

# SPPH DL 515 – SURVEILLANCE AND MONITORING IN PUBLIC HEALTH

## SYLLABUS – FALL 2017

### 1. COURSE DESCRIPTION

SPPH 515 DL is intended to provide students with a strong foundation in public health surveillance of both infectious and non-infectious diseases. The course will teach the theory and practice of surveillance supported by examples of surveillance systems from Canada and other countries.

In this course, students will learn to:

- describe the principles of public health surveillance
- design and evaluate a basic public health surveillance system
- analyze and interpret surveillance data and data challenges and limitations
- understand the characteristics of spatial data and how spatial analysis can be used to address public health problems
- describe the application of surveillance to various settings and diseases including communicable diseases, environmental health issues, chronic diseases, vector borne and zoonotic diseases, and public health emergencies, etc.
- identify potential ethical issues in public health surveillance ways to monitor and mitigate those issues
- understand the principles of effective communication regarding public health surveillance
- describe how surveillance data may be used to inform public policy

This course is a three credit elective. Non-SPPH students in related disciplines may take the course with approval of the course instructor. Prerequisites for this course include SPPH 502 (Epidemiological Methods I) or equivalent, SPPH 400 (Statistics for Health Research) or equivalent, and basic data manipulation skills using a statistical software package (e.g., R, SAS, STATA, etc.)

### 2. COURSE OPERATION

#### Face-to-face sessions:

Sat Sep 8      8.30AM to 4.30 PM

Sat Oct 13 8.30AM to 4.30 PM

Sat Nov 17 8.30AM to 4.30 PM

Classroom SPPH B108

**Instructors:**

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### 3. LEARNING GOALS AND OBJECTIVES

SPPH 515 provides an in-depth review of concepts and methods for developing and evaluating surveillance systems and analysing and interpreting surveillance data for both infectious and non-infectious diseases.

The overall goals of this course are to:

- (a) Understand the purpose and principles of surveillance;
- (b) Identify and understand the elements required in the development of a surveillance system;
- (c) Learn how to analyse and interpret surveillance data;
- (d) Identify and measure attributes used in the evaluation of a surveillance system.

On completion of this course the student will be able to:

- a. Identify and describe the principles, objectives and elements of public health surveillance for infectious and non-infectious diseases and conditions;
- b. Identify and select appropriate data sources and analysis methodologies for disease and health event surveillance;
- c. Conduct basic analysis of surveillance data;
- d. Interpret surveillance findings taking into account potential biases;
- e. Identify effective means to communicate surveillance findings;
- f. Enumerate possible actions resulting from surveillance findings and describe how they may be used to inform public policy;
- g. Explain how to conduct surveillance in a variety of public health situations;
- h. Identify and explain ethical issues related to surveillance;
- i. Develop a basic surveillance system for a public health issue.

#### 4. COURSE STRUCTURE

SPPH 515 is a mixed mode, or *blended*, course. The face-to-face component of the course takes place over three days and includes lectures and small group break-out sessions. Ample time will be provided throughout for discussion and questions. As the majority of students are from the health sector, or will be a part of the health sector in the future, participants will be encouraged to speak about their own experiences and challenges. The online component will include course materials, class discussion, questions, assignments, and additional reading to supplement classroom material.

#### 5. RECOMMENDED RESOURCES

There is NO REQUIRED TEXTBOOK, only recommended textbooks, for this course. However, we recommend Lee LM, Teutsch SM, Thacker SB, St. Louis ME (eds). Principles and Practice of Public Health Surveillance, 3rd edition. Oxford: Oxford University Press; 2010.

#### 6. STUDENT EVALUATION

Grades are based on a total of 100 points.

- Class participation: 30 points
- Mid-term exam: 15 points
- Analysis of surveillance data assignment: 15 points
- Final Assignment: 40 points

Class participation is based on contributions to a variety of exercises and discussions presented in the face-to-face and online modules. The mid-term will include multiple choice and short answer questions intended to solidify the students' understanding of the basic concepts of surveillance. The assignment will involve the analysis, interpretation and presentation of surveillance data. The final assignment will require the students' to develop their own basic public health surveillance system based on all of the information presented in class.

#### 7. GRADING

*(Adapted Dr. Dan Pratt, Depart. of Educational Studies, UBC, Graduate Course Grading Policy):*

**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.

#### **IMPORTANT NOTE**

Students are expected to know what constitutes plagiarism; that plagiarism is a form of academic misconduct, and that such misconduct is subject to penalty. Please review the Student Discipline section of the UBC Calendar (available on-line at [www.ubc.ca](http://www.ubc.ca)).

Please also visit the UBC Plagiarism

Resource Centre for Students (available on-line at [www.library.ubc.ca/home/plagiarism/](http://www.library.ubc.ca/home/plagiarism/)).