Statistics for Public Service and Managers

Summer 2017

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Class Meetings:	Class Location:
Tuesdays & Thursdays 6:00pm-10:00pm, August 1 st -August 31 st	SEM 2 2107

Course Description: Statistics can transform data into useful information for decision makers. In this course students will be shown why statistics are relevant and will become familiar with software that is commonly used in the public sector as well as the business world. In fun and interactive ways students will learn how: (1) to present and describe information; (2) draw conclusions about populations of interest using sample information; (3) make reliable forecasts; and (4) ultimately to gain knowledge about improving organizational processes in the public as well as private sectors by using statistics.

This course introduces the concepts and techniques of elementary statistics. Topics include descriptive statistics, discrete and continuous probability distributions, sampling distributions, confidence intervals, hypothesis testing, and linear regression. This course is designed to provide students with the essential tools used in statistical analysis. The software Excel will be used throughout the course.

Learning Objectives:

To be able to organize and display data clearly and effectively.

To be able to describe and compute characteristics of data.

To understand the concept of probability, including additive and multiplicative rules, mutually exclusive and independent events.

To understand and be able to work with discrete and continuous probability distributions, and their expected values.

To understand and compute probabilities from sampling distributions.

To do estimations using confidence intervals.

To understand and perform hypothesis testing.

To understand and perform linear regression analysis.

Required Readings

Books: Levine, David M., David F. Stephan, & Kathryn A. Szabat (2014). Statistics for managers using Microsoft Excel. 7th edition. Pearson Education Inc.

DATE	ТОРІС	READINGS
Week 1	Data	Chapters 1-3
August 1 & 3		
Week 2	Probabilities and distributions	Chapters 4-7
August 8 & 10		
Week 3	Confidence intervals and hypothesis	Chapters 8-10
August 15 & 17	testing	
Week 4	Analysis of variance and simple linear	Chapters 11-13
August 22 & 24	regression	
Week 5	Multiple regression	Chapters 14&15
August 29 & 31		

Summer 2017 Schedule (Faculty may alter schedule and reading assignments)

Student Assignments / Basis of Evaluation

- Participation Students must attend class having completed the readings and prepared to fully
 participate in class discussions and exercises. Students are expected to fully engage in
 discussions, presentations, exercises, and learn from them. If you are unable to attend class,
 please discuss this with the instructor to find a way to make up the work.
- 2. Homework exercises Students will be required to complete and submit exercises from the textbook on weekly basis.
- 3. Group assignment Datasets and instructions for the final group project will be provided.

Course Policies

Format: Unless otherwise noted, all written assignments should be typed, double spaced, 12 point font, and follow APA format and citation style. [APA Style http://www.apastyle.org/learn/index.aspx Purdue Writing & Grammar Guide http://www.apastyle.org/learn/index.aspx Purdue Writing & Students may request resource writing assistance from faculty and/or the Graduate Writing Assistant.

Participation and attendance: Students are required to attend each class meeting in its entirety. Participation includes focusing on class content, speaking in class and seminar, listening to others, taking notes, completing class interactive exercises, avoiding distractions, and listening to and dialoging with the guest speakers. If an absence is unavoidable, faculty should be notified prior to a class. After one absence per quarter (4 hours), make-up work may be assigned at faculty discretion, case-by-case. Makeup work must be completed by the deadline assigned to ensure full receipt of course credit. After three absences (12 hours) students may be denied full credit. After reoccurring weekly absences (missing an hour of class week to week) students may be denied full credit. Finally, if students do miss a class, they are expected to do the reading for that class meeting and turn in any assignments that were due that class date.

Late assignments: Turning in assignments late is unacceptable. However, if there is an unavoidable need to turn in an assignment late, the student should contact their seminar faculty no later than the original assignment due date to discuss options. Parameters are left to the discretion of the faculty on a situation-by-situation basis. Late assignments must be completed by the revised due date to ensure full receipt of course credit.

Credit: Students will receive four graduate credits at the end of the course if all requirements have been satisfactorily completed. Students will be evaluated based upon their progress towards the learning objectives, assessed from classroom, seminar, and assignment performance. <u>No incompletes will be awarded.</u> Full loss of credit decisions will be made by the faculty. Full loss of credit for two terms of core may result in dismissal from the MPA program. Plagiarism (i.e., using other peoples' work as your own) may result in total loss of credit for the class and may result in dismissal from the MPA program. See the <u>MPA Handbook</u> and <u>College statement on academic honesty</u> for more information. Failing to meet course requirements (ex. not completing one or more assignments, completing one or more assignments late, or multiple absences) may constitute denial of total credit at the discretion of the faculty. Students at risk of losing credit will receive written notification prior to the end of the quarter.

Evaluation: A written self-evaluation and faculty evaluation are required each quarter for credit. All final evaluations are to be submitted via my.evergreen.edu. Evaluation conferences may occur in-person or over the phone.

Multiculturalism and diversity: Faculty and students will actively work towards contextually weaving multiculturalism and diversity throughout our learning as related to readings, lectures, seminar, and group projects. In a learning community students and faculty share the responsibility for the teaching and learning environment. Multiculturalism and diversity is to be understood as: aiming to promote constructive community discourse about issues of culture, power, and differences including but not limited to race, ethnicity, color, nationality, sex, gender, gender identity, gender expression, class, sexual orientation, age, religion, (dis)ability, and veteran status.

Technology use and learning styles: We all have different ways of acquiring new knowledge. Therefore, faculty will actively work towards providing information in multiple formats: tactile, auditory, visual, experiential, etc. However, style applications are limited to means appropriate for the classroom environment. (Activities such as surfing the internet, posting on/checking social media, reading unrelated materials such as e-mail, playing with an IPOD, laptop, or cell phone are not appropriate.) Consult your faculty to discuss learning style options.

Reasonable accommodations will be provided for any student who qualifies for them through a working relationship with Access Services. To request academic accommodations due to a disability, please contact the office of Access Services for Students with Disabilities (867-6348 or 6364). If the student is already working with the office of Access Services the faculty should have received a letter clearly indicating the student has a disability that requires academic accommodations. If any student has a health condition or disability that may require accommodations in order to effectively participate in this class, please do the following: Contact faculty before class and Contact Access Services to receive a letter of accommodation. Information about a disability or health condition will be regarded as confidential. Please refer to TESC's <u>Students with Disabilities Policy</u>.

Conduct and conflict resolution: Discuss any problems involving others in the learning community directly with the individuals involved (so long as the concerned party feels safe doing so). Possessing

respect for others is fundamental to an open, free, and educational dialogue. All students are expected to support and contribute to a well-functioning MPA classroom and learning community. Behavior that disrupts the learning community may be grounds for disciplinary action, including dismissal from the MPA program. All students will be held accountable for maintaining the highest of academic standards.

We will abide by the <u>social contract</u>: WAC 174-121-010 College philosophy. We will abide by the <u>student conduct code</u> (including academic integrity and plagiarism): Chapter 174-123 WAC, Student Conduct Code & Grievance/Appeals Process. We will abide by the <u>non-discrimination policies and procedures at TESC.</u>

Guest policy: Guests are welcome to visit our learning community during class time and seminar meetings with discretionary approval from course faculty in advance of the requested visit. It is the host student's responsibility to contact the faculty with details about the requested guest visit and await approval. Guests must abide by all social contract conduct code, and nondiscrimination policy guidelines as aforementioned in this syllabus.

Inclement weather: In the event of bad weather or emergencies students should check with for announcements of campus closures. Students can call the main campus line 867-6000 to get the latest news regarding a campus closure or delay. Faculty may decide to cancel a class meeting even if campus is open and we will send an all-class email prior to 3:00 pm the day of class. Students are responsible for checking email and ensuring viable transportation options are available to them.

Communicating: Email and Canvas are our primary means of communication. Students are responsible for checking their Evergreen email and Canvas regularly.