JSGS 807 – Statistics for Public Managers

UNIVERSITY OF SASKATCHEWAN CAMPUS	
INSTRUCTOR:	Stephanie Ortynsky
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OFFICE HOURS:	By appointment or after synchronous sessions
OFFICE LOCATION:	Online, Zoom
TERM:	Spring 2022, April 25 to May 20
ROOM:	Online (Zoom link available on Canvas)
DATE AND TIME:	Synchronous, Mondays and Thursdays at 5:30-8:20pm CST

**The syllabus for this course is comprised of this document plus the document titled
"JSGS Common Syllabus 2021-22."**

INTELLECTUAL PROPERTY ACKNOWLEDGEMENT

The course is an amalgamation of the great work of Dr. Justin Longo from the University of Regina campus, Travis Reynolds, Alastair MacFadden, Lisa Jane de Gara, and Dan Florizone, all from the University of Saskatchewan campus. The online learning modules were updated with support from the Distance Education Unit.

CALENDAR DESCRIPTION

Administrative decision making and policy development often require the analysis of quantitative data. This course will introduce students to descriptive and inferential statistics often used in policy environments so that they will be effective data users and interpreters. Students will be taught how to use and present descriptive statistics.

Weekly hours: 6 Seminar/Discussion hours
Restriction(s): Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.
Note: Students with credit for PUBP 804 or JSGS 804 will not receive credit for this course.

LEARNING OBJECTIVES

JSGS has developed a set of three competency categories that all graduates will be able to demonstrate with their courses. These include:

- Evidence and strategic thinking
- Implementation and improvement

- Connection

The online learning modules, specific readings, assignments and activities in JSGS 807 will help you both acquire and demonstrate the ability to:

> Analyze policy-relevant data and statistics in order to communicate effectively to relevant stakeholders.
> Create critical questions of statistical analysis as support for policy making and the administration of public programs and citizen services.
> Select from common statistical methods and models to analyze specific policy and administration problems.
> Evaluate critically the public benefit of investments in data collection and analysis, and the value of publicly releasing public sector information (i.e., open data), and
> Explain public service responsibilities surrounding the collection, interpretation, communication, and presentation of public sector data and statistics.

COURSE CONTENT AND APPROACH

The course will be taught synchronously and asynchronously online. As this is a condensed spring session, a substantial amount of learning will happen online in the Rise modules prior to our scheduled synchronous sessions. Make sure to schedule time in your day before each synchronous session to go through the modules assigned for that day. The scheduled "face-to-face" or "screen-to-screen" time with one another will be an opportunity to work through case studies, activities, and discussions that benefit from group interaction. You will benefit most when you have gone through the material before class in order to actively participate in our time together. Come prepared with any questions you have about the online content or anything you would like to discuss further. We can learn a great deal from one another when we come together with a similar base of knowledge.

*In addition to the scheduled synchronous sessions, you will see office hours and optional class times below. These are subject to change based on student availability and participation.

COURSE MATERIALS

All required readings will be provided and/or linked in the online course modules, accessed on Rise through Canvas. There are no required textbooks for this course.

SUPPLEMENTARY RESOURCES

David M Diez, Christopher D Barr, Mine Cetinkaya-Rundel. 2019. OpenIntro Statistics. Fourth Edition.

Tibor Tóth. 2006. "Graphing Data for Decision Making." Center for Applied Demography and Survey Research (CADSR), University of Delaware.

Jacqueline M. Quinless. 2022. Decolonizing Data: Unsettling Conversations about Social Research Methods. Available online at U of S Library.

Maggie Walter, Chris Anderson. 2013. [Indigenous Statistics: A Quantitative Research Methodology](#).

Some free online textbooks you may find useful:

Bounegru, L., Chambers, L., Gray, J. (2018). [The Data Journalism Handbook.](#) 2nd edition. EJC.

Black, Ken. (2013). [Business Statistics: For Contemporary Decision Making, 8th Edition](#). John Wiley & Sons

Mahbobi, M., Tiemann, T. (2010). [Introductory Business Statistics with Interactive Spreadsheets](#). BCcampus.

Diez, D.M., Barr, C.D., Cetinkaya-Rundel, M. (2015). [OpenIntro Statistics.](#) Open Intro.

Illowsky, B., Dean, S. et al. (2016). [Introductory Statistics](#). OpenStax.

Shafer, D., Zhang, Z. (2012). [Introductory Statistics.](#) Saylor Foundation.

COURSE OUTLINE

Synchronous Date & Time	Office Hours + Optional Class Time*	Online Topic	Assignments
WEEK 1 **Mon April 25,** 5:30-8:20pm		0 **Syllabus & Introductions**	
	Tues April 26, 2-4pm + 5:30-6:30pm	1 **Descriptive Statistics**	**Web Safari 1** due Wed April 27, at 11:59pm

Thurs April 28, 5:30-8:20pm		2 **Application of Descriptive Statistics + Data Visualization**	**Quiz 1** due Fri April 29 at 11:59pm
		3 **Infographics + Communication of Statistics**	
WEEK 2 **Mon May 2,** 5:30-8:20pm		4 **Inferential Statistics I**	**Web Safari 2** due Wed May 4, at 11:59pm
	Wed May 4, 2-4pm	5 **Inferential Statistics II + Working with Incomplete Data**	**Quiz 2** due Wed May 4 at 11:59pm
Thurs May 5, 5:30-8:20pm		6 **Data in Context**	
	Fri May 6, 2-4pm	7	**Assignment 1**

		Data Collection by Listening to People: Polling, Surveys, and Social Listening	due Fri May 6 at 11:59pm
WEEK 3 **Mon May 9,** 5:30-8:20pm	**Tues May 10,** 2-4pm + 5:30-6:30pm	8 **Data collection by Other Means: Sensors, Devices, Open data, and Big Data**	**Web Safari 3** due Wed May 11 at 11:59pm
Thurs May 12, 5:30-8:20pm	**Fri May 13,** 2-4pm	9 **Indices, Indicators and Dashboards**	**Assignment 2** due Fri May 13 at 11:59pm
		10 **Models, Simulations, and Scenario Tools**	
WEEK 4 **Mon May 16,** 5:30-8:20pm	**Tues May 17,** 2-4pm + 5:30-6:30pm	11 **Probabilities and Predictive Analytics**	**Web Safari 4** due Wed May 18 at 11:59pm
Thurs May 19, 5:30-8:20pm	**Fri May 20,** 2-4pm	12 **Evidence-based Policy + Ethical Use of Statistics**	**Final Assignment** due

ASSIGNMENTS

There will be two quizzes, each worth 10%, due on Friday April 29 and Wednesday May 4. These quizzes are an opportunity to practice and showcase what you have learned thus far. They will be completed individually.

You will work in assigned groups to complete the remainder of the course assignments. Assignments 1 and 2 will be each worth 15%, due on Friday May 6 and Friday May 13, respectively. As there is no final exam, the Final Assignment is worth 40% of your grade and is due one week after the final synchronous session on Thursday May 26. Further information on assignments will provided on Canvas.

To support your success with Briefing Notes assigned in this course, please refer to the following JSGS Guide to Writing Briefing Notes:

https://rise.articulate.com/share/coTHcUVvOZB68gCzEJQ2FYfWmxsrPTCd#/

EVALUATION

Assignment	Percentage	Due Date
Quiz 1	10%	Fri April 29 at 11:59pm
Quiz 2	10%	Wed May 4 at 11:59pm
Assignment 1	15%	Fri May 6 at 11:59pm
Assignment 2	15%	Fri May 13 at 11:59pm
Final Assignment	40%	Thurs May 26 at 11:59pm
Web Safari	4*2.5 = 10%	Wed April 27, at 11:59pm Wed May 4, at 11:59pm Wed May 11 at 11:59pm Wed May 18 at 11:59pm

WEB SAFARI

In addition to the assignments described above, you will have the opportunity to collectively build a collection of news stories, articles, videos, blog posts, and other web-accessible resources related to the course themes and content.

These will be organized as discussion boards on Canvas. Prior to each Web Safari due date, please post a link to one news story, article, video, blog post, or other web-accessible resource that you would like to share, along with a 100 word summary of the resource. You will then comment on the link and summary of four other students (50-100 words) for a total of 5 marks per Web Safari due date.

TECHNOLOGY REQUIREMENTS

- To view the course materials, a standard Internet-connected device and web browser will work.
- All software used in this course is available for use for free from a standard current computer configuration (e.g., laptop computer) with access to the Internet.
- While Excel is the standard spreadsheet software in most organizations, we use Google Sheets when working with spreadsheets in this class as the operation of Sheets is similar to Excel. This also avoids problems with file transfers and providing comments on submitted work. While you will not be learning the particular features of Excel, learning how spreadsheets can be used in the sourcing, organizing, analysis, and presentation of data is transferable between programs.
- Some governments (particularly the Government of Saskatchewan) have restricted access to Zoom meetings when using corporate equipment. If you are using a computer provided to you by such an organization, you will likely not be able to use that computer to engage in any Zoom sessions.
- Students who are unable to participate due to a technology barrier should contact the instructor as soon as possible to discuss alternative arrangements.

ENROLLMENT LIMIT

Class enrollment will be limited to 30 students.