). I am willing to make exceptions to these *recommended* prerequisites, as the focus of PSYC 513 concerns the *conceptual* understanding and *application* of analyses for manifest and latent factor models (rather

than detailed comprehension of the underlying matrix algebra). If you have no previous experience in these areas, please contact me to discuss your background. I would be happy to provide suggestions for supplementary reading material that will prepare you for concepts and topics that we will discuss in class.

COURSE FORMAT AND LEARNING GOALS	

This advanced graduate course on structural equation modeling is designed to promote learning through lecture, practical application, dialogue, and sharing of ideas. Our regular meetings will integrate conceptual learning with practical application. We will hold in-depth discussion of issues (e.g., definitions, methodological approaches and problems, how to prepare data and use software, etc), with each class theme building successively on content from previous lectures. Although this is a course on novel statistical procedures that requires some lecturing, the success of the course is also predicated upon our lively exchanges. I invite each of you to participate in group discussions and to ask questions about specific procedures based on examples from your research area or personal data sets -- your perspective is important to the collective learning experience! As detailed in the *evaluation* section of the syllabus, opportunities will be provided to further enhance both your written and spoken skills.

In my capacity as a guide to your learning, I am committed to you achieving the following learning outcomes:

1. Obtain a basic understanding of methods for fitting latent factor models, as well as related statistical procedures that provide the foundation of these models

2. Introduce structural equation models (SEMs), focusing initially on *measurement* models and then progressing to *structural* models

3. Develop an understanding of special topics in SEM including multiple group comparisons and approaches for handling missing data (***time permitting***)

4. Apply practical knowledge in data management and analysis for examining the topics in Objectives 1 through 3 using various software packages. ***Ideally, this objective will be fulfilled using your own data with multiple continuous indicators***

5. Enhance your communication skills (e.g., share ideas, hone presentation skills, respond to questions) and confidence when speaking among your peers

6. Refine your scientific writing by creating (a) a *Method* section that summarizes your population, measures, and the statistical method employed, and (b) a *Results* section that summarizes findings from your SEM analyses. In completing these manuscript sections, please adhere to APA style (according to the 7th edition of the APA publication manual).

ACADEMIC EXPECTATIONS	

Your contributions to class discussions and completion of assignments are required to achieve the learning outcomes. Thus, I expect you to attend class. Should circumstances prevent your attendance, please inform me (in advance if possible). If you are unable to submit the final written assignment on the specified date, you

should apply to the Dean of Graduate Studies for an academic concession (deferral or DEF). Failure to complete one or more class assignments will result in a grade of "N" regardless of the cumulative percentage of all other elements of the course. N is a failing grade and factors into GPA as a value of 0.

In accordance with the University's policy on academic concessions, "A student who completes all course requirements is not eligible for an academic concession". Consequently, students can only request deferrals for the completion of required course components and not for non-essential course components.

You are expected to abide by the University's policy on plagiarism and cheating (*see pp. 10-11*).

COURSE REGISTRATION	

You are personally responsible for checking your registration status before the end of the course-add period (Thursday, May 12, 2022). Please verify and confirm your registration status with me as, according to University policy, I am unable to facilitate a course addition after this date *even if* you have been attending class. Also note that Tuesday, May 24, 2022 is the last day for officially withdrawing without academic penalty. University policy states that failing to attend lectures does not constitute official withdrawal.

EVALUATION	

Evaluation of your progress toward the course objectives will be based upon several graded requirements including: (a) a 2-page SEM analysis proposal, (b) presentation of research findings, (c) a written Method and Results section summarizing your SEM findings.

Ideally, the assignments will be completed using **your own data** (e.g., master's or dissertation data, data from a collaboration with your supervisor) that is well suited to SEM analyses. Doing so will be advantageous for your retention of the material (i.e., applying SEMs to data that you already understand), and will promote scientific efficiency (you could complete a method and results section and get published!). Data sets with 3 or more indicator variables for a given latent factor (e.g., 3 separate measures of well-being, a measurement scale with multiple items for each subscale) are preferable. **Please let me know by the second or third class whether it is possible for you to bring your own data suitable for SEM analyses. If not, please examine the external data sources that I mentioned in class and/or consult with me.**

The expectations and rationale for each assignment are briefly outlined below.

(a) 2-Page SEM Proposal
The purpose of this assignment is to create a very brief outline/summary of your proposed project for the class presentation and final written assignment (see b and c below). The 2-page summary should include:
- [ ] an introduction to your research area and associated research questions (include any relevant hypotheses)
- [ ] a conceptual description of SEM based on your own understanding
- [ ] a brief description of why SEM is well suited to your data/research questions (please list the potential advantages of using SEM for your analyses)
- [ ] a figure that outlines the path/SEM model that you propose to test

Your 2-page proposal (25%) is due by midnight on THURSDAY, MAY 19, 2022 (electronic submission is preferred). This due date may be moved back pending progress on foundational lecture topics (e.g., exploratory factor analysis) in advance of the detailed overview of structural equation models.

(b) Class Presentation of Research Findings

During the **last few scheduled classes**, you will be asked to give an oral presentation that summarizes key findings from your data based on SEM analyses conducted in class. **During our initial class meeting, each individual will have an opportunity to choose a presentation date.** Each student is expected to make a 20-minute presentation that outlines research area, associated hypotheses, study population, measures, statistical models, key findings, and implications of the results. The goal is to apply and explain techniques learned in class, while at the same time simulating a research talk at a conference. The ensuing discussion should take at least another 5 minutes. View this as an opportunity to get invaluable feedback on your research questions and findings, how you might tweak your statistical models, etc. Feel free to (a) employ strategies that ensure lively group discussion and (b) guide and moderate the discussion as required. This assignment is intended to promote your spoken communication skills. Evaluation of individual presentations will be based on the ability to identify and present key findings from your analyses, as well as your comprehension and ability to explain the techniques employed.

Class presentations (35%) will take place on (a) FRIDAY, MAY 27, (b) MONDAY, MAY 30, (c) TUESDAY, MAY 31, and (d) WEDNESDAY, JUNE 1, 2022.

(c) Final Written Assignment: Method and Results Section

For your major writing assignment, I would like you to create a ***manuscript-length Method and Results*** section based on your own personal data, research questions, and analyses throughout the course. *Please note* that your 2-page SEM proposal can be adapted into a polished *method and results* section, with your remaining task to create a *method* section summarizing your sample, measures, and the statistical method (with a number of these details already compiled for your oral presentation). The focus is on the Method and Results, as this course concerns SEM models based on links between multiple indicators and latent factors (measurement models) as well as directional regression paths between latent factors (structural models). However, contextually speaking, it would be useful for me if you also included: (a) a brief ***introduction*** that summarizes the research area including your hypotheses (e.g., in 3-4 paragraphs), as well as (b) a brief ***discussion*** that highlights the key findings and their associated implications, as well as any limitations (in no more than 3-4 paragraphs).

The method and results sections should provide a detailed summary typical of articles published in APA journals (e.g., *Psychology & Aging, Developmental Psychology*). Detailed ***method subsections*** that I would like to see include: (a) participants, (b) measures, (c) and procedures such as data preparation and statistical analysis (including a description of structural equation models). Please consult the APA manual for formatting details (e.g., levels of headings, etc.). The ***results section*** should summarize all key findings relevant to your research questions (feel free to create and refer to relevant tables and figures). Citations should be referenced using APA style. The combined length of the method and results sections should be ***no more than 15 double-spaced pages***, excluding references, figures, and tables. Please do not attempt to write the most comprehensive Method and Results sections known to humankind! Evaluation will *not* be based on number of words, but rather on your: (a) ability to summarize the most pertinent information in the Method (e.g., sample, measures, statistical method/summary of structural equation modeling) and Results (e.g., overview of key findings specific

to your research questions, overview of model fit, etc.) sections, (b) capacity for critical thinking and novelty, and (c) writing, attention to detail, and adherence to APA style.

Finally, as each of you will have very different research questions and will thus employ different models, I have refrained from recommending any single example in the published literature for you to consult regarding content and formatting for this assignment. As I familiarize myself with your data/questions, feel free to consult me for specific examples of published articles that are closely tailored to your own project. These articles can serve as templates as you work on your final assignment.

Your final written assignment (40%) is due on WEDNESDAY, JUNE 8, 2022.

Grading

I have purposely employed several forms of evaluation in recognition that each of you have individual learning styles. Your grade for the course will be based on both written and spoken contributions, providing you the best opportunity to demonstrate your many abilities. Further, to minimize anxiety associated with individual projects that count toward a large percentage of your grade, I have specifically chosen to parse evaluation into smaller components. Your workload should not increase, but rather be more evenly dispersed across the term.

1. 2-page SEM analysis proposal = 25%
2. Class presentation = 35%
3. Final written assignment (Method and Results sections) using APA style = 40%

Graded course requirements will be weighted and aggregated to yield a percentage score. The final letter grade in the course will be based on total percent score rounded up at values of .5 or greater (e.g., 89.5 will be rounded up to 90, but 89.4 will not). Final grades will be assigned according to the following scale: 90-100% = A+; 85-89 = A; 80-84 = A-; 77-79 = B+; 73-76 = B; 70-72 = B-; 65-69 = C+; 60-64 = C; 50-59 = D; 0-49 = F.

WEEKLY TOPICS AND ASSIGNED READINGS	

There is no required textbook for this class. In lieu, I have carefully selected chapters and articles that outline key themes in SEM (e.g., path analysis, factor analysis, measurement and structural models, etc.) and that set the stage for group discussions, practical demonstrations, assignments, and presentations. For select topics, I may include representative data/articles from my own research to further inform the practical analysis sessions in the lab. Please note that this is a *tentative reading list* that will evolve pending your individual data sets and interests. Each article identified below represents a core reading for a given theme that I may supplement with additional readings as required.

Overview of Dates and Topics

09 May	Introduction to the Course **(class presentation sign up)**
10 May	Foundations of Structural Equation Modeling (SEM): Exploratory Factor Analysis I
11 May	Foundations of Structural Equation Modeling (SEM): Exploratory Factor Analysis II
12 May	Foundations of Structural Equation Modeling (SEM): Exploratory Factor Analysis III
13 May	Foundations of Structural Equation Modeling (SEM): Path Analysis I

16 May	Foundations of Structural Equation Modeling (SEM): Path Analysis II
	From Manifest to Latent Variables – A Conceptual Introduction to SEM
17 May	Basic Steps in Fitting Structural Equation Models I
18 May	Basic Steps in Fitting Structural Equation Models II
19 May	Basic Steps in Fitting Structural Equation Models III **(outline due)**
20 May	Basic Steps in Fitting Structural Equation Models IV
23 May	***No Class (Victoria Day/May Long Weekend)***
24 May	Intermediate Applications of SEM
25 May	Intermediate Applications of SEM
	Common Problems with SEMs I
26 May	Common Problems with SEMs II
27 May	**Class Presentations** and Special Topics in SEM (**time permitting)
30 May	**Class Presentations** and Special Topics in SEM (**time permitting)
31 May	**Class Presentations** and Special Topics in SEM (**time permitting)
01 June	**Class Presentations** and Special Topics in SEM (**time permitting)
08 June	**Research Paper Due**

Readings

The required readings will consist of selected chapters and articles. Many of these articles are available online through the UVic library website or PsycINFO.

Weekly Themes and Reading List

May 9
Introduction to the Course
Course focus and objectives, syllabus and requirements
Getting to know you
Discussion of individual data sets

May 10-12
Foundations of Structural Equation Modeling (SEM): Exploratory Factor Analysis
Student projects overview
Basics of factor analysis
Exploratory factor vs. principal components analysis
Precursor of SEM
Data analysis: some basic examples

Suggested Readings:
Bryant, F.B., & Yarnold, P.R. (1994). Principal-components analysis and exploratory and confirmatory factor analysis. In L.G. Grimm, & P.R. Yarnold (Eds.), *Reading and Understanding Multivariate Statistics* (pp. 99-136). Washington D.C.: APA.

May 13 + May 16
Foundations of Structural Equation Modeling (SEM): Path Analysis
Underpinnings of SEM
Measurement error and its implications
Practical examples
Mediation and bootstrapping

Suggested Readings:
Klem, L. (1994). Path analysis. In L.G. Grimm, & P.R. Yarnold (Eds.), *Reading and Understanding Multivariate Statistics* (pp. 65-97). Washington D.C.: APA.

Hayes, A.F. (2009). Beyond Baron and Kenny (1986): Statistical Mediation Analysis in the New Millenium. *Communication Monographs, 76*, 408-420.

Calculation for the Sobel test: An interactive calculation tool for Mediation tests
(http://quantpsy.org/sobel/sobel.htm)

May 16-17
From Manifest to Latent Variables – A Conceptual Introduction to SEM
Gentle introduction to SEM
Why use it? (aka advantages of SEM models)
Types of SEM models (measurement/confirmatory factor models, structural models)
Exploratory factor analysis (EFA) vs principal components analysis (PCA) vs SEM (confirmatory factor analysis)
SEM equations

Suggested Readings:
Klem, L. (2000). Structural equation modeling. In L.G. Grimm, & P.R. Yarnold (Eds.), *Reading and Understanding More Multivariate Statistics* (pp. 227-260). Washington D.C.: APA.

Raykov, T., & Marcoulides, G.A. (2000). Fundamentals of structural equation modeling. In, *A First Course in Structural Equation Modeling* (pp. 1-45). New Jersey: Erlbaum.

Ullman, J.B. (2001). Structural Equation Modeling. In B. Tabachnick, & L. Fidell (Eds.), *Using Multivariate Statistics* (4th ed.) (pp. 653-771). New York: Allyn & Bacon.

University of Texas AMOS Tutorial

May 17-18
Basic Steps in Fitting Structural Equation Models
Key terms and concepts (latent vs. manifest variables, uniqueness, loading, covariance vs. correlation, model identification, convergence, maximum likelihood, SEM equations, etc.)
Basic steps in fitting SEMs
Model specification and identification
Evaluation of model fit

Model modification and interpretation
Practical examples: Measurement models using R/AMOS/Mplus

Suggested Readings:
Arbuckle, J.L. (2008). AMOS 17.0 User's Guide. Chicago: SPSS Inc.

Blunch, N. (2008). The Measurement Model in SEM: Confirmatory Factor Analysis. In Introduction to Structural Equation Modelling Using SPSS and AMOS (pp. 127-156). Thousand Oaks, CA: Sage Publications Inc.

Byrne, B.M. (2001). Application 1: Testing for the Factorial Validity of a Theoretical Construct (First-Order CFA Model). In *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming* (pp. 57-97). Mahwah, New Jersey: Lawrence Erlbaum Associates.

Byrne, B.M. (2001). Application 2: Testing for the Factorial Validity of Scores From a Measuring Instrument (First-Order CFA Model). In *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming* (pp. 98-119). Mahwah, New Jersey: Lawrence Erlbaum Associates.

May 19
Basic Steps in Fitting Structural Equation Models -- continued (2-page outline due; 25%)
Basic steps in fitting SEMs (continued)
Practical examples: Measurement models using R/AMOS/Mplus

May 20
Basic Steps in Fitting Structural Equation Models
Basic steps in fitting SEMs (continued)
Practical examples: Measurement models using R/AMOS/Mplus

May 23
No Class (Victoria Day/May Long Weekend)

May 24-25
Intermediate Applications of SEM
Group invariance testing for confirmatory factor models
Latent factor scores
Structural models
Practical modeling examples using R/AMOS/Mplus

Suggested Readings:
Blunch, N. (2008). The General Causal Model. In *Introduction to Structural Equation Modelling Using SPSS and AMOS* (pp. 157-185). Thousand Oaks, CA: Sage Publications Inc.

Byrne, B.M. (2001). Application 4: Testing for the validity of a causal structure. In *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming* (pp. 142-170). New Jersey: Lawrence Erlbaum Associates.

Byrne, B.M. (2001). Application 5: Testing for Invariant Factorial Structure of a Measuring Instrument (First-Order CFA Model). In *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming* (pp. 174-199). Mahway, New Jersey: Lawrence Erlbaum Associates.

MacDonald, S.W.S., Stigsdotter Neely, A., Derwinger, A., & Bäckman, L. (2006). Rate of acquisition, adult age, and basic cognitive abilities predict forgetting: New views on a classic problem. *Journal of Experimental Psychology: General, 135*, 368-390.

May 25-26
Common Problems with SEMs
Underidentified models, convergence failures, negative variances
Correlated residuals
Multivariate normality

Suggested Readings:
Landis, R.S., Edwards, B.D., & Cortina, J.M. (2009). On the practice of allowing correlated residuals among indicators in structural equation models. In C.E. Lance & R.J. Vandenberg (Eds.) *Statistical and Methodological Myths and Urban Legends* (pp. 193-215). New York: Routledge.

May 27
Class Presentations and Special Topics in SEM (**time permitting)
Moderation and mediation in SEM

Suggested Readings:
Hopwood, C.J. (2007). Moderation and mediation in structural equation modeling: Applications for early intervention research. *Journal of Early Intervention, 29*, 262-272.

May 30
Class Presentations and Special Topics in SEM (**time permitting)

Suggested Readings:
Thompson, B. (2000). Ten commandments of structural equation modeling. In L.G. Grimm, & P.R. Yarnold (Eds.), *Reading and Understanding More Multivariate Statistics* (pp. 261-283). Washington D.C.: APA.

Kline, R.B. (2005). How to fool yourself with SEM. In, *Principles and Practice of Structural Equation Modeling* (2nd ed.) (pp. 313-324). New York: The Guilford Press.

May 31-June 1
Class Presentations and Special Topics in SEM (**time permitting)

Please note that this is our final class (Wednesday, June 1, 2022 is the last day of classes for May term).

June 8
Final research paper is due (40%).

The above schedule, course policies, and assignments are subject to change

Sexualized Violence Prevention and Response at UVic

UVic takes sexualized violence seriously, and has raised the bar for what is considered acceptable behaviour. We encourage students to learn more about how the university defines sexualized violence and its overall approach by visiting www.uvic.ca/svp. If you or someone you know has been impacted by sexualized violence and needs information, advice, and/or support please contact the sexualized violence resource office in Equity and Human Rights (EQHR). Whether or not you have been directly impacted, if you want to take part in the important prevention work taking place on campus, you can also reach out:

Where: Sexualized violence resource office in EQHR, Sedgewick C119

Phone: 250.721.8021

Email: svpcoordinator@uvic.ca

Web: www.uvic.ca/svp

Important Course Policy Information
Summer 2022

Commitment to Inclusivity and Diversity

The University of Victoria is committed to promoting, providing and protecting a positive and supportive and safe learning and working environment for all its members.

Policy on Academic Integrity including Plagiarism and Cheating
The Department of Psychology fully endorses and intends to enforce rigorously the Senate Policy on Academic integrity
https://www.uvic.ca/calendar/future/grad/index.php#/policy/BJujesM_E?bc=true&bcCurrent=02%20-%20Policy%20on%20Academic%20integrity&bcGroup=Faculty%20Academic%20Regulations&bcItemType=policies . It is of utmost importance that students who do their work honestly be protected from those who do not. Because this policy is in place to ensure that students carry out and benefit from the learning activities assigned in each course, it is expected that students will cooperate in its implementation.

 The offences defined by the policy can be summarized briefly as follows:

1. **Plagiarism**. You must make sure that the work you submit is your work and not someone else's. There are proper procedures for citing the works of others. The student is responsible for being aware of and using these procedures.

2. **Unauthorized Use of an Editor**. The use of an editor is prohibited unless the instructor grants explicit written authorization.

3. **Multiple Submission**. Only under exceptional circumstances may a work submitted to fulfill an academic requirement be used to satisfy another similar requirement. The student is responsible for clarifying this with the instructor(s) involved.

4. **Falsifying Materials Subject to Academic Evaluation**. This includes falsification of data, use of commercially prepared essays, using information from the Internet without proper citation, citing sources from which material is not actually obtained, etc.

5. **Cheating on Assignments, Tests, and Examinations**. You may not copy the work of others in or out of class; you may not give your work to others for the purpose of copying; you may not use unauthorized material or equipment during examinations or tests; and you may not impersonate or allow yourself to be impersonated by another at an examination. The Department of Psychology has a policy of not making old examinations available for study purposes. Therefore, use of old exams without the express written permission of the instructor constitutes cheating by the user, and abetting of cheating by the person who provided the exam.

6. **Aiding Others to Cheat**. It is a violation to help others or attempt to help others to engage in any of the conduct described above.

Instructors are expected to make every effort to prevent cheating and plagiarism. This may include the assignment of seating for examinations, asking students to move during examinations, requests to see student identification cards, and other measures as appropriate. Instructors also have available to them a variety of tools and procedures to check for Internet and electronic media-based cheating. In instances of suspected or actual plagiarism or cheating, instructors, following prescribed procedures, are authorized to take steps consistent with the degree of the offence. These measures will range from a zero on the test or assignment or a failing grade for the course, probation within a program to temporary or even permanent suspension from the University.

Rights of Appeal are described in the Policy on Academic Integrity in the University calendar January 2022.

The definitive source for information on Academic Integrity is the University Calendar

Other useful resources on Plagiarism and Cheating include:
1. The Ombudsperson's office: https://uvicombudsperson.ca/academic-integrity/
2. The Office of the Ombudsperson is an independent and impartial resource to assist with the fair resolution of student issues. A confidential consultation can help you understand your rights and responsibilities. The Ombudsperson can also clarify information, help navigate procedures, assist with problem-solving, facilitate communication, provide feedback on an appeal, investigate and make recommendations. Phone: 250-721-8357; Email: ombuddy@uvic.ca   Web: uvicombudsperson.ca.
3. UVic Library Resources: https://www.uvic.ca/library/help/citation/plagiarism/index.php
4. https://www.uvic.ca/library/research/citation/documents/avoiding%20plagiarism%20guideUpdate_Sept_2013.pdf

BE WELL

A note to remind you to take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress. All of us benefit from support during times of struggle. You are not alone.

Discovering Victoria, UVic and your Community:
Grad school can involve a lot of time studying and researching on your own – but it does not have to be an isolating experience. There are a lot of other grad students out there like you who are looking to connect outside of academics.
https://www.uvic.ca/graduate/campus/student-services/index.php

Counselling Services:
Counselling Services can help you make the most of your university experience. They offer free professional, confidential, inclusive support to currently registered UVic students. https://www.uvic.ca/student-wellness/wellness-resources/mental-health/index.php

Health Services:
The Student Wellness Centre also provides a full service primary health clinic for students. https://www.uvic.ca/student-wellness/contacts/student-wellness-team/index.php#ipn-physicians

Centre for Accessible Learning:
The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations https://www.uvic.ca/graduate/campus/student-services/index.php#ipn-accessible-learning . The sooner you let us know your needs, the quicker we can assist you in achieving your learning goals in this course.

Elders' Voices:
The Office of Indigenous Academic and Community Engagement (IACE) has the privilege of assembling a group of Elders from local communities to guide students, staff, faculty and administration in Indigenous ways of knowing and being.
www.uvic.ca/services/indigenous/students/programming/elders/

Mental Health Supports and Services:
Mental health supports and services are available to students from all areas of the UVic community: https://www.uvic.ca/graduate/campus/student-services/index.php#ipn-health-wellness