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.

During this pandemic, the shift to online learning has greatly altered teaching and studying at UBC, including changes to health and safety considerations. Keep in mind that some UBC courses might cover topics that are censored or considered illegal by non-Canadian governments. This may include, but is not limited to, human rights, representative government, defamation, obscenity, gender or sexuality, and historical or current geopolitical controversies. If you are a student living abroad, you will be subject to the laws of your local jurisdiction, and your local authorities might limit your access to course material or take punitive action against you. UBC is strongly committed to academic freedom, but has no control over foreign authorities (please visit http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,33,86,0 for an articulation of the values of the University conveyed in the Senate Statement on Academic Freedom). Thus, we recognize that students will have legitimate reason to exercise caution in studying certain subjects. If you have concerns regarding your personal situation, consider postponing taking a course with manifest risks, until you are back on campus or reach out to your academic advisor to find substitute courses. For further information and support, please visit: http://academic.ubc.ca/support-resources/freedom-expression

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	2020-21 Winter Terms 1 and 2
Course Title	SOWK 553C: Quantitative Methods in Social Work Research
Credit Value	6
Course Schedule	Fridays, 9:00 AM – 12:00 PM Pacific Time Zone via Zoom
Course Location	Web-oriented course; Materials on CANVAS
Drop/Withdrawal dates	November 27, 2020 is the last day to drop full-year courses without a Withdrawal standing.

Virtual Office hours by appointment:		
Instructor	**e-mail address**	**Telephone**
Sheila Marshall	Sheila.Marshall@ubc.ca	(604) 822-5672 to leave voice message

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

Remote-access to class discussions via Zoom and instructional videos complemented by individual and group exercises. Students experiencing power or internet outages during classes may contact the instructor for optional ways of engaging in the course.

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 Textbooks(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, D.J., & Foxcroft, D.R. (2019). *Learning statistics with Jamovi.* (Version 0.70). doi: 10.24384/hgc3-7p15 [available for no fee on-line]

IBM SPSS through UBC's central Kivuto / OnTheHub web store - https://ubc.onthehub.com

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 and 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 decisions:
Design #1: knowledge generation, descriptive design: 15%
Design #2: evaluation of an intervention: 15%

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 11, 2020
TOPIC:	**Getting started: Thinking about thinking**
READING:	Moon, K., & Blackman, D. (2014). A guide to understanding social science research for natural scientists. *Conservation Biology*, *28*, 1167-1177. doi: 10.1111/cobi.12326 Attia, M., & Edge, J. (2017). Be (com) ing a reflexive researcher: A developmental approach to research methodology. *Open Review of Educational Research*, *4*, 33-45.

SESSION 2:	September 18, 2020
TOPIC:	**Research designs**
READING:	Chapters 1 and 2 of Gorard

SESSION 3:	September 25, 2020
TOPIC:	**Matching questions and research designs**

READING:	Chapters 3 to 5 of Gorard Navarro & Foxcroft, sections 1.1.1 and 1.2

SESSION 4:	October 2, 2020
TOPIC:	**Ethics in research**
READING:	TCPS 2—2018 *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (skim chapters 12 and 13) available through: http://www.pre.ethics.gc.ca/eng/documents/tcps2-2018-en-interactive-final.pdf Chapter 13, Gorard Charles, G. (2017). Beyond ethics and evidence: Learning to look at the intended and unintended consequences of our actions. *Child & Youth Services, 38*, 108-125. doi: 10.1080/0145935X.2017.1297200 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.) *Indigenous and Decolonizing Studies in Education* (pp. 168-180). New York: Routledge.

SESSION 5:	October 9, 2020
TOPIC:	**Constructs & Variables**
READING:	Finkelstein, L. (2003). Widely, strongly and weakly defined measurement. *Measurement*, *34*, 39-48. Navarro & Foxcroft 2.1 to 2.26

SESSION 6:	October 16, 2020
TOPIC:	**Measurement & Validity Evidence**
READING:	Bandalos, D.L. (2017). Measurement Theory and Applications for the Social Sciences. New York, NY: Guilford Press. Chapter 11 only. Recommended Reading: Messick, S. (1995). Validity of psychological assessment: Validation of inferences from persons' responses and performances as scientific inquiry into score meaning. *American Psychologist, 50*, 741-749.

SESSION 7:	October 23, 2020
TOPIC:	**Validity Evidence continued**
READING:	Review Bandalos (2017) and Messick (1995).
WATCH:	https://www.youtube.com/watch?v=0L6Lr2BzuSQ

SESSION 8:	October 30, 2020
TOPIC:	**Reliability Evidence**
READING:	If reliability is new to you, read Navarro & Foxcroft section 2.3

Streiner, D. L. (2003). Starting at the beginning: an introduction to coefficient alpha and internal consistency. *Journal of Personality Assessment*, *80*, 99-103.

Hallgren, K. A. (2012). Computing inter-rater reliability for observational data: an overview and tutorial. *Tutorials in Quantitative Methods for Psychology*, *8*, 23-34. |
| **WATCH:** | Reliability analysis (Cronbach's alpha): jamovi and SPSS
https://www.youtube.com/watch?v=KQrLw1qlnI8
https://www.youtube.com/watch?v=OdIhhtg-3LE&ab_channel=BrunelASK |

SESSION 9:	November 6, 2020
TOPIC:	**Sampling**
READING:	Chapters 6 and 7, Gorard

SESSION 10:	November 13, 2020
TOPIC:	**Timing and Sequence in Designs**
READING:	Chapter 8, Gorard

Wu, A. D., & Zumbo, B. D. (2008). Understanding and using mediators and moderators. *Social Indicators Research: An International Interdisciplinary Journal for Quality of Life Measurement, 87,* 367–392. **No need to read sections on mediated moderation & moderated mediation.** |

SESSION 11:	November 20, 2020
TOPIC:	**Controlled Interventions; alternatives to trials**
READING:	Chapters 9 and 10, Gorard

SESSION 12:	November 27, 2020
TOPIC:	**Challenges to Validity of Design**
READING:	Navarro & Foxcroft, section 2.7
Chapter 11, Gorard

Term 2:

SESSION 1:	January 15, 2021
TOPIC 1:	**Data Management, Setting up Codebooks**
READING:	Burchinal, M. R. & Neebe, E. (2006). I. Data management: recommended practices. *Monographs of the Society for Research in Child Development, 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 22, 2021
TOPIC:	**Descriptive Statistics: Central Tendency, Variability**
READING:	Navarro & Foxcroft, Sections 3 and 4 (and for fun, section 5)
WATCH:	Descriptive statistics and histograms in SPSS https://www.youtube.com/watch?v=1Qt8HxsoYLI&list=PLRV_2nAtkiVONsDm5nKgvOQKLsveVP97j&index=2 https://www.youtube.com/watch?v=e-CehMFn_IY&list=PLRV_2nAtkiVONsDm5nKgvOQKLsveVP97j&index=3 https://www.youtube.com/watch?v=06QOdHv68pM&list=PLRV_2nAtkiVONsDm5nKgvOQKLsveVP97j&index=7

SESSION 3:	January 29, 2021
TOPIC 1:	**Probability, Hypothesis testing**
READING:	Navarro & Foxcroft, sections 7 and 9.1 to 9.8

SESSION 4:	February 5, 2021
TOPIC 1:	**Associations between variables: Chi-square**

READING:	Navarro & Foxcroft, section 10.2 to 10.8
WATCH:	Chi-square in SPSS https://www.youtube.com/watch?v=q0XkYOG0trc

SESSION 5:	February 12, 2021
TOPIC:	**Associations between variables: Correlation**
READING:	Navarro & Foxcroft, section 12.1 and 12.2 Read only the sections on correlation: Swinscow, T. D. V. (1997). Correlation and regression. Statistics at Square One (9th ed). British Medical Journal. Revised by M. J. Campbell, University of Southhampton, BMJ Publishing Group. https://www.bmj.com/about-bmj/resources-readers/publications/statistics-square-one/11-correlation-and-regression
WATCH:	Correlation in SPSS https://www.youtube.com/watch?v=gOcFRO7DFZl

Midterm Break

SESSION 6:	February 26, 2021
TOPIC:	**Linear Regression**
READING:	Navarro & Foxcroft, section 12.3 to 12.4 Read only the sections on regression: Swinscow, T. D. V. (1997). Correlation and regression. Statistics at Square One (9th ed). British Medical Journal. Revised by M. J. Campbell, University of Southhampton, 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:	March 5, 2021
TOPIC:	**Multiple Linear Regression**
READING:	Navarro & Foxcroft, section 12.3 to 12.4; 12.5 to 12.10.4
WATCH:	Multiple regression in SPSS and regression diagnostics: https://www.youtube.com/watch?v=ueNrP5TyZaE

SESSION 8:	March 12, 2021
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 9:	March 19, 2021
TOPIC 1:	**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=vII22ZnFOP0
TOPIC 2:	**Options for t-tests with non-normal data**
READING:	Navarro & Foxcroft, sections 11.9

SESSION 10:	March 26, 2021
TOPIC 1:	**Comparing Several Means: ANOVA**
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

April 2nd, Good Friday, no class

SESSION 11:	April 9, 2021
TOPIC 1:	**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.

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?g=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. Assignments submitted on the final extension date are due at the beginning of the class session. Assignments submitted later than the *beginning* of the class session on the extension date will not be graded.

Assignment 1:	Due October 9, 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

Assignment 2 (20%):	Due November 13, 2020

Creation & initial assessment of a self-report measure.

Activities:
- Select a topic of interest which you will use to create a self-report 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).
- Test response processes with two class members. Document the plan for testing response processes. During 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 and describe the philosophical underpinnings.
- Describe what aspects of the construct are to be assessed in the measure.
- Describe the design of the measure, including instructions, all parts of the measure, 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 (e.g., scoring). Indicate your decision-making regarding assigning numbers to responses.

- Report the plan for testing response processes. Define the response process and how it relates to validity evidence.
- 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 4, 2020**

Research Designs.

Activities:
Select a topic of interest to you. Generate two different types of designs with rationale for decisions.

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):
  Aim for the research.
  Research question or hypothesis.
  Sampling strategy.
  Way(s) of collecting the data.
  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 select a research question or hypothesis from a list provided in class. You will be provided with a data set you will use to use to answer the question or hypothesis.

Assignment 4 (5%):	Due February 5, 2021

Codebook for your data set following the example in Burchinal and Neebe (2006). 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, see:
https://www.youtube.com/watch?v=2gdorgugwK8

For a refresher on reliability of multi-item scales, review Streiner, D. L. (2003).

Assignment 5 (5%):	Due February 26, 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 19, 2021

Plan for analysis should describe what technique you intend to use to answer the research question and why that is the technique of choice. Link your choice of technique very clearly to the hypothesis or question and the type of data you are using to answer the question.

Assignment 7 (5%):	Due March 26, 2021

   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 9, 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 16, 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 11: https://socialwork.ubc.ca/current-students/.

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 https://schoolofsocialwork.sites.olt.ubc.ca/files/2019/07/Handbook_2019-20.pdf

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 may not record class or group discussions without prior permission of all individuals in attendance.

UBC Grading Criteria

UBC GRADING CRITERIA			
Letter Grade	Percent Range	Mid-Point	
A+ A A-	90-100 85-89 80-84	95 87 82	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.
B+ B B-	76-79 72-75 68-71	77.5 73.5 69.5	Represents work of good quality with no major weaknesses. Writing is clear and explicit and topic coverage and comprehension is more than adequate. Shows 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.