	THE UNIVERSITY OF BRITISH COLUMBIA
	School of Social Work
	Course Outline – 553C

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.

Year/Term	**2016 / Summer T1 and T2; May 6 to August 11**
Course Title	**SOWK 553C, Quantitative Methods in Social Work Research**
Course Schedule	**Tuesday & Thursday, 5:00 pm - 8:00 pm**
Course Location	**Room 224, Jack Bell Building**

Instructor	**Office Location**	**Office Phone**	**e-mail address**
Sheila Marshall	Room 336	604-822-5672	Sheila.Marshall@ubc.ca
Office Hours	By appointment		

COURSE OBJECTIVES:

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 appropriately interpret research findings.

COURSE GOALS:

- 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 COURSE TEXTS:

Palys, T., & Atchison, C. (2014). *Research decisions: Quantitative and qualitative, and mixed methods approaches* (5th ed.). Toronto, ON: Nelson.

Privitera, G. J. (2015). *Statistics for the behavioral sciences* (2nd ed.). Thousand Oaks, CA: Sage Publications.

See course outline below for additional required readings.

EVALUATION:

Assignment 1: 2%

Assignment 2: 25%
Assignments 3 through 6: 2 marks each (total = 8%)
Mid-term examination (take home essay questions): 20%

Assignments 7 to 12 are elements of a small research project.
Assignment 7: 5% Codebook for your data set
Assignment 8: 5% Methods section of the manuscript
Assignment 9: 5% Plan for analysis
Assignment 10: 5% Description of preliminary analyses of data, checking assumptions, Results of analysis
Assignment 11: 5% Interpretation of results; description of limitations, implications

Assignment 12: 20% Decision Tree

OUTLINE AND READINGS:

Week 1a: **Getting started:**
              Overview of the course & setting student learning goals
              Representing social life; Framing research problems

Readings: Chapters 1 & 2, Palys & Atchinson
              Privitera, pages 3-14

Week 1b: **Ethics**

Readings: Chapter 3, Palys & Atchinson

              TCPS 2—2nd edition of *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* available through:
              http://www.pre.ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/Default/

              Complete the on-line tutorial course at:
              http://www.pre.ethics.gc.ca/eng/education/tutorial-didacticiel/

Week 2a: **Constructs/variables, measurement, unit of analysis**
              Lab: introduction to SPSS

Readings: Palys & Atchinson, pages 334-337
              Privitera, pages 15-20

Week 2b/3a: **Assessment & test validity**

Readings: 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.

              Hubley, A. M., & Zumbo, B.D. (2013). Psychometric characteristics of assessment procedures: An overview. In Kurt F. Geisinger (Ed.), *APA handbook of testing and assessment in psychology, Volume 1* (pp. 3-19). Washington, D.C.: American Psychological Association Press.

Week 3b: **Reliability evidence: Survey instruments**

Lab: correlation and Cronbach's alpha

Readings: Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and application. *Journal of Applied Psychology, 78,* 98–104.

Week 4a: **Sampling**

Readings: Palys & Atchinson, Chapter 4
Privitera, Chapter 7

Week 4b: **Conceptual considerations for designs: mediation, moderation**

Readings: 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.

Week 5a: **Interactive methods: surveys, interviews, oral history**

Readings: Palys & Atchinson, Chapter 6

Retrieve from peer-reviewed journals a sample of social work research that uses (a) survey methods and (b) interviews (one of each). Bring the articles to class for presentation, comparison, and discussion.

Week 5b: **Unobtrusive & archival methods**

Readings: Palys & Atchinson, Chapter 8

Retrieve from peer-reviewed journals a sample of social work research that uses unobtrusive or archival methods. One article will use quantitative analysis and the other article will use qualitative analysis of the data). Bring the articles to class for presentation, comparison, and discussion.

Week 6a: **Experimental designs**

Readings: Palys & Atchinson, Chapter 9

Retrieve from a peer-reviewed journal a sample of social work research that uses an experimental design. Bring the article to class for presentation, comparison with other methods covered in previous weeks, and discussion.

Week 6b: **Quasi-experimental designs**

Readings: Palys & Atchinson, Chapter 10

Retrieve from a peer-reviewed journal a sample of social work research that uses a quasi-experimental design. Bring the article to class for presentation, comparison with other methods covered in previous weeks, and discussion.

Week 7: **Midterm examination**

Week 8a: **Lecture: Descriptive statistics: Central Tendency, Variability**
Lab: Cleaning data; missing values

Reading: Privitera, Chapters 2, 3, and 4

Week 8b: **Probability, Normal distribution, Z-scores, hypothesis testing**
Lab: Graphically summarizing data; Constructing scale scores

Reading: Privitera, Chapters 5, 6, 8

Week 9a: **Lecture: Data management**
Lab: 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

Week 9b: **Lecture: t-Tests (independent samples & related samples)**
Lab: testing assumptions, conducting analyses, interpreting results

Reading: Privitera, Chapters 9 and 10

Week 10a: **Lecture: Analysis of Variance (ANOVA)**
Lab: testing assumptions, conducting analyses, interpreting results

Reading: Privitera, Chapter 12

Week 10b: **Lecture: Analysis of Variance (ANOVA) within- subjects (repeated measures)**
Lab: testing assumptions, conducting analyses, interpreting results

Reading: Privitera, Chapter 13

Week 11a: **Lecture: Tests for ordinal data (alternatives to t-tests and ANOVA)**
Lab: conducting analyses, interpreting results

Reading: Privitera, Chapter 18

Week 11b: **Lecture: Correlation**
Lab: testing assumptions, conducting analyses, interpreting results

Reading: Privitera, Chapter 15

Week 12a: **Lecture: Regression I**
Lab: testing assumptions, conducting analyses, interpreting results

Reading: Chapter 16.1 to 16.8

Week 12b: **Lecture: Regression II: Multiple Regression**
Lab: testing assumptions, conducting analyses, interpreting results

Reading: Chapter 16.9 to 16.14

Week 13a: **Lecture: Chi-Square tests**
Lab: testing assumptions, conducting analyses, interpreting results

Reading: Chapter 17

Week 13b: Wrapping up

COURSE POLICIES: [attendance, participation, academic dishonesty]:

Excerpt from the UBC calendar:

Regular attendance is expected of students in all their classes (including lectures, laboratories, tutorials, seminars, etc.). Students who neglect their academic work and assignments may be excluded from the final examinations. Students who are unavoidably absent because of illness or disability should report to their instructors on return to classes.

The University **accommodates students with disabilities** who have registered with the Disability Resource Centre. The University **accommodates students whose religious obligations** conflict with attendance, submitting assignments, or completing scheduled tests and examinations. Please let your instructor know in advance, preferably in the first week of class, if you will require any accommodation on these grounds.   Students who plan to be absent for varsity athletics, family obligations, or other similar commitments, cannot assume they will be accommodated, and should discuss their commitments with the instructor before the drop date.

It is recommended that students retain a copy of all submitted assignments (in case of loss) and should also retain all their marked assignments in case they wish to apply for a Review of Assigned Standing. Students have the right to view their marked examinations with their instructor, providing they apply to do so within a month of receiving their final grades. This review is for pedagogic purposes. The examination remains the property of the university.

Academic Dishonesty: Please review the UBC Calendar "Academic regulations" for the university policy on cheating, plagiarism, and other forms of academic dishonesty. Also visit www.arts.ubc.ca and go to the students' section for useful information on avoiding plagiarism and on correct documentation.

ASSIGNMENTS:

Submitting Assignments-
Students may submit assignments electronically or on hard copy to the instructor. Assignments must be received by the beginning of the class period on the date due.

Return of marked student assignments -
Instructors coordinate the return of marked assignments. The options are as follows: a) the instructor returns the paper to students in class; b) if the paper has been submitted electronically, the instructor will mark it on-line (with track changes) and return to the student on-line; c) the instructor returns the paper to the student by snail mail (the student provides a self-stamped, addressed envelope to the instructor). Marked papers not returned by any of the options above will be held by the instructor. Marked papers cannot be put in a box outside the instructor's office or distributed from the main office.

Late assignments-
Failure to submit an assignment by the due date will result in a mark of 0 for the assignment. Papers submitted on the due day but after the class period will be considered late.

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 83.5 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.

ASSIGNMENTS DESCRIPTIONS:

All written assignments should follow APA format: 1" margins, 12-point font, double spacing, and APA style referencing. Failure to follow guidelines will result in the paper not being assessed until it has been reformatted according to guidelines.

Assignment 1: Due by the end of Week 3 (May 26)

Submit a certificate of successful completion of the TCPS tutorial. The tutorial is accessed at
http://www.pre.ethics.gc.ca/eng/education/tutorial-didacticiel/
This assignment is aligned with TCPS 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. Please submit the certificate by attaching an electronic copy to an email address to the instructor.

Assignment 2: Due Week 8 (June 30)

Select an indicator used to assess a construct used in social work research.
Do a literature search on this measure for:
   a) empirical tests contributing to reliability and validity evidence
   b) how the measure is used in research more generally.

In essay format, use your literature search and course readings on reliability and validity to address the following:

   1) Begin the paper with an argument for investigating existing reliability and validity

evidence for the measure. Introduce the construct the measure is supposed to measure, including the version (i.e., is this a first, second, or third edition?).

2) How is this measure administered and scored in extant studies? How are scores calculated?

    How much training/cost/time is required to administer the scale? Who can administer the measure?

3) Define validity and describe what it means to collect validity evidence. Describe what has been done to generate validity evidence for the measure you investigated in your literature search.

    Include an examination of the instructions given for the scale and/or the implementation procedures. Evaluate any strengths or weaknesses you discover.

    How would you judge this instrument based on this information?
    Are there other things you would do to generate validity evidence?

4) Define reliability and then describe what has been done to generate reliability evidence for this instrument.

    How would you judge the instrument based on the information you collected?
    Are there other things you would do to generate reliability evidence?

5) What does the scoring imply about people and the construct purported to be assessed?

6) Summarize your findings on the evidence for the instrument's reliability and validity and generate a conclusion about the viability of using the instrument in social work research.

Assignments 3 to 6: Due in class (see classes listed above).

Having selected articles for class discussion, write a 2-3 page (double spaced) summary and reflection to bring to class. The papers will address the following:

1) Briefly summarize the research method and findings reported in the study or studies (the number of articles summarized depends on the number assigned for the week).

2) Reflect on the ways in which the method used in each article is able to address the research question(s). Be sure to link the method to your reflection. In what ways does the method miss tapping into information that might answer the research question?

3) Describe the considerations *outside* of the research question that may have guided the author(s) selection of the methodology.

Assignments 7 to 11 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 7: (due Week 10, July 14th)
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 scales in the data set.

Assignment 8: (due Week 11, July 21st)
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 9: (due Week 12, July 28th)
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 10: (due week 13, August 4th)
  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 (be parsimonious).

Assignment 11: (due Week 13, August 4th)
Interpretation of results; description of limitations of the study design (including measures), description of strengths of the study design (including measures), implications for future research.

Assignment 12: 20% (due August 11th)
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.