SPPH504 (Section 01)
APPLICATION OF EPIDEMIOLOGICAL METHODS

TIME AND PLACE: Term 1, Tuesdays, 9 am – noon
                          Tutorials, Tuesdays, noon – 1 pm

LOCATION: Room B108
                          School of Population and Public Health
                          2206 East Mall

INSTRUCTOR: Mieke Koehoorn
                          Room 293, 2206 East Mall
                          School of Population and Public Health
                          University of British Columbia
                          604-822-5756
                          mieke.koehoorn@ubc.ca

OFFICE HOURS: By Appointment

TEACHING ASSISTANT: Ashleigh Rich
                          SPPH PhD Candidate and Graduate Research Assistant
                          School of Population and Public Health, UBC
                          ajrich@mail.ubc.ca

PRE-REQUISITES: SPPH400 Statistics for Health Research, and
                          SPPH500 Analytical Methods in Epidemiological Research, and
                          SPPH502 Epidemiological Methods I, and one of

                          SPPH503 Epidemiological Methods II, or
                          SPPH506 Quantitative Research Methods, or
                          SPPH519 Qualitative Methods for Health Research Design, or
                          SPPH530 Epidemiology of Occupational & Environmental Health

COURSE ACTIVITIES/OBJECTIVES:

SPPH504 is designed to build confidence and experience applying epidemiological methods so that you become better population health researchers and practitioners. The course objectives include:

- To use Statistics Canada health survey data files and associated resources and data documentation for population health research;
- To develop a research protocol that includes formulating an epidemiological/population health research question (i.e. the relationship between a risk factor and a health outcome), including the identification of confounders; the identification of a study sample and the development of an analysis plan;
- To carry out the research protocol using the Statistics Canada survey data, including the application of skills in the areas of statistical software, data management, descriptive analysis, analytical modeling, and interpretation of analytic output (coefficients or odds/risk ratios, 95% confidence intervals, confounding effects, and model errors/model fit);
- To present preliminary descriptive and bi-variable results as part of an in-class 'lightning talk' presentation suitable for a population health, academic conference;
- To write a paper suitable for publication in a health-related journal based on findings from your analysis, including writing an Introduction, Methods, Results, Discussion and Reference sections; and presenting findings in tables and figures;
- To participate in class discussion and problem solving around the application of epidemiological methods throughout the term.

UBC POLICIES AND PROCEDURES

Academic Integrity
The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred to the President's Advisory Committee on Student Discipline. Careful records are kept in order to monitor and prevent recurrences. A more detailed description of academic integrity, including the University's policies and procedures, may be found in the Academic Calendar at http://calendar.ubc.ca/vancouver/index.cfm?tree=3,54,111,0.

Accommodations
Students with disabilities who have registered with Access and Diversity (Student Services) http://www.students.ubc.ca/mura/access/, including Diversity Services, should notify the instructor.

Resources/Supports
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 and cultural 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 here.

Late Assignments
Each written assignment is to be uploaded via CANVAS by the designated deadline. Typically, no late assignments will be accepted. Extensions of the due date for the written assignments will be considered pending extenuating circumstances with the approval of the instructor. Assignments submitted later than the due date without instructor approval will be penalized 10% of the possible grade for each day past due (i.e. one minute past the due date/time is considered a day late).

Other Policies
- Academic Concession
- Academic Honesty and Standards Attendance
- Grading Practices
- Student Conduct and Discipline

SUMMARY OF STUDENT EVALUATION:

Paper Proposal for your population health journal article	P/F
Introduction section of journal article	10%
Methods section of journal article	20%
Results section of journal article	25%
Lightning Talk presentation of study with descriptive/bi-variable findings	5%
Final article suitable for submission to a scientific health journal	40%
Sex and gender bases analyses (SGBA) – on-line training module certificate	P/F

GRADING *(from the UBC Department of Educational Studies, Graduate Course Grading Policy, D. Pratt):*
 See also UBC Grading Practices.

A Level (80% to 100%)
A+ is from 90% to 100%: It is reserved for exceptional work that greatly exceeds course expectations. In addition, achievement must satisfy all the conditions below.
A is from 85% to 89%: A mark of this order suggests a very high level of performance on all criteria used for evaluation. Contributions deserving an A are distinguished in virtually every aspect. They show that the individual (or group) significantly shows initiative, creativity, insight, and probing analysis where appropriate. Further, the achievement must show careful attention to course requirements as established by the instructor.
A- is from 80% to 84%: It is awarded for generally high quality of performance, no problems of any significance, and fulfillment of all course requirements.

B Level (68% to 79%)
This category of achievement is typified by adequate but unexceptional performance when the criteria of assessment are considered. It is distinguished from A level work by problems such as: One of more significant errors in understanding, superficial representation or analysis of key concepts, absence of any special initiatives, or lack of coherent organization or explanation of ideas. The level of B work is judged in accordance with the severity of the difficulties demonstrated. B+ is from 76% to 79%, B is from 72% to 75%, and B- is from 68% to 71%

C Level (55% to 67%)
Although a C+, C, or C- grade may be given in a graduate course, the Faculty of Graduate Studies considers 68% as a minimum passing grade for doctoral graduate students.

SOME SUGGESTED RESOURCES/TEXTS:

Rothman KJ. (2012) Epidemiology: An Introduction. Oxford University Press: New York, New York.

Cody RP and Smith JK. Applied Statistics and the SAS Programming Language (5th Edition). Pearson Prentice Hall Publishers; ISBN 0131465325

Garrard J. (2004). Health Sciences Literature Review Made Easy – The Matrix Method. Jones and Bartlett Publishers: Boston. ISBN 0-7637-2673-7.

Heard SB (2016). The Scientist's Guide to Writing: How to Write More Easily and Effectively throughout Your Scientific Career. Princeton University Press. ISBN 9781400881147

Messenger WE et al. The Canadian Writer's Handbook (4th Edition). Oxford University Press. Ontario CA.

UBC Learning Commons – Centre for Scholarly Writing and Communication: http://learningcommons.ubc.ca/improve-your-writing/

COURSE SUMMARY – MODULES AND CONTENT

MODULE 1 –INTRODUCTION TO LEARNING ENVIRONMENT AND RESOURSES
- Course activities, assignments, expectations, evaluation
- StatsCan health survey data via Research Data Centre and Google Drive
- Statistical learning environment via SAS University Edition
- Statistics Canada Research Data Centres

MODULE 2 – COMMUNICATION OF EPIDEMIOLOGICAL FINDINGS
- Key elements of a scientific paper and presentation
- Choosing a journal, formatting requirements, authorship guidelines
- Tips and techniques for presentation of research findings in tables, figures, slides
- Writing tips and techniques; writing a better paragraph, common grammatical errors
- Media communications – What to do and say when the media calls

MODULE 3 – DEVELOPING AN EPIDEMIOLOGICAL RESEARCH QUESTION AND ANALYTIC PLAN
- Using Directed Acyclic Graphs (DAGS) for identification of confounders; over-adjustment bias

MODULE 4 – WORKING WITH HEALTH DATA
- Data documentation, sampling, coding, data checking, missing data
- Analytic datasets (sub-setting to analytic sample/variables, creating new variables)
- Survey sampling weights
- Bootstrapping *(if time allows)*

MODULE 5 – EPIDEMIOLOGICAL ANALYSES
- Descriptive statistics and bivariable analyses
- Multivariable analyses – building an epidemiological model
- Interpretation of model output (ORs, RRs, HRs, coefficients)
- p values versus confidence intervals
- Effect modification
- Sensitivity analyses

MODULE 6 – SEX AND GENDER BASED ANALYSES (SGBA)

COURSE ASSIGNMENTS AND DUE DATE – All assignments to be submitted electronically via CANVAS by the due dates/times. *Late penalties apply as per course policy on page 3 above*.

Dates	Activity
ASSIGNMENT#1a and #1b	
1a. Monday, Sept 16th (6:00 pm)	Draft one-page research proposal for peer review (see attached template) – Assignment#1a (P/F)
1b. Tuesday Sept 18th (11:59 pm)	Revised one-page research proposal for instructor evaluation – Assignment #1b (P/F)
ASSIGNMENT#2a and #2b	
2a. Monday, Sept 30th (6:00 pm)	Introduction assignment for peer review – Assignment#2a (P/F)
2b. Tuesday Oct 1st (11:59 pm)	Revised Introduction assignment for instructor evaluation – Assignment #2b (10%)
ASSIGNMENT#3a and #3b	
3a. Monday Oct 21st (6:00 pm)	Methods assignment for peer review-Assignment#3a (P/F)
3b. Tuesday, Oct 22nd (11:59 pm)	Revised Methods assignment for instructor evaluation– Assignment#3b (20%)
ASSIGNMENT#4a and #4b	
4a. Monday, Nov 4th (6:00 pm)	Copy of slides (pdf) for in-class study 'Lightning' presentation – Assignment #4a
4b. Tuesday Nov 5th (9 am-noon)	In-class 'Lightning-talk presentations– Assignment#4b (5%)
ASSIGNMENT#5a and #5b	
5a. Monday Nov 18th (6:00 pm)	Results assignment for peer review – Assignment #5a (P/F)
5b. Tuesday Nov 19th (11:59 pm)	Revised Results assignment for instructor evaluation – Assignment #5b (25%)
ASSIGNMENT#6	
6. Tuesday, Dec 10th (11:59 pm)	Final paper (Introduction, Methods, Results plus Discussion, including References and Figures, Tables) (40%)
ASSIGNMENT#7	
7. SGBA Certificate – submitted by Nov 29th (11:59 pm)	On-line training module and certificate – integrating sex and gender in health research (successful completion of one of three CIHR modules) (P/F)

DESCRIPTION OF ASSIGNMENTS

Your epidemiological population health paper will evolve over the course of the term using the following assignments (sections) as inputs. You are expected to revise/update sections of your paper to incorporate instructor/peer feedback from the assignments, as well as new learning over the term, into the final version (i.e. an organized whole that is more than the sum of its parts).

Completion of **Research Proposal (Assignments 1a and 1b)** as per the Proposal Template below; reflecting careful consideration of an appropriate population health research question, study sample, key study variables (one explanatory and one outcome variable), potential confounders and analytic approach. This is a Pass/Fail assignment - you must submit a proposal to proceed with course. Students with a Failing grade will be asked to submit a revised proposal incorporating instructor feedback.

Completion of an **Introduction assignment for your epidemiological population health paper (Assignments 2a and 2b.** The Introduction must include three elements documenting 1) an introduction to the issue with statistics describing the 'problem' of relevance to population health research, 2) a summary of previous key studies/findings (i.e. the background) that informs your research question/hypothesis, and 3) a summary of key issue(s)/gap(s)/problem(s) leading to the rationale for your study and research question. This assignment must not exceed 500 words, excluding reference list.

Completion of a **Methods assignment for your epidemiological population health paper (Assignment 3a and 3b.** The Methods must include four elements that describe 1) the study design, 2) the study sample with inclusion/exclusion criteria where relevant and a flowchart (Figure 1) demonstrating how you went from the survey sample to your analytic sample with numbers, 3) definitions for the outcome and explanatory variable, plus potential confounders, and 4) the analysis plan. This assignment must not exceed 750 words, excluding Figure 1 and reference list.

Students are responsible for delivering an academic-style, '**Lightning Talk' presentation** on their study, suitable for a population health conference (**Assignment 4a-Slides and 4b-Presentation**. See the following link for a description of a 'Lightning Talk': https://en.wikipedia.org/wiki/Lightning_talk. Lightning Talks will be five-minutes maximum per student and limited to five slides per presentation. A copy of the slides is due via UBC CANVAS on the Monday before the Tuesday presentation (pdf version to avoid formatting issues) and cannot be modified after submission. The presentation during Tuesday class must provide the audience with an overview of the study (rationale, research question, key methodological components), findings to-date (key descriptive findings on the sample and key bi-variable findings on the relationship between the main explanatory and outcome variables), plus a discussion of key study limitations/biases.

Completion of a **Results assignment for your epidemiological population health paper (Assignment 5a and 5b)**. Results must include three elements that provide 1) descriptive characteristics of the study sample, 2) descriptive statistics (i.e. mean, median, range, %) for the outcome and explanatory variables, and 3) the bivariable (unadjusted) and multivariable (adjusted) relationships between the outcome and explanatory variable, and potential confounding effects. The results section must include a Table 1 with the descriptive statistics for the study sample and a Table 2 with the bivariable and multivariable model results. This assignment must not exceed 750 words, ***excluding*** the table (s) and reference list.

FINAL Class Paper (Assignment 6)

The final class paper is a scientific article suitable for publication in a health-related journal. Your paper will evolve over the course of the term using the section assignments as inputs (as outlined above), and you are expected to revise/update sections of your paper to incorporate instructor/peer feedback from the assignments, as well as new learning over the term, into the final version (i.e. an organized whole that is more than the sum of its parts). The final course paper has five sections 1) Introduction, 2) Methods (with Study Sample Flowchart/Figure 1), 3) Results (with Table 1 and Table 2), 4) Discussion and 5) References (Vancouver Style).

The **Introduction** section must include *three elements*: 1) a description of the health 'problem' illustrating the importance of the population health issue, 2) a summary of previous key studies/findings (i.e. the background) that informed the rationale for your study, and 3) a summary of key issue(s)/gap(s)/problem(s) leading to your stated research question.

The **Methods** section must include *four elements* that describe: 1) the study design; 2) the study sample with inclusion and exclusion criteria and a flowchart/Figure 1 (from survey sample to your analytic sample), 3) definitions for the outcome and explanatory variable, plus potential confounders (and interaction terms, effect modifiers if appropriate), and 4) the analysis plan.

The **Results** section must include *four elements* that provide: 1) descriptive statistics of the study sample, 2) descriptive statistics (e.g. %, mean, median, range) for the outcome and explanatory variables, 3) the bivariable (unadjusted) and multivariable (adjusted) relationship between the outcome and explanatory variable, and potential confounding effects, and *4) findings as they relate to one sensitivity analysis (e.g. varying definition of explanatory or outcome variable).* The results section must include a Table 1 with the descriptive statistics and Table 2 with the bivariable and multivariable statistical model results. In sum, a maximum of 1 figure (in Methods) and 2 (in Results) is permissible.

The **Discussion** section must include *four elements*: 1) a summary of key finding(s) relative to the research question; 2) a discussion of similarities and differences between the current findings and previous research, and explanations why you observed what you observed); 3) a discussion of the limitations of the study, including the potential influence of key biases on the results/findings; and 4) conclusions on how the current findings influence our knowledge, practices, or understanding of the health problem, plus recommendations for future studies.

The **maximum word count** for the **final paper** (Introduction, Methods, Results, Discussion *excluding References and Tables/Figures/Graphs*) is **3000 words**. Usually the Discussion section is the longest (approximately 1,000 words) and the Introduction the shortest (approximately 500 words). Approximately one-half of the paper is for the Methods and Results Sections (750 words each). There are no word limits for References or Tables/Figures.

ASSIGNMENT 1A and 1B - Research Proposal – SPPH504 (P/F)

Research Question (relationship and direction of relationship between **one** key explanatory factor and **one** health outcome of relevance to population health):

Data Source/Survey and Data Years:

Description/Definition of Study Sample with exclusion criteria (if any): and estimated n (based on survey documentation):

Description/Definition of Study Outcome (dependent variable). Include the survey variable name(s) and estimated number of respondents from the survey documentation:

Description/Definition of Explanatory Variable (independent variable). Include the survey variable name(s) and estimated number of respondents from the survey documentation:

List Potential Confounders. Include the survey variable name(s) from the survey documentation:

Proposed Analytic Model. Based on the type of outcome measure and how you want to analyze the data to answer your research question

SPPH504 Academic Journal Article– Marking Rubric for Class Assignments 2B, 3B, 5B

ASSIGNMENT 2B - INTRODUCTION – 10% of Final Grade				
Expression	Components	Interpretation	Overall Assessment	Marking
• Good paragraph construction • Sections well integrated • No errors in expression (e.g. slang, spelling, grammar) • Demonstrates clear organization and logical development of ideas • Language is clear and concise	• Addresses all components and requirements of section (problem statement, literature context, research gap or study need, research question) • Purposeful selection of key readings	• Cogent rationale and research question • Proper interpretation of previous research • Correct identification of research gaps/needs	• Reader has a clear understanding of why the study is warranted, how it builds upon previous key studies and what specific epidemiological/ population health research question is addressed by the study.	**Outstanding (9-10)**
• Mostly correct, clear and concise, some errors in items listed above	• Addresses most components/requirements, but some missing elements	• Interprets most components correctly, but some errors in interpretation or some omissions	• Addresses most of the elements as described above but missing some elements for the reader • Some errors in interpretation of literature, rationale for the study and research question	**Competent (7 - 8)**
• Challenging to read re expression, flow, paragraph construction, conciseness, organization • Errors of expression (e.g., slang, misspelling, grammatical errors)	• Mostly does not address the section components/requirements; incorrectly addresses most elements	• Major errors in interpretation of literature • Rational for study and the research question are not cogent	• Mostly does not address the objectives for this section (i.e. not clear why the study is warranted, does not appear to add to the existing literature) • Reader does not conclude the same need/rationale for the study • A different research question is warranted	**Incomplete or incorrect (<=6)**
No response	No response	No response	No response	**No response (0)**

ASSIGNMENT 3B - METHODS – 20% of Final Grade				
Expression	Components	Interpretation	Overall Assessment	Marking
• Good paragraph construction • Sections well integrated • No errors in expression (e.g. slang, spelling, grammar) • Demonstrates clear organization and logical development of ideas • Language is clear and concise	• Addresses all components and requirements of section (study sample, outcome, explanatory variable, confounders, analytic plan)	• Cogent selection and definition of a study sample, study variables, confounders and analytic plan	• At the end of the Methods section, readers should have sufficient information that they could repeat the study.	**Outstanding (17-20)**
• Mostly correct, clear and concise, some errors in items listed above	• Addresses most components/requirements, but some missing elements	• Addresses most elements, but some elements of interpretation are missing or not clear to the reader	• Could replicate some but not all elements of the methods	**Competent (14-16)**
• Challenging to read re expression, flow, paragraph construction, conciseness, organization • Errors of expression (e.g., slang, misspelling, grammatical errors)	• Mostly does not address the section components/ requirements; incorrectly addresses most elements	• Selection of study sample, study variables, or analytic plan not cogent or in error	• Could not replicate most elements of the study design	**Incomplete or incorrect (<=13)**
• No response	• No response	• No response	• No response	**No response (0)**

ASSIGNMENT 5B - RESULTS – 25% of Final Grade				
Expression	Components	Interpretation	Overall Assessment	Marking
• Good paragraph construction • Sections well integrated • No errors in expression (e.g. slang, spelling, grammar) • Demonstrates clear organization and logical development of ideas • Language is clear and concise	• Addresses all requirements (description of sample, bivariable and multivariable results, main findings for research question adjusted for confounders, plus tables/figure; final paper to include a sensitivity analyses (e.g. investigation of robustness of findings, or investigation of interaction)	• Correctly interprets descriptive, bivariable and multivariable results • Correctly interprets additional components such as confounders correlations, missing data, 'sensitivity' analyses • Model building decisions are cogent • Tables and figure are 'stand alone' and can be interpreted by the reader without the text.	• Reader understands who was included in the study sample, how the key outcome and explanatory variables were distributed in the study sample, the bivariate relationship between variables, and the final adjusted relationship in the multivariable model. • Reader would generally arrive at same results as the author	Outstanding (21-25)
• Mostly correct, clear and concise, some errors in items listed above	• Addresses most components/requirements, but some missing elements	• Correctly interprets most elements but some errors in interpretation • Need to refer to the text to interpret some elements of the tables/figure • Some errors in model decision making	• Addresses most components listed above but some gaps in understanding • Could replicate some but not all elements of the results	Competent (17-20)
• Challenging to read re expression, flow, paragraph construction, conciseness, organization • Errors of expression (e.g., slang, misspelling, grammatical errors)	• Mostly does not address the section components/ requirements; incorrectly addresses most elements	• Major errors in interpretation across multiple components • Need to refer to text to interpret for most elements of tables/figure • Model decision making is fatally flawed	• Mostly does not address the objectives of this section • Could not replicate results	Incomplete or incorrect (<=16)
• No response	• No response	• No response	• No response	No response (0)

ASSIGNMENT 4a and 4b - Evaluation

ASSIGNMENT 4A – Copy of Lightning Presentation Slides (Pdf version).

ASSIGNMENT 4B – In-class Lightning Presentation (5%)

Students are responsible for delivering an academic-style, '**Lightning Talk' presentation** on their study, suitable for a population health conference (**5%**). See the following link for a description of a 'Lightning Talk': https://en.wikipedia.org/wiki/Lightning_talk. Lightning Talks will be five minutes maximum per student and limited to five slides per presentation. A copy of the slides is due via UBC Canvas on Monday before the Tuesday presentations before 6 pm (pdf version to avoid formatting issues) and cannot be modified after submission. The presentation must provide the audience with an overview of the study (rationale, research question, key methodological components), findings to-date (key descriptive findings on the sample and key bi-variable findings on the relationship between the main explanatory and outcome variables), plus a discussion of key study limitations/biases.

Evaluation Criteria:

0%:   Did not participate in 'Lightning Talk' presentation

3%:   Participated in 'Lightning Talk' presentation

4%:   Participated in 'Lighting Talk' presentation and met the assignment expectations (5 slides, 5 minutes, presentation provided research question, rationale for study, key methodological components, key descriptive and bivariable findings, and key (1-3) study limitations/biases)

5%:   Participated in 'Lighting Talk' presentation, met the assignment expectations, plus demonstrated additional initiative, insight, creativity (e.g. insightful interpretation of their results/biases, creativity in the visual or oral presentation that enhanced effective communication, evidence of presentation preparation in terms of pacing/flow/talking to point)

ASSIGNMENT 6 – REVISED INTRODUCTION, METHODS, RESULTS SECTIONS, *PLUS DISCUSSION*

DISCUSSION SECTION MARKING RUBRIC			
Expression	Components	Interpretation	Overall Assessment
• Good paragraph construction • Sections well integrated • No errors in expression (e.g. slang, spelling, grammar) • Demonstrates clear organization and logical development of ideas • Language is clear and concise	• Addresses all components and requirements of section (summary of findings, findings in the context of existing literature, explanation of findings, limitations and understanding of limitations, explanation of findings)	• Cogent summary of key findings from the analysis • Cogent interpretation of results relative to other studies • Cogent interpretation of recommendations for future research, practice • Demonstrates insight, depth/breadth to discussion of findings and epidemiological research issues	• Reader understands if the results provide an answer to the research question; if the results agree with what others have shown and if not, how this study differ from others; what factors or sources of error influenced the results or what insights other researchers could learn from your work to improve future studies; and how the results of the study influence our knowledge, practice or understanding of the problem
• Mostly correct, clear and concise, some errors in items listed above	• Addresses most components/requirements, but some missing elements	• Correctly interprets most elements but some errors in interpretation and explanation • Provided insight, depth and breadth of response in some areas but not all; some errors in discussion of epidemiological methods	• Addresses most components listed above but some gaps
• Challenging to read re expression, flow, paragraph construction, conciseness, organization • Errors of expression (e.g., slang, misspelling, grammatical errors)	• Mostly does not address the section components/ requirements; incorrectly addresses most elements	• Major errors in interpretation and explanation • Lacking insight in epidemiological research methods; lack of depth or breadth to discussion and explanation	• Mostly does not address the objectives of this section
• No response	• No response	• No response	• No response

ASSIGNMENT 6 – MARKING RUBRIC FOR REFERENCES (Vancouver Style)				
Expression	Components	Interpretation	Overall Assessment	Marking
• No spelling errors • All references are included in the reference list	• Can find all references • Follows a consistent referencing format acceptable by a health journal (**MUST BE Vancouver Style**) • References correctly cited in the text	• Correctly interprets evidence from other studies • Correctly attributes evidence to original source • Provides different perspectives where needed	• Conveys to reader a purposeful selection of readings, but depth and breadth of evidence • Reader able to find and check citations as easily as possible	**Excellent (no deductions)**
• Some errors or omissions	• Addresses most components/requirements, but some errors	• Addresses most components/requirements, but some errors	• Addresses most components/requirements, but some errors	**Incomplete 5% deduction**
• Consistent spelling errors and reference omissions	• Inconsistent referencing style, incorrect referencing style • Cannot find references	• Incorrectly or inappropriately attributes evidence	• Major errors in referencing style, evidence attribution • Reference list is not a resource for the reader	**Incomplete and incorrect 10% deduction**

ASSIGNMENT 6 –FINAL SPPH504 PAPER (40%)

Evaluation Criteria

Adjudication of final epidemiological population health paper suitable for submission to health-related journal, including Introduction, Methods (with Flowchart/Figure 1), Results (with Tables 1 and Table 2), Discussion, and References. Your final paper will evolve over the course of the term using the assignments as inputs, and you are expected to revise/update sections of your paper to incorporate instructor/peer feedback as well as new learning over the term into the final version. The final version will be evaluated as an organized whole that is more than the sum of its parts.

A Level (80% to 100%)
A+ is from 90% to 100%: It is reserved for exceptional work that greatly exceeds course expectations. In addition, achievement must satisfy all the conditions outlined the assignments and demonstrate exceptional work incorporating class/instructor feedback on work throughout the term.

A is from 85% to 89%: A mark of this order suggests a very high level of performance on all criteria used for evaluation. Contributions deserving an A are distinguished in virtually every aspect. They show that the individual significantly shows initiative, creativity, insight, and probing analysis where appropriate. Further, the achievement must show careful attention to course requirements as established by the instructor and careful consideration of the inclusion of class/instructor feedback on work throughout the term.

A- is from 80% to 84%: It is awarded for generally high quality of performance, no problems of any significance, and fulfillment of all course requirements. In addition, achievement must satisfy all the conditions outlined the assignments and incorporate class feedback from assignments.

B Level (68% to 79%)
This category of achievement is typified by adequate but unexceptional performance when the criteria of assessment are considered. It is distinguished from A level work by problems such as: One of more significant errors in understanding, superficial representation or analysis of key concepts, absence of any special initiatives, lack of coherent organization or explanation of ideas, and/or failure to include incorporate class/instructor feedback on work throughout the term. The level of B work is judged in accordance with the severity of the difficulties demonstrated. B+ is from 76% to 79%, B is from 72% to 75%, and B- is from 68% to 71%.

C Level (55% to 67%)
Although a C+, C, or C- grade may be given in a graduate course, the Faculty of Graduate Studies considers 68% as a minimum passing grade for doctoral graduate students.

ASSIGNMENT 7 – SEX AND GENDER BASED ANALYSIS TRAINING CERTIFICATE (P/F)

Students are required to complete one of three on-line training modules provided by the Canadian Institutes for Health Research's Institute for Gender and Health:
http://www.cihr-irsc.gc.ca/e/49347.html#wb-cont

Students can choose which training module to complete based on their research interests or needs: 1) Sex and Gender in Biomedical Research, 2) Sex and Gender in Primary Data Collection with Humans or 3) Sex and Gender in the Analysis of Data from Human Participants.

Students can complete the training module at any time during the SPPH504 course (September 4th to December 15th 2018), but must submit a copy of their certificate of completion via the Assignment folder for the course on the UBC Canvas website in order to receive their final course grade and to successfully meet all of the requirements for SPPH504.