

School of Social Work

Course Outline

SOWK 553C

The UBC School of Social Work acknowledges that we are located on the traditional, ancestral, and unceded territory of the [xʷməθkʷəy̓əm](#) (Musqueam) people.



THE UNIVERSITY OF BRITISH COLUMBIA
Faculty of Arts

arts.ubc.ca

UBC COVID-19 Protocols for in-class learning

COVID-19 Safety: You are required to wear a non-medical mask during our class meetings, for your own protection and the safety and comfort of everyone else in the class. For our in-person meetings in this class, it is important that all of us feel as comfortable as possible engaging in class activities while sharing an indoor space. Non-medical masks that cover our noses and mouths are a primary tool for combating the spread of COVID-19. Further, according to the provincial mandate, masks are required in all indoor public spaces including lobbies, hallways, stairwells, elevators, classrooms and labs. There may be students who have medical accommodations for not wearing a mask. Please maintain a respectful environment.

If you are sick, it is important that you stay home.

If you miss class because of illness:

- Ask someone to share their notes if I am lecturing. But in the case of discussions about readings, we will endeavour to record conversations for you to access later through Canvas.
- Be sure to consult the class resources on Canvas.
- If you are concerned that you will miss a key activity due to illness, contact the instructor to discuss.

If I (the instructor) am feeling ill: If I am unwell, I will not come to class. I will make every reasonable attempt to communicate plans for class as soon as possible by email. Our classroom will still be available for you to sit in and attend an online session. In this instance:

- If I am well enough to teach, but am taking precautions to avoid infecting others, we may hold the class online. If this happens, you will receive an email informing you how to join the class.
- If I am not well enough to teach I may ask you to do an activity or read something in place of class time

School Vision

Building upon a foundation of social justice and an ethic of care, we are a community of learners actively engaged in the development of critical, transformative knowledge for social work practice.

MSW Mission

The MSW program offers an accessible, advanced professional degree focused on social work practice in the fields of child and family welfare, health and social care, and international and social development, using a social justice lens. The purpose of this MSW program is to prepare our graduates to be competent social work professionals, equipped with state-of-the-art knowledge and skills, a critical analytic lens, and a social justice orientation.

Course Info

Year/Term	Winter Terms 1-2, 2021-22; September 10, 2021 to April 8, 2022
Course Title	SOWK 553C: Quantitative Methods in Social Work Research
Credit Value	6
Course Schedule	Fridays, 9:00 AM – 12:00 PM
Course Location	Room 222, School of Social Work

Instructor	Office Location	Office Phone	Email Address	Office Hours
Sheila Marshall	School of Social Work, 336	(604) 822-5672	Sheila.Marshall@ubc.ca	Fridays noon to 1:00 PM or by appointment

Prerequisite and/or Corequisite

There are no pre- or co-requisites for this course.

Course Description

This course provides an overview of methodologies that can be used in social work inquiry *with a focus on quantitative methods*. Students will learn how to design a study, conduct analyses of data, and interpret appropriately research findings.

Course Structure and Learning Activities

Class discussions will be complemented by individual and group exercises.

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Learning Outcomes

- Familiarize students with a variety of approaches to social work research.
- Introduce students to processes, methods and issues in qualitative and quantitative inquiry.
- Strengthen abilities to critically read and evaluate research designs and findings of quantitative and qualitative studies.
- Facilitate skills in identifying questions relevant to social policy, social service programs and social work practice that can be addressed using quantitative designs.
- Enhance skills in identifying ethical issues in conducting systematic inquiry, particularly in relation to marginalized groups.

Required Textbook(s) and Learning Materials

Gorard, S. (2013). *Research design: Creating robust approaches for the social sciences*. Los Angeles, CA: Sage. [available through the UBC library]

Navarro DJ and Foxcroft DR (2019). learning statistics with jamovi: a tutorial for psychology students and other beginners. (Version 0.70). DOI: 10.24384/hgc3-7p15 [available for no fee at <https://www.learnstatswithjamovi.com/>]

Recommended: IBM SPSS through UBC's central Kivuto / OnTheHub web store - <https://ubc.onthehub.com>
Alternatively, students may access IBM SPSS in the computer lab of the School of Social Work.

Additional resources are indicated in the Course Schedule below or located in CANVAS.

Assessment of Learning

TERM 1

- Assignment 1: Complete Tri-Council (2018) on-line tutorial module
Assignment 2: Creation (or modification) & assessment of a self-report measure: 20%
Assignment 3: On the same research topic you will generate two different types of designs with rationale for design decisions:
Design #1: knowledge generating, descriptive design: 15%
Design #2: evaluation of an intervention: 15%
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TERM 2

Assignments 4 to 8 are elements of a small research project.

- Assignment 4: Codebook for your data set: 5%
Assignment 5: Methods section of the manuscript: 5%
Assignment 6: Plan for analysis: 5%
Assignment 7: Results: preliminary analyses of data, results of analysis: 5%
Assignment 8: Interpretation of results; description of limitations, implications: 5%
Assignment 9: Decision Tree: 25%

Course Schedule

Term 1

Before first class: Retrieve and read a research article (not a review paper) on a social work topic of your choice. Have the article ready for discussions during the first three sessions.

Session 1:	September 10, 2021
Topic:	Getting started: Thinking about thinking
Readings:	<p>Moon, K., & Blackman, D. (2014). A guide to understanding social science research for natural scientists. <i>Conservation Biology</i>, 28, 1167-1177. doi: 10.1111/cobi.12326</p> <p>Attia, M., & Edge, J. (2017). Be (com) ing a reflexive researcher: A developmental approach to research methodology. <i>Open Review of Educational Research</i>, 4, 33-45.</p>
Session 2:	September 17, 2021
Topic:	Research Designs
Readings:	<p>Chapters 2 and 3 of Gorard (2013)</p> <p>Bauer, G. (2021). Meet the Methods Series: Quantitative intersectional study design and primary data collection, Issue 3 Part 1. https://cihr-irsc.gc.ca/e/52352.html</p>
Session 3:	September 24, 2021
Topic:	Matching questions and research designs
Readings:	<p>Chapters 3 to 5 of Gorard (2013)</p> <p>Navarro & Foxcroft, sections 1.1.1 and 1.2</p>
Session 4:	October 1, 2021
Topic:	Ethics in research
Readings:	<p>TCPS 2—2018 <i>Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans</i> (skim chapters 12 and 13) available through: http://www.pre.ethics.gc.ca/eng/documents/tcps2-2018-en-interactive-final.pdf</p> <p>Chapter 13, Gorard</p> <p>Charles, G. (2017). Beyond ethics and evidence: Learning to look at the intended and unintended consequences of our actions. <i>Child & Youth Services</i>, 38, 108-125. doi: 10.1080/0145935X.2017.1297200</p>

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	Whetung, M. (Nishnaabeg), & Wakefield, S. (2018). Colonial conventions: Institutionalized research relationships and decolonizing research ethics. In E. Tuck, K.W. Yang, & L.T. Smith (Eds.) <i>Indigenous and Decolonizing Studies in Education</i> (pp. 168-180). New York: Routledge.
Session 5:	October 8, 2020
Topic:	Constructs & Variables
Readings:	Finkelstein, L. (2003). Widely, strongly and weakly defined measurement. <i>Measurement</i> , 34, 39-48. Navarro & Foxcroft 2.1 to 2.26
Session 6:	October 15, 2021
Topic:	Measurement & Validity Evidence
Reading:	Bandalos, D.L. (2017). <i>Measurement Theory and Applications for the Social Sciences</i> . New York, NY: Guilford Press. Chapter 11 only.
Session 7:	October 22, 2021
Topic:	Validity Evidence continued
Reading:	Messick, S. (1995). Validity of psychological assessment: Validation of inferences from persons' responses and performances as scientific inquiry into score meaning. <i>American Psychologist</i> , 50, 741-749.
Session 8:	October 29, 2021
Topic:	Reliability Evidence
Readings:	If reliability is new to you, read Navarro & Foxcroft section 2.3 Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. <i>International Journal of Medical Education</i> , 2, 53-55. Hallgren, K. A. (2012). Computing inter-rater reliability for observational data: an overview and tutorial. <i>Tutorials in Quantitative Methods for Psychology</i> , 8, 23-34.
WATCH:	Reliability analysis in SPSS (Cronbach's alpha): https://www.youtube.com/watch?v=Odlhhtg-3LE&ab_channel=BruneiASK
Session 9:	November 5, 2021
Topic:	Sampling & Recruitment
Readings:	Chapters 6 and 7, Gorard (2013) Manohar N., MacMillan F., Steiner G.Z., Arora A. (2019) Recruitment of research participants. In P. Liamputtong (Ed.), <i>Handbook of Research Methods in Health Social Sciences</i> . Springer, Singapore. https://doi.org/10.1007/978-981-10-5251-4_75

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Session 10:	November 12, 2021
Topic:	NO SESSION; MIDTERM BREAK
Session 11:	November 19, 2021
Topic:	Timing and Sequence in Designs
Readings:	Chapter 8, Gorard Wu, A. D., & Zumbo, B. D. (2008). Understanding and using mediators and moderators. <i>Social Indicators Research: An International Interdisciplinary Journal for Quality of Life Measurement</i> , 87, 367–392. Optional sections: mediated moderation & moderated mediation.
Session 12:	November 26, 2021
Topic:	Controlled Interventions; alternatives to trials
Readings:	Chapters 9 and 10, Gorard
Session 13:	December 3, 2021
Topic:	Challenges to Validity of Design
Readings:	Navarro & Foxcroft, section 2.7 Chapter 11, Gorard

Term 2

Session 1:	January 14, 2022
Topic 1:	Data Management, Setting up Codebooks
Reading:	Burchinal, M. R. & Neebe, E. (2006). I. Data management: recommended practices. <i>Monographs of the Society for Research in Child Development</i> , 71: 9–23. doi: 10.1111/j.1540-5834.2006.00402.x
Watch:	Variable types and labels in SPSS https://www.youtube.com/watch?v=zFBUfZEBWQ and https://www.youtube.com/watch?v=Kp_js1i6xwE
TOPIC 2:	Creating scale scores
WATCH:	Creating scale scores in SPSS https://www.youtube.com/watch?v=GY8w4cTfA4o
Session 2:	January 21, 2022
Topic:	Descriptive Statistics: Central Tendency, Variability

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Reading:	Navarro & Foxcroft, Sections 3 and 4 (and for fun, section 5)
Watch:	<p>Descriptive statistics and histograms in SPSS</p> <p>https://www.youtube.com/watch?v=1Qt8HxsoYLI&list=PLRV_2nAtkiVONsDm5nKgvOQKLsveVP97j&index=2</p> <p>https://www.youtube.com/watch?v=e-CehMF_n_IY&list=PLRV_2nAtkiVONsDm5nKgvOQKLsveVP97j&index=3</p> <p>https://www.youtube.com/watch?v=06QOdHv68pM&list=PLRV_2nAtkiVONsDm5nKgvOQKLsveVP97j&index=7</p>
Session 3:	January 28, 2022
Topic:	Probability, Hypothesis testing
Reading:	<p>Navarro & Foxcroft, sections 7 and 9.1 to 9.8</p> <p>Amrhein, V., Greenland, S., & McShane, B. (2019). Scientists rise up against statistical significance. <i>Nature</i>, 567(7748), 305–307. https://doi.org/10.1038/d41586-019-00857-9</p>
Session 4:	February 4, 2022
TOPIC:	Associations between variables: Chi-square
READING:	Navarro & Foxcroft, section 10.2 to 10.8
Watch:	<p>Chi-square in SPSS</p> <p>https://www.youtube.com/watch?v=g0XkYOG0trc</p>
Session 5:	February 11, 2022
TOPIC:	Associations between variables: Correlation
READING:	<p>Navarro & Foxcroft, section 12.1 and 12.2</p> <p>Read only the sections on correlation: Swinscow, T. D. V. (1997). Correlation and regression. <i>Statistics at Square One</i> (9th ed). British Medical Journal. Revised by M. J. Campbell, University of Southampton, BMJ Publishing Group. https://www.bmj.com/about-bmj/resources-readers/publications/statistics-square-one/11-correlation-and-regression</p>
Watch:	<p>Correlation in SPSS</p> <p>https://www.youtube.com/watch?v=gOcfRO7DFZI</p>
Session 6:	February 18, 2022
TOPIC:	Linear Regression
READING:	<p>Navarro & Foxcroft, section 12.3 to 12.4</p> <p>Read only the sections on regression:</p>

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	Swinscow, T. D. V. (1997). Correlation and regression. Statistics at Square One (9th ed). British Medical Journal. Revised by M. J. Campbell, University of Southampton, BMJ Publishing Group. https://www.bmj.com/about-bmj/resources-readers/publications/statistics-square-one/11-correlation-and-regression
Watch:	Simple linear regression in SPSS: https://www.youtube.com/watch?v=6xcQYmPDqXs
Session 7:	February 25, 2021
Topic:	NO SESSION; MIDTERM BREAK
Session 8:	March 4, 2022
TOPIC:	Multiple Linear Regression
READING:	Navarro & Foxcroft, section 12.3 to 12.4; 12.5 to 12.10.4
Session 9:	March 11, 2022
TOPIC:	Categorical Predictors and Moderation
READING:	Review: Wu, A. D., & Zumbo, B. D. (2008). Understanding and using mediators and moderators. <i>Social Indicators Research: An International Interdisciplinary Journal for Quality of Life Measurement</i> , 87, 367–392. Optional sections: mediated moderation & moderated mediation.
Session 10:	March 18, 2022
TOPIC:	Comparing Two Means: t-tests
READING:	Navarro & Foxcroft, sections 11.3 and 11.4; section 11.7.2
Watch:	t-tests in SPSS https://www.youtube.com/watch?v=-qGFZFOQx7Q
Session 11:	March 25, 2022
TOPIC:	Comparing Means Across Time: Paired Samples t-test
READING:	Navarro & Foxcroft, sections 11.5 and 11.7.3
Watch:	Paired samples t-test in SPSS https://www.youtube.com/watch?v=vll22ZnFOP0
TOPIC 2:	Options for t-tests with non-normal data
READING:	Navarro & Foxcroft, sections 11.9
Session 12:	April 1, 2022
TOPIC:	Comparing Several Means: ANOVA

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READING:	Navarro & Foxcroft, section 13 to 13.6.4 Optional: Navarro & Foxcroft, sections 13.7
Watch:	Oneway ANOVA in SPSS https://www.youtube.com/watch?v=rS3k8ONVN-o
Session 13:	April 8, 2022
TOPIC:	Repeated Measures ANOVA
READING:	Navarro & Foxcroft, section 13.8 Optional: Navarro & Foxcroft, section 13.9
Watch:	Repeated measures ANOVA in SPSS https://www.youtube.com/watch?v=6jfXBtN25u4

Assignments

All assignments are to be submitted to Canvas. Assignments will be returned through Canvas.

All written assignments must be in American Psychological Association (APA) format with 12 point font, double spaced, and 1" margins. Where referencing is needed, use APA referencing style. Style guides are available through the UBC library at <https://guides.library.ubc.ca/c.php?q=707463&p=5035495>.

Students must complete all assignments indicated for this course to receive a final grade in the course.

Students needing an extension for any assignment may, at their own discretion and no discussion with the instructor, take up to one additional week. Use of the extension does not impact the grading of the assignment.

Assignment 1:

Due October 8, 2020

Ethics Tutorial.

This assignment is aligned with *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2)* guidelines and UBC ethics review boards' expectations that all people applying for ethical review and working with data complete the tutorial. A certificate is provided upon successfully completing this tutorial. Submit the certificate by uploading an electronic copy into Canvas. [This tutorial must be completed prior to being given access to anonymized data for practice during class and for class assignments.](#)

Complete the on-line tutorial course at:
<https://tcps2core.ca/welcome>

Creation (or modification) & initial assessment of a self-report measure.

Activities:

- Select a topic of interest which you will use to create a self-report measure or modify an existing measure.
- Do a brief literature search on the topic. Use existing literature to help you define the construct you would like to assess.
- Determine whether you are going to assess quality or quantity of the construct.
- Design the measure (this includes instructions to users) or modify an existing measure.
- Document your plan for testing response processes.
- Test response processes with two class members. During the testing, document responses for reporting.
- Adjust the measure according to responses, if needed.

Reporting:

In essay format (using APA style), describe the following: (In an Appendix, include a copy of the measure which can be referenced in your paper.)

- Briefly introduce the topical area.
- Define the construct using theory.
- Describe the philosophical underpinnings of the construct (and therefore measurement).
- Describe what aspects of the construct are to be assessed in the measure.
- Describe how you designed the measure or modified an existing measure.
 - Include instructions, all parts of the measure, the way that the measure is administered (e.g., paper and writing instrument; computer), and any other details necessary for other researchers to be able to use the measure such as how the measure is scored.
 - Briefly describe your decision-making regarding assigning numbers to responses.
- Define the type of response process you planned to use and how it relates to validity evidence (use course readings for guidance).
- Describe your plan for testing response processes.
- Report the results of testing response processes.
- Describe any limitations of the testing of response processes.
- Describe any adjustments to the measure you made after testing for response processes.
- Write a conclusion regarding the development and evaluation of the measure. Use course readings on validity and measurement to evaluate what you now know about the measure and what you might do to improve it in the future.

You may find the following resources helpful in writing Assignment 3 and the elements of your research project (Assignments 4 to 8):

<http://www.discoveringstatistics.com/docs/writinglabreports.pdf>

<https://www.youtube.com/watch?v=vekCPvF016A>

Assignment 3 (30%):

Due December 10, 2020

Research Designs.

Activities:

Select a topic of interest to you. Generate two different types of designs addressing the topic.

The first design will be for knowledge generation (15%).

The second design will evaluate an intervention (15%).

Writing:

Begin the paper with an introduction to the topic.

Include in descriptions of each design (write the descriptions of each design sequentially in the paper just like a journal article):

Aim for the research.

Research question or hypothesis.

Design.

Rationale for the design

Sampling strategy.

Way(s) of collecting the data (i.e., measures, interviews or observations you will use).

Procedures.

Ethical considerations.

Conclude the paper with a reflection on what you have learned from constructing these two different types of studies.

Assignments 4 to 8 are elements of a research project. You will be provided with a data set you will use to use to answer research questions and hypotheses.

Assignment 4 (5%):

Due February 4, 2021

Put together a codebook for your data set following the example in Burchinal and Neebe (2006) and the example provided in class. You will need to research the background information on variables to document the source of variables and any other pertinent information. You will also need to conduct analyses to document the reliability of any scales in the data set.

To analyze reliability of any multi-item scales using SPSS:

<https://www.youtube.com/watch?v=2gdorgugwK8>

Assignment 5 (5%):

Due February 18, 2021

Methods sections of journal articles include: sample description, measures, and procedures. This assignment should look like something out of the APA manual or a tier-1 journal. Use (a) the data set to describe the sample, and (b) codebook to write the measures section. Information about procedures will be provided with your data set.

Assignment 6 (5%):

Due March 18, 2021

Plan for analysis should describe the technique used to answer the research question and why that is the technique of choice. Describe how you will conduct the analysis.

Link the type of analysis to the hypothesis or research questions and the type of data used in the analysis.

Assignment 7 (5%):

Due March 25, 2021

Results section of your study is in two parts:

- a) Description of preliminary analyses of data, including tables, and checking of assumptions.
- b) Results of analysis should include reports in text or in tables but not both.

Assignment 8 (5%):

Due April 8, 2020

Interpretation of results; description of limitations of the study design, measures used in the study, description of strengths of the study design and measures, implications for future research.

Assignment 9 (25%):

Due April 15, 2020

Decision Tree.

Design a decision tree which includes all of the statistical strategies (including descriptive statistics) covered in this course. Include decisions regarding:

- a) Type of data,
- b) Type of strategy, and the assumptions of data when using the strategy
- c) When to change strategies if assumptions are not met.

School/Course Policies

Attendance

The attendance policy is in the student handbook on page 8. You can find the student handbook on the Advising page of our website: <https://socialwork.ubc.ca/undergraduate/advising/>

The School considers class attendance to be an essential component of integrated learning in professional social work education. Therefore, regular attendance is required in all social work courses. Instructors may count repeated late arrivals or early departures as an absence, and a meeting should be setup to discuss this with the student. If students miss three or more classes, they may be considered to have not met the requirements of the course. If students have valid reasons, they could be withdrawn from the course with the approval of the instructor – otherwise, they would fail the course.

Other school policies can be accessed through the School of Social Work student handbook.

Learning Resources

UBC Learning Commons has a variety of tools and information such as; borrowing equipment, academic integrity (APA Citation Guide), writing support, skills for class, skills for life and academic support to assist students in their learning. <https://learningcommons.ubc.ca/>

University Policies

Support: UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions.

Details of the policies and how to access support are available at:

<https://senate.ubc.ca/policies-resources-support-student-success>

Learning Analytics

Learning analytics includes the collection and analysis of data about learners to improve teaching and learning. No learning analytics are being used in this course.

Copyright

All materials of this course (course handouts, lecture slides, assessments, course readings, etc.) are the intellectual property of the Course Instructor or licensed to be used in this course by the copyright owner. Redistribution of these materials by any means without permission of the copyright holder(s) constitutes a breach of copyright and may lead to academic discipline.

Students must request permission to record class discussions from the instructor.

UBC Grading Criteria

Letter Grade	Percent Range	Mid-Point	
A+	90-100	95	Represents work of exceptional quality. Content, organization and style are all at a high level. Student demonstrates excellent research and reference to literature where appropriate. Also, student uses sound critical thinking, has innovative ideas on the subject and shows personal engagement with the topic.
A	85-89	87	
A-	80-84	82	
B+	76-79	77.5	Represents work of good quality with no major weaknesses. Writing is clear and explicit and topic coverage and comprehension is more than adequate. Shows
B	72-75	73.5	
B-	68-71	69.5	

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			some degree of critical thinking and personal involvement in the work. Good use of existing knowledge on the subject.
C+ C C-	64-67 60-63 55-59	65.5 62.5 57	Adequate and average work. Shows fair comprehension of the subject, but has some weaknesses in content, style and/or organization of the paper. Minimal critical awareness or personal involvement in the work. Adequate use of literature.
D	50-54	52	Minimally adequate work, barely at a passing level. Serious flaws in content, organization and/or style. Poor comprehension of the subject, and minimal involvement in the paper. Poor use of research and existing literature.
F	0-49		Failing work. Inadequate for successful completion of the course or submitted beyond final date of acceptance for paper.