The University of British Columbia
School of Population and Public Health

PERINATAL EPIDEMIOLOGY 2023

UBC's Point Grey Campus is located on the traditional, ancestral, and unceded territory of the xwməθkwəy̓əm (Musqueam) people. The land it is situated on has always been a place of learning for the Musqueam people, who for millennia have passed on their culture, history, and traditions from one generation to the next on this site.

Course Title	Course Code Number	Credit Value
Perinatal Epidemiology	SPPH 537/ WACH 503	3.0

PREREQUISITES
SPPH 400, SPPH 502

COREQUISITES
SPPH 500

CONTACTS

Course Instructor(s)	Contact Details	Office Location	Office Hours
Dr. Patricia Janssen	patti.janssen@ubc.ca	Room V-222 Clinical Support Building, BC Children's Hospital Campus.	By appointment at either UBC or the C&W site or by Zoom.

SCHEDULING
Wednesdays, 1:30 - 4:30 pm

LOCATION
Course will be offered in at Children's and Women's Hospital, Clinical Support Building, 948 West 28th Avenue, Room V222. (see map last page) but students may join remotely by Zoom. Parking available on site. Accessible by Oak St. or 25th Ave bus or inter-hospital shuttle from UBC, St. Paul's or VGH. Sky train Canada Line stops at 25th and Cambie with shuttle every 15 minutes from NW corner of Cambie and 25th to C&W site. You do not need a pass key to come into the building – enter the lobby and turn left through the glass door, then turn right and proceed down hallway to ceiling sign that indicates seminar rooms.

COURSE INSTRUCTOR BIOGRAPHICAL STATEMENT
Dr. Janssen is a perinatal epidemiologist and professor in the UBC School of Population and Public Health. She obtained her BSN from UBC and practiced as an obstetrical nurse for 25 years. She also obtained midwifery skills through a clinical fellowship in advanced perinatal nursing. She obtained her MPH in maternal child health and her PhD in epidemiology from the University of Washington.

OTHER INSTRUCTIONAL STAFF
A TA will be assigned to this course.

COURSE STRUCTURE
This course will introduce topics and methods in perinatal epidemiology. It is an elective open to all students in the School of Population and Public Health and in the WACH Graduate Program. Students in other related disciplines may take the course with approval of the course instructor. Classroom time will consist of lecture, seminar, and discussion formats. A variety of experts in topical areas will be providing lectures. The course will involve analysis of data from the British Columbia Perinatal Registry. The course instructor will grade evaluation activities. A clinical background is an asset but not necessary.

LEARNING OUTCOMES
Maternal/fetal/newborn health is a critical determinant of the health and demographic properties of a population. The overall goal of this course in perinatal epidemiology is to provide the basis for familiarity with indicators of maternal/newborn well-being across population subgroups, changing trends in obstetrical intervention, determinants of perinatal morbidity and analysis of perinatal data.

On completion of this course the student will:
1. Be familiar with recent secular trends in major problems of maternal and child health including perinatal mortality, intrauterine growth restriction, preterm birth, and maternal morbidity and mortality;
2. Understand the contribution of social determinants to maternal/fetal morbidity and mortality;
3. Understand challenges in predicting risk of adverse perinatal outcomes;
4. Understand the demographic forces that cause changes in characteristics of populations which in turn relate to both etiologies and service needs associated with maternal/newborn morbidities;
5. Appreciate differences between cross sectional and longitudinal analyses of pregnancy outcomes in predicting outcomes for individuals and for populations.
6. Be exposed to the epidemiological patterns of common congenital malformations.
7. Develop a perspective of the relative importance of intrinsic factors (host factors) and extrinsic factors (infections, drugs, chemicals, occupational exposures) in major maternal newborn health problems.
8. Evaluate screening programs in current use in maternal newborn care.
9. Evaluate the contribution of health services in improving maternal newborn morbidity and mortality.
10. Undertake a large data set analysis.
11. Develop a proposal for writing an instructor-approved epidemiologic question, analyze data, and present and discuss findings in a report format.

ASSESSMENTS OF LEARNING
Oral presentation (25%)
A 10-minute oral presentation in a perinatal topic area with emphasis on methodological issues

Proposal (25%)
The student will submit a proposal to undertake a project using data from the BC Perinatal Registry. The proposal will be 5 pages in length and outline the justification for the question including a literature review and a outline of methods to be used.

Class participation (10%):
Students will be assigned a mark between 0-10 for their willingness to participate in class discussion and the degree to which their participation enhances discussion in the class.

Large data set analysis (40%)
The student will test a hypothesis related to maternal/fetal/newborn health. The analysis will address confounding, effect modification, bias, and misclassification.

LEARNING MATERIALS
There is no required text. References to readings will be distributed throughout the course. Lectures will be recorded and posted online.

UNIVERSITY POLICIES
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 on **the UBC Senate website.**

SPPH is committed to providing a positive education experience free from discrimination. If you have had an experience in this course where you feel unsafe, have been mistreated or have witnessed mistreatment, please let us know. If you want to raise this beyond the course instructor the School recommends the following: You may contact your academic supervisor, the education manager for your program or the Associate Director of Education. You may also report your concerns to the Faculty of Medicine Office of Respectful Environments, Equity, Diversity & Inclusion (REDI) at https://mistreatmenthelp.med.ubc.ca/. Both SPPH and the REDI Office have procedures in place for recording and acting on reports of mistreatment in the educational environment.

Note that students will need to provide proof of Covid-19 vaccination before they can study or work in a BC care location. The Education Team will request documentation from all incoming students. Please report your vaccination status before the beginning of term.

GENERATIVE ARTIFICIAL INTELLIGENCE
The use of Chat GPT or other generative AI tools is not permitted in this course. Students should avoid using AI tools for assignments. Failure to follow this policy will be considered a violation of UBC's policy on academic misconduct.

SCHEDULE OF TOPICS - Tentative Schedule

Perinatal Epidemiology Concepts and Challenges			
1	Sept 6	Introduction to perinatal epidemiology & course requirements	P. Janssen
Preconceptual Determinants of Perinatal Outcomes			
1	Sept 6	Social determinants	Dr. G. Hanley
2	Sept 13	Environmental determinants	Dr. G. Webster
2	Sept13	Aboriginal Health	Dr. J. Murray
3	Sept 20	Human Fertility and Fecundity	Dr. A Zhang
Prenatal Determinants of Perinatal Outcomes			
3	Sept 20	Genetics and Reproduction	Li Qing Wang
4	Sept 27	Congenital anomalies	Dr. M. Patel
4	Sept 27	Fetal Growth	Dr. P. Janssen
5	Oct 4	Pregnancy Dating and Length	Dr. F. Tessier
5	Oct 4	Screening in pregnancy	S. Lauson
6	Oct 11	Multiple gestation	Dr. F. Tessier
6	Oct 11	Oral health in pregnancy	Dr. A. Adenyi
7	Oct 18	Introduction to Pop Data	Dr. G. Hanley
7	Oct 18	Unintended pregnancy	Dr. W. Norman
Epidemiology of Conditions Arising in Pregnancy			
8	Oct 25	Physiology and pathophysiology of labour	Dr. P. Janssen
8	Oct 25	Pop Data Orientation and Accounts	PopData BC
9	Nov 1	Hypertensive disorders	Dr. M. Vidler
9	Nov 1	Diabetes in pregnancy	Dr. S. John
10	Nov 8	Mental health disorders in pregnancy	Dr. G. Hanley
10	Nov 8	Etiologies of preterm labour	Dr. Knutzen
	Nov 15	**Midterm Break**	
11	Nov 22	Infections and perinatal outcomes	Dr. J. van Schalkwyk
11	Nov 22	Obesity/Pregnancy Spacing	Dr. L. Schummers
Surveillance and Methodology in Perinatal Epidemiology			
12	Nov 29	Issues in study design and analysis of perinatal data	Dr. KS Joseph
12	Nov 29	Mortality trends – maternal	P. Janssen
13	Dec 6	Mortality and morbidity trends – newborn	Dr. R. Sherlock
13	Dec 6	Knowledge synthesis/translation/ethics	Dr. P. Janssen

MAP of C&W site