



Course title:	Advanced Statistics	
Course #/term:	SW673, Fall, 2020	
Time and place:	Wednesday, 9:00am – 12:00pm, Online & In-person (optional)	
Credit hours:	3	
Prerequisites:	None	
Instructor:	Brian Perron, PhD	
Pronouns:	He, him, his	
Contact info:	Email: CANVAS Email	Phone: NA
	You may expect a response within 24 hours via CANVAS	
Office:	NA	
Office hours:	By appointment	

1. Course Statement

a. Course description

This course is designed to introduce students to statistics and statistical methods. It is intended and designed for students who already have some familiarity with statistics. Students in this course will acquire the skills to create and comprehend statistical reports related to program evaluation and research practice. Students will be able to assess the value and limitations of measures of central tendency (means, medians and modes), rates, and statistical estimates such as correlations and regression parameters. This course will help students develop the ability to use advanced quantitative methods to describe and analyze real world situations in social work settings and to make ethical inferences and decisions based on the statistical results. Students will learn to choose methods of statistical analysis to improve social policy decisions, service delivery, and intervention programs. Students will learn to understand and use appropriate language with their statistical analyses to clarify meaning and to explain the inferences (e.g. causal inferences) that can be appropriately made from specific data.

b. Course objectives and competencies

- c. 1. Analyze extant research for its use and abuse of outcomes and measures of social justice, social change, and diversity.
2. Construct rates, means, proportions and other simple statistics and interpret them appropriately.
3. Ethically use and ethically report on the results of statistical analyses.
4. Identify appropriate simple statistical methods to use in policy and program evaluation

situations.

6. Conduct basic statistical analyses of common policy and program evaluation situations.

7. Use basic descriptive statistics and test simple hypotheses to help answer policy or evaluation questions.

8. Construct meaningful and readable charts, tables, and graphs of appropriate data.

9. Prepare written, oral and visual reports for different audiences using simple and appropriate statistical language.

d. Course design

This course will use lectures, computer lab exercises, applied statistical exercises, case studies, and small group exercises to convey relevant content.

e. Intensive focus on PODS

This course integrates PODS content and skills with a special emphasis on the identification of theories, practice and/or policies that promote social justice, illuminate injustices and are consistent with scientific and professional knowledge. Through the use of a variety of instructional methods, this course will support students developing a vision of social justice, learn to recognize and reduce mechanisms that support oppression and injustice, work toward social justice processes, apply intersectionality and

2. Class Requirements

a. Text and class materials

- **Book:** *Weapons of Math Destruction*, by Cathy O’Niel. Students may obtain this book in hardcopy, audio-book, or electronic format.
- **External site:** Students will be provided a free subscription to DataCamp, which will be used for skill development
- All other class materials will be provided electronically on the course site.

b. Class schedule

Please refer to the course site for the class schedule, as times and format may change due to the pandemic.

c. Assignments

Please refer to the course site for a summary of all available assignments, due dates, and specific requirements.

d. Attendance and class participation

Please evaluate your own health status regularly and refrain from attending class and coming to campus if you are ill. You are encouraged to seek appropriate medical attention for treatment. The course is planned as a hybrid course, with the sessions being held remotely and in-persons at the School of Social Work. On days of in-person sessions, students have the option of attending remotely without any penalty to their grade. Approval to attend the in-person sessions remotely is not necessary, as this option is made available to everybody. Because of COVID-related issues, this course does not have a strict attendance policy. However, students who miss class session are fully responsible for the material that was covered. All material assigned and all material reviewed during live sessions is considered candidate material for either the mid-term or final exam. As noted below, live sessions will not be recorded. Thus, students are strongly encouraged to attend all sessions and complete all the in-class activities.

e. Grading

Please refer to the course site on the grading requirements.

This course will have a series of *Technical skill development* assignments with a soft and hard deadline. The soft deadline is the recommended submission date to remain on track with the course. Students who complete the *Technical skill development* assignments by the soft deadline will receive extra-credit. Students can make late assignments up until the hard deadline (2 weeks after the soft deadline) without penalty. *Technical skill development* assignments will not be accepted after the hard deadline.

Mini-assignments and in-session assignments are all firm deadlines and cannot be accepted for credit after the noted deadline. Please note that students must be present during the course session in order to participate in and complete the in-session assignments.

Extra-credit will be offered in this course. The opportunities for extra-credit are made available at the beginning of the course with specific deadlines throughout. Please note that the points for the extra-credit will contribute either to an examination (mid-term or final exam), or toward the final grade. The purpose of the extra-credit is to reinforce learning throughout the course. Extra-credit will not

be offered at the end of the course to make up for a low exam score or missing assignments.

f. Class Recording and Course Materials

Audio and video recording of in-class lectures and discussions is prohibited without the advance written permission of the instructor. As a standing policy, none of the sessions will be recorded. The following are exceptions to this policy:

- Students with an approved accommodation from the Office of Services for Students with Disabilities permitting the recording of class meetings must present documentation to the instructor in advance of any recording being done.
- The instructor reserves the right to disallow recording for a portion of any class time where privacy is a special concern.
- If the instructor chooses to record a class, they will decide which classes, if any, are recorded, what portion of each class is recorded, and whether a recording is made available on the course management website.
- On days when classes are recorded, students will be notified in advance that a recording will occur and be provided with an option to opt-out.
- Class recordings and course materials may not be reproduced, sold, published or distributed to others, in whole or in part, without the written consent of the instructor.

g. COVID-19 Statement

For the safety of all students, faculty, and staff on campus, it is important for each of us to be mindful of safety measures that have been put in place for our protection. By returning to campus, you have acknowledged your responsibility for protecting the collective health of our community. Your participation in this course on an in-person/hybrid basis is conditional upon your adherence to all safety measures mandated by the state of Michigan and the University, including maintaining physical distancing of six feet from others, and properly wearing a face covering in class. Other applicable safety measures may be described in the Wolverine Culture of Care and the University's Face Covering Policy for COVID-19. Your ability to participate in this course in-person/hybrid may be impacted by failure to comply with campus safety measures. Individuals seeking to request an accommodation related to the face covering requirement under the Americans with Disabilities Act should contact the Office for Institutional Equity. If you are unable or unwilling to adhere to these safety measures while in a face-to-face class setting, you will be required to participate on a remote basis. I also encourage you to review the Statement of

Student Rights and Responsibilities and the COVID-related Addendum to the Statement of Student Rights and Responsibilities.

h. Health-Related Class Absences

Please evaluate your own health status regularly and refrain from attending class and coming to campus if you are ill. You are encouraged to seek appropriate medical attention for treatment. The course is planned as a hybrid course, with the sessions being held remotely and in-persons at the School of Social Work. On days of in-person sessions, students have the option of attending remotely without any penalty to their grade. Approval to attend the in-person sessions remotely is not necessary, as this option is made available to everybody. Because of COVID-related issues, this course does not have a strict attendance policy. However, students who miss class session are fully responsible for the material that was covered. All material assigned and all material reviewed during live sessions is considered candidate material for either the mid-term or final exam. As noted below, live sessions will not be recorded. Thus, students are strongly encouraged to attend all sessions and complete all the in-class activities.

i. Academic dishonesty

Academic dishonesty refers to the use of unauthorized assistance with intent to deceive an instructor or other such person who may be assigned to evaluate the student's work in meeting course and degree requirements. The central points of concern for this course refers to:

- Collaborating with another student or person when completing the mid-term or final exam;
 - Seeking credit on a group assignment without making a contribution;
 - Being complicit in another's act of academic dishonesty (e.g., including somebody's name on a group assignment if they were not present);
 - Plagiarism
- j. Course analytics

The instructor notes the use of course analytics to monitor, understand and respond to patterns of student engagement and use of course resources. Student-level data are available in both CANVAS, DataCamp, and Google docs and sheets. This includes (but is not limited to) what / when resources are accessed, time spent on different pages, problems, revision histories, etc. These course analytics are not used in calculating grades.

Additional School and University policies, information and resources are available here: <https://ssw.umich.edu/standard-policies-information-resources>. They include:

- *Safety and emergency preparedness*
- *Mental health and well-being*
- *Teaching evaluations*
- *Proper use of names and pronouns*
- *Accommodations for students with disabilities*
- *Religious/spiritual observances*
- *Military deployment*
- *Writing skills and expectations*
- *Academic integrity and plagiarism*