Co-coordinator:
Jan Sargeant
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Ext. 54045, sargeanj@uoguelph.ca

TA:
TBD

Class schedule:
Tuesdays and Thursdays, 1:00 – 2:30 pm.

Description:  This is a 0.5 credit introductory graduate course for MPH students and other graduate students with an interest in epidemiology. The course will focus on questionnaire design and basic statistical methods for epidemiological studies, as well as providing an introduction to literature searches, grant proposal writing.

Objectives:
Students who complete this course should be able to:
- Formulate a research question
- Conduct a structured literature search for literature relevant to a specific research topic
- Structure a grant proposal to conduct an epidemiological study
- Plan, draft, and analyze a survey instrument (questionnaire) to identify determinants of health and disease
- Conduct basic statistical analyses of epidemiological data

Course approach:
This course will consist of two 90 minutes sessions per week, either in a classroom setting or in the OVC computer laboratory. For the statistics component (the second half of the course), class sessions will include opportunities for practical applications of statistics using data sets and statistical programs.

Pre-requisites:
POPM*6200 (Epidemiology I) is a co-requisite class. Students not taking Epidemiology I concurrently and who have not previously taken Epidemiology I will require permission of the course coordinator. Students seeking permission to take this course without the Epidemiology I course require at least one graduate-level course in epidemiology.

Pre-class preparation: To enhance learning during classroom sessions, pre-class readings (or other preparation) have been assigned. Details are provided for each session later in this document. Textbooks for chapter readings are available on 2-hour
reserve via the library and will be available in the OVC learning commons. Some materials may be provided on the class courselink website.

You are expected to complete the readings for each class prior to the class. The lectures will not necessarily cover all of the material in the lectures that you will be responsible for in assignments, and you will get much more out of the lectures having completed the pre-class readings.

**Course topics (tentative):**

<table>
<thead>
<tr>
<th>Session</th>
<th>Date</th>
<th>Instructor</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Sep-06</td>
<td>Jan Sargeant</td>
<td>Course introduction, Use of questionnaires in healthcare and public health</td>
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<td>2</td>
<td>Sep-10</td>
<td>Jan Sargeant</td>
<td>Questionnaire design: Hypotheses and conceptual frameworks</td>
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<td>3</td>
<td>Sep-12</td>
<td>Jan Sargeant</td>
<td>Questionnaire design: Modes of administration, response rates</td>
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<td>4</td>
<td>Sep-17</td>
<td>Jan Sargeant</td>
<td>Questionnaire design: Creating a structuring questions</td>
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<td>5</td>
<td>Sep-19</td>
<td>Jan Sargeant</td>
<td>Questionnaire design: Informed consent and layout</td>
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<td>6</td>
<td>Sep-24</td>
<td>Jan Sargeant</td>
<td>Questionnaire design: Validating and pre-testing</td>
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<td>7</td>
<td>Sep-26</td>
<td>Jan Sargeant</td>
<td>Population measures of disease frequency</td>
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<td>8</td>
<td>Oct-01</td>
<td>Sandy Auld</td>
<td>Ethical approval</td>
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<tr>
<td>9</td>
<td>Oct-03</td>
<td>Judy Wanner</td>
<td>Searching the literature</td>
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<td>10</td>
<td>Oct-08</td>
<td>Judy Wanner</td>
<td>Reference management</td>
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<td>11</td>
<td>Oct-10</td>
<td>Jan Sargeant</td>
<td>Proposal writing I</td>
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<td>12</td>
<td>Oct-15</td>
<td>Jan Sargeant</td>
<td>Proposal writing II</td>
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<td>13</td>
<td>Oct-17</td>
<td>Jan Sargeant</td>
<td>Intro to SPSS, Descriptive statistics</td>
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<td>14</td>
<td>Oct-22</td>
<td>TBD</td>
<td>Categorical data analysis – from 2*2 tables to logistic regression</td>
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<tr>
<td>15</td>
<td>Oct-24</td>
<td>TBD</td>
<td>Categorical data analysis – from 2*2 tables to logistic regression</td>
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<tr>
<td>16</td>
<td>Oct-29</td>
<td>TBD</td>
<td>Categorical data analysis – from 2*2 tables to logistic regression</td>
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<tr>
<td>17</td>
<td>Oct 31</td>
<td>TBD</td>
<td>Categorical data analysis – from 2*2 tables to logistic regression</td>
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<tr>
<td>18</td>
<td>Nov-05</td>
<td>Jan Sargeant</td>
<td>Continuous data analysis – from t-tests to linear regression</td>
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<tr>
<td>19</td>
<td>Nov-07</td>
<td>Jan Sargeant</td>
<td>Continuous data analysis – from t-tests to linear regression</td>
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<td>20</td>
<td>Nov-12</td>
<td>Jan Sargeant</td>
<td>Continuous data analysis – from t-tests to linear regression</td>
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<tr>
<td>21</td>
<td>Nov-14</td>
<td>Jan Sargeant</td>
<td>Continuous data analysis – from t-tests to linear regression</td>
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Overview of evaluation methods:

Assignments 40%
Midterm project 30%
Final examination 30%

Assignments: There will be 8 assignments, each worth 5 marks out of 100. Assignments are due prior to the start of the class session on the due date. Late assignments will be penalized by 1 mark (out of 5) if received after the start of the class session and by 1 mark (out of 5) for each late day thereafter. Assignment topics and due dates are as follows (complete details will be posted on course-link):

Assignment 1, due Sept. 19. Posing a research question
Assignment 2, Sept. 24 In-class quiz on question format for questionnaires
Assignment 3, due Oct. 1. Ethical approval process
Assignment 4, due Oct. 15. Search strategies to address a research question
Assignment 5, due Oct. 31. Analysis of categorical data
Assignment 6, due Nov. 7. Logistic regression
Assignment 7, due Nov. 14. Analysis of continuous data
Assignment 8, due Nov. 21. Linear regression

Midterm project. The midterm project will involve designing an on-line survey to address a specific research question. The project will be due prior to the start of class on Oct. 22. Complete details will be provided on courselink.

Final exam. The final exam will be related to the statistics component of the course and will take place in the computer lab. Students will be provided with data sets and will be expected to analyze the data appropriately to address the exam questions.

Course materials on reserve:
The following textbooks are recommended for the course. Students can access the list of reserve books as well as links to online reserves via Ares and Courselink. Ares can be accessed at: https://ares.lib.uoguelph.ca/ares/). Please note that only reserve items are located at the OVC Learning Commons; all other publications are now housed at the Main Library.

These texts are recommended for the questionnaire design component of the course:


Pre-class readings are provided from both of the following textbooks for the statistics component of the course. Most other introductory statistics textbooks also cover these topics. The choice of textbook is up to you, but it is expected that you have read about the topics prior to class sessions.


Software:
The program SPSS will be used for the statistics portion of the class. SPSS is available on the computers in the PopMed computer room and is available for download at no cost from the University of Guelph CCS. Students may use other statistical programs if they wish, but in class support may not be available for other programs.

Courselink:
Additional course materials and information regarding all assignments will be posted on the courselink website. The website can only be accessed by persons who are registered for the class, therefore it is imperative that students ensure that they are registered for the class and have access to courselink. If you have any problems accessing courselink, contact CCS at x58888 or 58888help@uoguelph.ca

Students with Special Needs/Learning Disabilities: If you have a documented disability and require accommodations to obtain equal access to this course, please meet with Dr. Sargeant at the beginning of the semester, or as soon as possible thereafter.
If you suspect you may have a learning disability, you are strongly encouraged to consult the Centre for Students with Disabilities (http://www.slcs.uoguelph.ca/csd/docforLD.cfm)

Academic Misconduct:
The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the
responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Graduate Calendar: http://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/sec_d0e1609.shtml

Session objectives and pre-class preparation.

Session 1: Course Overview and Introduction to Questionnaires

Session Objectives:
1. Understand the expectations of the course and the methods of evaluation
2. Understand plagiarism and how to avoid plagiarism when writing and citing the work of others.
3. Have an appreciation for the use of questionnaires in medical and veterinary medical healthcare and in public health.

Required Reading:
Review the University of Guelph website on academic integrity: http://www.academicintegrity.uoguelph.ca with emphasis on the section regarding plagiarism: http://www.academicintegrity.uoquelp.ca/plagiarism.cfm


ADDITIONAL SESSION OBJECTIVES AND READINGS WILL BE POSTED ON COURSELINK.