SYLLABUS & COURSE INFORMATION

SCHOOL OF PUBLIC HEALTH
UNIVERSITY OF MINNESOTA

PUBH 6107

Excel® and Access® skills in public health settings
Spring 2019

COURSE & CONTACT INFORMATION

Credits: 1
Meeting Day(s), Time, and Place: Thursdays, 1:25 – 3:20 PM. Mayo 1250

Contact Type	Contact Information	Role	When to Contact
Instructor	Claudia Munoz-Zanzi, DVM, MPVM, PhD munozzan@umn.edu Office Phone: 612-625-6953 Fax: 612-626-4837	Primary instructor for this course	For course or content related matters, contact your instructor via the Course Q&A/Announcements in Canvas. Use email for private matters.
Teaching Assistant	Julie Hottinger hott0004@umn.edu	Teaching assistant	Office hours and email for course related questions.
Technical Support	Technical support options are available on the SPH website. https://z.umn.edu/sphquickhelp	Troubleshoots technical issues related to the course site or course content.	Technical issues with the course site, media, or assignments.

Please save this contact information to your computer or print it. That way, you can still contact us in the event that you have difficulty connecting to the Internet or accessing the syllabus.

COURSE DESCRIPTION

This is a hands-on course on computer skills to learn a wide range of methods to manipulate public health data. Students will be given "raw" datasets and practice computer methods to clean, filter, recode, combine, tabulate and report data within the Excel and Access environments. The course is ideal for students who may not pursue more advanced quantitative training but still want to feel comfortable using these widely available programs to produce quality datasets for further analysis, and to generate summary results or reports in their work as public health practitioners.

COURSE PREREQUISITES

None.

COURSE GOALS & OBJECTIVES

1) To gain necessary computer skills to efficiently manipulate raw public health data and perform procedures to clean, validate, recode, summarize, and report data.
2) To become familiar with commonly used software (Microsoft Excel and Access) for data manipulation and management.
3) To gain experience in oral and visual reporting of summarized public health data.

METHODS OF INSTRUCTION AND WORK EXPECTATIONS

Course Workload Expectations

Weekly lectures (7) with in-class computer exercises. Students will work on an assigned task each session while following instructions and demonstrations by the instructor. Students will be asked to complete the assigned weekly work and submit for credit towards passing the course.

A laptop computer is needed for each student. SPH laptops with the necessary software (Excel and Access) will be made available for students who cannot bring one to class.
Privately-own laptops need to have Excel and Access installed.
Microsoft Office 365 ProPlus with Excel and Access is available to registered University of Minnesota students at no charge.
OIT website:
http://it.umn.edu/services/all/computer-device-support/purchasing/software/office/index.htm
For homework and/or practice outside class time, computers with Excel and Access are available free of charge at the Student Sphere Lounge in Moos (for SPH graduate students only), the EpiCH Student Lounge, and Coffman computer laboratories in the East Bank.

Students using their own laptops should have the software installed and ready to work before the first day of class. Contact the instructor prior to the first day of class if you have any questions about obtaining and/or installing software.

Technology
You will use the following technology tool in this course. Please make yourself familiar with it.

- **VoiceThread:** This is a tool, accessed through Canvas, that allows you to record presentations at your computer. Instructions are available in the Canvas site.

Learning Community
School of Public Health courses ask students to discuss frameworks, theory, policy, and more, often in the context of past and current events and policy debates. Many of our courses also ask students to work in teams or discussion groups. We do not come to our courses with identical backgrounds and experiences and building on what we already know about collaborating, listening, and engaging is critical to successful professional, academic, and scientific engagement with topics.

In this course, students are expected to engage with each other in respectful and thoughtful ways.

In group discussion, this can mean:

- Respecting the identities and experiences of your classmates.
- Avoid broad statements and generalizations. Group discussions are another form of academic communication and responses to instructor questions in a group discussion are evaluated. Apply the same rigor to crafting discussion posts as you would for a paper.
- Consider your tone and language, especially when communicating in text format, as the lack of other cues can lead to misinterpretation.

Like other work in the course, all student to student communication is covered by the Student Conduct Code (https://z.umn.edu/studentconduct).

COURSE TEXT & READINGS

Files with public health datasets and handouts will be uploaded to Moodle prior to each class.
We will not follow a specific book but the following are resources that will be referenced throughout the course.
Required readings for specific lectures will come from this list and stated in the class schedule below as appropriate. Links to library resources and tutorial modules will be posted in Moodle.
Books or printed resources:
Excel® 2010 Formulas. John Walkenback. Wiley Publishing, Hoboken, NJ. (e-book access from the University of Minnesota Library).
Excel® 2013 Bible. John Walkenback. Wiley Publishing, Hoboken, NJ. (e-book access from the University of Minnesota Library).
Access® 2013 Bible. Michael Alexander. Wiley Publishing, Hoboken, NJ. (e-book access from the University of Minnesota Library).

Online resources:
Microsoft Office Tutorials for Excel:
http://office.microsoft.com/en-us/excel-help/training-courses-for-excel-2013-HA104032083.aspx
Microsoft Office Tutorials for Access:
http://office.microsoft.com/en-us/access-help/training-courses-for-access-2013-HA104030993.aspx

COURSE OUTLINE/WEEKLY SCHEDULE

This course has specific deadlines. All coursework must be submitted via the course site before the date and time specified on the site. **Note: assignments are due by 1:25pm.**

Week	Topic	Readings	Activities/Assignments
Week 1 1/24/19	Introduction to use of filters, formulas and built-in functions for data entry, exploration, and quality control in Excel. Advanced formulas in Excel for recoding, creation of new variables, and creation of summary outputs and tables	Recommended Reading: Excel 2010® Formulas, Chapter 10: Basic Facts about Formulas. Pages: 39-61.	In-class exercise (Assignment No. 1-1, 1-2): Cleaning, exploring, and preparing toxoplasmosis survey data (due 1/31/19)
Week 2 1/31/19	Use of pivot tables for exploration and creation of summary tables.	Recommended Reading: Excel® 2013 Bible, Chapter 33: Introducing Pivot tables.	In-class exercise (Assignment No. 2): Pivot tables for summarizing health data (due 2/7/19)
Week 3 2/7/19	Visualizing and summarizing data using charts, creating and updating reports directly from Excel.	Recommended Reading: Excel® 2013 Bible, Chapter 19: Getting started making charts	In-class exercise (Assignment No. 3): Charts and visual display (due 2/14/19) Individual project assignment: Preparing and presenting using VoiceThread a summary report on data from a specific study. Each student will be assigned a raw dataset from 5 different options (due 2/14/19)
Week 4 2/14/19	Individual VoiceThread presentations of summary reports from Individual project Assignment.	None	Presentation due Thurs 2/14/19, review of classmate's presentation due Friday 2/16/19
Week 5 2/21/19	Microsoft Access: creating and importing tables, managing	(Recommended) Watch Microsoft on-line Tutorial: Design and build tables for a database (Access basics, part 1) Key concepts and terms (4:35 mins) Start a new database from a blank template (4:09 mins)	In-class exercise (Assignment No. 4): Database development for managing multi-center data – Part 1 (due 2/28/19)
Week 6 2/28/19	Microsoft Access: creating relationships between multiples tables, use of queries, and creation of new datasets by combining variables from different tables.	TBD	In-class exercise (Assignment No. 5): Database development for managing multi-center data – Part 2 (due 3/7/19)
Week 7 3/7/19	Demonstration of add-in programs in Excel and additional on-line resources Final integrative exam: Creation of new project dataset for analysis and written summary report. In-class component (1.5 hours)	None	In-class component: Upload to Canvas by 3:20 PM on 3/7/19 (end of class time). At-home component: Due on 3/14/19 (upload to Canvas by 5:00 PM)

SPH AND UNIVERSITY POLICIES & RESOURCES

The School of Public Health maintains up-to-date information about resources available to students, as well as formal course policies, on our website at www.sph.umn.edu/student-policies/. Students are expected to read and understand all policy information available at this link and are encouraged to make use of the resources available.

The University of Minnesota has official policies, including but not limited to the following:

- Grade definitions
- Scholastic dishonesty
- Makeup work for legitimate absences
- Student conduct code
- Sexual harassment, sexual assault, stalking and relationship violence
- Equity, diversity, equal employment opportunity, and affirmative action
- Disability services
- Academic freedom and responsibility

Resources available for students include:

- Confidential mental health services
- Disability accommodations
- Housing and financial instability resources
- Technology help
- Academic support

EVALUATION & GRADING

Below is a list of the activities by which students will be graded and their assigned weights:

Maximum possible score is 100, distributed as follows:
Five assignments (10 points each): Students will begin work on the assignment during class and will be due at 1:25 PM the following week.
Individual class project assignment (20 points):

- Oral presentation (slides and voice recording using VoiceThread) of summary report from raw dataset (15 points).
- Review and comment on 2 other presentations (5 points).

Final integrative exam (30 points):

- In-class component (10 points)
- Take-home component (20 points).

Grading is based on completeness, accuracy, clarity, and on-time submission.

Grading Scale
The University uses plus and minus grading on a 4.000 cumulative grade point scale in accordance with the following, and you can expect the grade lines to be drawn as follows:

% In Class	Grade	GPA
93 - 100%	A	4.000
90 - 92%	A-	3.667
87 - 89%	B+	3.333
83 - 86%	B	3.000
80 - 82%	B-	2.667
77 - 79%	C+	2.333
73 - 76%	C	2.000
70 - 72%	C-	1.667
67 - 69%	D+	1.333
63 - 66%	D	1.000
< 62%	F	

- A = achievement that is outstanding relative to the level necessary to meet course requirements.
- B = achievement that is significantly above the level necessary to meet course requirements.
- C = achievement that meets the course requirements in every respect.
- D = achievement that is worthy of credit even though it fails to meet fully the course requirements.
- F = failure because work was either (1) completed but at a level of achievement that is not worthy of credit or (2) was not completed and there was no agreement between the instructor and the student that the student would be awarded an I (Incomplete).
- S = achievement that is satisfactory, which is equivalent to a C- or better
- N = achievement that is not satisfactory and signifies that the work was either 1) completed but at a level that is not worthy of credit, or 2) not completed and there was no agreement between the instructor and student that the student would receive an I (Incomplete).

Evaluation/Grading Policy	Evaluation/Grading Policy Description
Scholastic Dishonesty, Plagiarism, Cheating, etc.	You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis (As defined in the Student Conduct Code). For additional information, please see https://z.umn.edu/dishonesty The Office for Student Conduct and Academic Integrity has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty: https://z.umn.edu/integrity. If you have additional questions, please clarify with your instructor. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class-e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam. Indiana University offers a clear description of plagiarism and an online quiz to check your understanding (http://z.umn.edu/iuplagiarism).
Late Assignments	Assignments are due on the due date and time indicated in the syllabus. Unless the student has received prior approval from the instructor, late assignments will be penalized 10% point for each day overdue.
Attendance Requirements	None
Makeup Work for Legitimate Reasons	If you experience an extraordinary event that prevents you from completing coursework on time and you would like to make arrangements to make up your work, contact your instructor within 24 hours of the missed deadline if an event could not have been anticipated and at least 48 hours prior if it is anticipated. Per University policy, legitimate reasons for making up work may include: • illness • serious accident or personal injury • hospitalization • death or serious illness within the family • bereavement • religious observances • subpoenas • jury duty • military service • participation in intercollegiate athletic events We expect students to plan accordingly if travels or access to internet will cause them to miss a deadline. Further, circumstances that qualify for making up missed work will be handled by the instructor on a case-by-case basis; they will always be considered but not always granted. For complete information, view the U of M's policy on Makeup Work for Legitimate Absences (http://z.umn.edu/sphmakeupwork).
Extra Credit	Not available in this course
Saving & Submitting Coursework	**Documents that students submit are considered final;** students may not submit more than one version or draft of each assignment.
Technical Issues with Course Materials	You are expected to submit all coursework on time and it is your responsibility to ensure that your work is submitted properly before the deadline. If you experience technical difficulties while downloading the required files or attempting to submit coursework, contact Canva's help site and notify the instructor.

CEPH COMPETENCIES

Competency	Learning Objectives	Assessment Strategies
1. Apply epidemiological methods to the breadth of settings and situations in public health practice 2. Select quantitative and qualitative data collection methods appropriate for a given public health context 3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate 4. Interpret results of data analysis for public health research, policy or practice 18. Select communication strategies for different audiences and sectors 19. Communicate audience-appropriate public health content, both in writing and through oral presentation	To gain necessary computer skills to efficiently manipulate raw public health data and perform procedures to clean, validate, recode, summarize, and report data. To become familiar with commonly used software (Microsoft Excel and Access) for data manipulation and management. To gain experience in oral and visual reporting of summarized public health data.	Weekly assignments based on hands-on computer exercises developed to apply skills Individual integrative project written and oral report