Oklahoma City University Meinders School of Business

ECON 5313-10 Spring 2020 Syllabus

**Data Analysis for Business Decisions**

**DATES:** Jan 13, 2020 - Mar 13, 2020

**COURSE PREREQUISITE:** graduate standing

**CURRICULUM REQUIREMENT:**  This course is required for all MBA students

P**ROFESSOR:** Shahrzad Ghourchian, Ph.D.

**ON CAMPUS OFFICE LOCATION:** Meinders School of Business-Suite 205E

**OFFICE PHONE**: 405-208-5525

**ONLINE OFFICE HOURS: Zoom Office Hours-Tuesdays 5 to 7 pm**

**ZOOM LINK:**

**EMAIL:** sghourchian@okcu.edu

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**Required Texts:** James R. Evans, Statistics, Data Analysis, and Decision Modeling, Pearson, Fifth Edition, 2013 (ISBN-13: 978-0-13-274428-7).

**REQUIRED SUPPLEMENTS:**

* A personal computer is required. The primary software will be MS Excel. Excel has some limitations and needs additional add-ins. PHStat is a collection of statistical tools that enhance the capabilities of Excel. You need to install Excel 2016 and PHStat on your computer. You may go to your account on Blue Link to get access to a free copy of MS Office provided by Oklahoma City University’s Campus Technology Office.
* Please go to [www.pearsonhighered.com/evans](http://www.pearsonhighered.com/evans) and register as a student. You should be able to get access. Please let me know if you have any questions about the installation of Excel 2016 and PHStat. For more information, please refer to page xxii of your text.
* An increasing number of students recently use Macintosh laptops rather than Windows laptops. Fortunately, this is not a big problem, and the students have followed along fine with their Macs. However, these students should be advised to use a Windows emulation program (Bootcamp or Parallels are good candidates), along with Office for Windows. If you use Office for the Mac, you are bound to experience some difficulty, and there is no guarantee that the add-ins used throughout the book will work. Please be sure that the latest Excel version is installed on your computer.

**INTRODUCTION:**

* Living in the age of technology has implications for everyone entering the business world. First, technology makes it possible to collect huge amounts of data. Second, it has given more people the power and responsibility to analyze data and make decisions. A large amount of data already exists and will only increase in the future. One of the hottest topics in today’s business world is **business** **analytics**. This term encompasses all of the types of analysis discussed in this course. It also typically implies the analysis of very *large* data sets.
* This course combines topics from two separate fields: statistics and management science.
* Statistics is the study of data analysis. Management science is the study of model building, optimization, and decision making. Statistical analysis and quantitative methods have been helpful in decision making and problem solving when managers are encountered with large complex problems. This course is designed to be very example-based and practical.

**Course Description:**

* This course focuses on the identification and access of information sources and analyzing the information to make informed decisions and solve managerial problems. Among the topics included are numerical and graphic description of data, confidence intervals, hypothesis testing, decision modeling, regression analysis and predictive modeling, time series analysis, linear allocation models, and simulation. The course mainly utilizes MS Excel. The use of spreadsheet will be integrated into all aspects of this course. Therefore, the focus of the course will be the application of the theories and formulas to a functional area of business by utilizing computer, getting the solutions and results, and the interpretation of results.

**GENERAL COURSE OBJECTIVES:**

* Gaining a basic understanding of the science of statistics (e.g., factual knowledge, methods, principles, generalizations, theories)
* Learning to apply course material (to improve thinking, problem solving, and decisions)
* Learning appropriate methods for collecting, analyzing, and interpreting numerical information

**Specific Course Learning Objectives:** The main objective of this course is to prepare the students to analyze data using computer.

**The other objectives are the following:**

At the end of this course the student should demonstrate an ability to:

* make sense of data by constructing appropriate numerical summary measures, tables, and graphs.
* use different tools to examine relationships between different types of variables.
* to explain the basic concepts and tools necessary to work with probability distributions to deal with many sources of uncertainty in business.
* analyze decision problems that involve uncertainty.
* develop algebraic and spreadsheet models to solve optimization problems.
* develop simulation models to imitate real-life business situations.
* estimate population parameters from samples, test hypothesis, forecast, manage real data sets, and interpret the results.
* solve managerial problems and make managerial decisions in the business world using the analytical tools learned in this course.
* use spreadsheet software to solve statistical problems.

**METHODS:** During this course, you will use your textbook extensively. You will have weekly assignments, and you will take two tests.

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**Course Assignments and Grading:**

The final course grade will be comprised of the following elements:

* Assignments 60%
* Course Project 40%

**GRADING SCALE:** The following scale will be used to assign students’ grades:

94% and higher = A 90-93.9 = A- 87-89.9 = B+

84-86.9 = B 80-83.9 = B- 77-79.9 = C+

74-76.9=C 70-73.9=C- 60-69.9 = D

less than 60% = F

**INCOMPLETE GRADE POLICY:**

* Oklahoma City University's incomplete grade policy stated in the university bulletin is as follows: "The student must be performing at a passing level and have a legitimate reason to receive an “I.” Students cannot be assigned an “I” because they have excessive unexcused absences or because they are failing the course." The University’s incomplete course policy is contained in the undergraduate catalogue (page 38 for 2016-2017) available on the university website (www.okcu.edu).

**MAKE-UP POLICY**:

* If you miss an assignment, a quiz, or a test, there would be a zero credit for the portion of the course. There is no make-up for any portion of this course.
* This syllabus is considered to be a course contract between the student and the professor. Please examine the contents of this syllabus very carefully and ask questions if you have any problem with any part.

**COMPUTER HARDWARE AND EQUIPMENT REQUIREMENTS FOR ONLINE**

* Computer – regular access to a fairly recent Mac or PC, preferably not more than three years-old, with a current operating system to complete the online course activities in D2L. For more information regarding Campus Technology Service computer requirements, please click [HERE](https://www.okcu.edu/campus/resources/technology/resources/requirements).
* Operating System – Windows 10 or higher, Macintosh OS Yosemite or higher;
* Processor – i5 Intel processor or higher preferred;
* Memory – 4GB of DRAM or higher, 8GB of DRAM recommended;
* Plug-ins – Adobe PDF reader, Zoom;
* Browser - It is strongly recommended that Google Chrome or Firefox is used as your primary browser, Internet Explorer is not supported. More information regarding browser support of D2L, please click [HERE](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm?tocpath=Get%20started%7CBrightspace%20platform%20requirements%7C_____7).
* Video and audio capabilities;
* Regular access to the internet and capable of downloading large files efficiently;
* Webcam
* Headset or microphone/speakers – We may be located in different location but we still want to see you! Video conferencing is extremely powerful. We may be using video conference software with you. Most computers have integrated cameras and mics, but please check your computer to ensure both work and to familiarize yourself with the settings.

**COURSE POLICIES AND INFORMATION FOR STUDENTS**

**ATTENDANCE POLICY**:  
The course is designed to take about 10-12 hours per week. Students should plan to log in to the course several times each week—there will be regular due dates for discussions topics on Wednesday and Saturday of each week, in addition to weekly due dates for assignments. Student participation is an important part of the success of this course, but we also recognize that students have work schedules, and personal responsibilities that need attention. Please call: 405-208-5525**, or e-mail:** sghourchian@okcu.eduto work out a path to success and to help stay caught up.

* Please note that online participation is automatically tracked by D2L. It is expected that each student will access the course website a minimum of three times per week. Failure to do so will result in a student's grade being lowered. Of special note, because of the intensive nature of online learning; as stated above, students should expect to allocate at least 10-12 hours per week for each course.

**CARE AND RESPECT:** Each student is expected to conduct himself/herself in a professional manner during the class - whether face-to-face or online - taking full advantage of the learning opportunities available. This includes active participation in group work, participating in weekly online discussions and assignments, adhering to proper Netiquette. Netiquette refers to a set of behaviors that are appropriate for online activity-- especially with e-mail and threaded-discussions. The core rules of Netiquette can be found at: [The Core Rules of Netiquette](http://www.albion.com/netiquette/corerules.html).

**NETIQUETTE**

*The rules of etiquette that apply when communicating over computer network.*

* Instructors may add to the below Netiquette standards in order to guide your learning on a course by course basis. These will be located in a module under the “Content” tab in D2L.
* OCU email or the “Ask the Instructor” forum/topic will be used for all communication.
* Check your OCU email and LMS on a daily basis.
* Students must use the LMS to submit assignments. No assignments will be accepted through email.
* Contact your Instructor first or cc them when requesting technical support.
* Submit all Learning Management System (LMS) requests for support to [D2LHelp@okcu.edu](mailto:D2LHelp@okcu.edu).

**WORK SUBMISSION POLICY:**

* All work needs to be completed using the D2L dropbox for written assignments and submitted online per the instructor's request. In the event of technical problems, the instructor will arrange for alternative submission procedures and activities. Immediately contact the instructor in case of technical problems. All assignments must include a title page, be typed, double-spaced, 12-point Times New Roman font, 1-inch margins and professionally presented including accurate spelling, grammar, punctuation, etc. All assignments must follow APA guidelines for style, citations, and APA references.

**NOTE:** This is a master’s level course, and as such it is expected that work be submitted complete and on time. The pace of this course requires that assignments be completed in a timely manner since assignments build on one another**.**

**ETHICS/VIOLATIONS OF ACADEMIC INTEGRITY:**

* Academic honesty is required in all aspects of a student’s relationship with the University. Academic dishonesty may not be course-specific and includes falsification or misrepresentation of a student’s academic progress, status, or ability, including but not limited to, false or altered transcripts, letters of recommendation, registration or advising forms, or other documents related to the student’s academic career at Oklahoma City University or other colleges or universities. The policy regarding cheating and plagiarism can be found in the University Catalog. I expect it to be followed. “Students are advised that cheating and plagiarism are not tolerated. The university expects all students to maintain a high standard of ethics in their academic activities. In this context, forms of academic dishonesty include, but are not limited to cheating on tests, examinations or other class/laboratory work; involvement in plagiarism (the appropriation of another’s work and/or the unacknowledged incorporation of that work in one’s own); collusion (the unauthorized collaboration with another person); misrepresentation of actions; and falsifying information.” The university’s academic honesty policy is published in the 2018-19 undergraduate catalog (pages 31-32) and the 2018-2019 graduate catalog (pages 33-34).

**ONLINE RESOURCES FOR STUDENTS**

**TECHNOLOGY SUPPORT:** For University-supported technologies, the OCU Helpdesk is available M-F, 8am-8pm Central Time. You may contact the Help Desk in any of the following ways.

* 405-208-5555; [helpdesk@okcu.edu](mailto:helpdesk@okcu.edu)
* CTS Homepage - <https://www.okcu.edu/campus/resources/technology>

If your online course or program requires the use of technologies that are not supported by the University, you should be able to find information about how to access support for those tools in your syllabus and/or your course website in D2L. (i.e. ExamSoft).

**LEARNING MANAGEMENT SYSTEM SUPPORT:** The University utilizes Desire2Learn or D2L as its platform to deliver digital course content. [OCUonline.okcu.edu](https://ocuonline.okcu.edu/) You may contact the D2L Help Desk in any of the following ways.

* 405-208-5584; [D2Lhelp@okcu.edu](mailto:D2Lhelp@okcu.edu) *(email preferred)*
* Use the same single-sign on username and password provided for [BlueLink](https://bluelink.okcu.edu/) to access D2L.
* **Use this online** [System Check](https://ocuonline.brightspace.com/d2l/tools/system_check/systemcheck.asp?ou=20589) to determine whether or not your computer is compatible with D2L.
* **For a basic overview of D2L functionality**, visit our printable guides for [Students](https://drive.google.com/file/d/1_vZTFg8sKTpLTsO1n-GnBj3qw4-BuWpE/view?usp=sharing) and [Faculty](https://drive.google.com/file/d/0B-j0-R8gV_1lclltR2k2a3g2T1U/view?usp=sharing).

**LIBRARY INFORMATION & RESEARCH SUPPORT**

* The Dulaney-Browne Library provides online access to databases of journal articles, books, videos, musical recordings, and scores. Librarians also provide individual assistance to students on topics from basic orientation through dissertation research. Visit the library home page at <https://libguides.okcu.edu> or explore research guides by topic and make an appointment with your librarian at <https://libguides.okcu.edu/research>.

**ACADEMIC COMPLAINTS:**

* Regarding online distance-delivered classes must be filed with a designated board, bureau, or agency for the state in which you reside. Information for each state can be found at:

[OKCU Academics Distance Learning Complaints](https://www.okcu.edu/academics/distance-learning-complaints) –

**CIVIL RIGHTS, EQUITY AND ACCESS**

**DISABILITY RESOURCES:** If you believe that you need reasonable accommodations for a documented physical, psychiatric, and/or learning disability or attention disorder, please make sure to register with Campus Disability Services by filling out the New Student Application at the following link:

[OKCU Disability Information Form](https://andes.accessiblelearning.com/s-OKCU/ApplicationStudent.aspx)

The Senior Coordinator for Access and Academic Support is responsible for coordinating student disability-related accommodations and, if approved, will issue students a Letter of Accommodation. Reasonable accommodations may require early planning and are not provided retroactively, so please start this process as soon as possible. If you have general questions about reasonable accommodations, you may contact the Senior Coordinator for Access and Academic Support, Jenny Minsberg, located on campus in DBL 106C, e-mail: [jlminsberg@okcu.edu](mailto:jlminsberg@okcu.edu) or [disabilityservices@okcu.edu](mailto:disabilityservices@okcu.edu) phone:405-208-5895.

**NONDISCRIMINATION POLICY**

The Nondiscrimination Policy prohibits discrimination in the University community, 6/26/2019 including students, faculty, staff, guests, and visitors. Acts of discrimination, including harassment based on a protected category, may limit, deprive, or deny educational/employment access, benefits, and opportunities. This policy prohibits discrimination based on race, ethnicity, national origin (including ancestry), religion, sex, gender identity, gender expression, sexual orientation, pregnancy, age, disability, domestic violence victim status, veteran or military status, and other protected categories under federal law. For a complete list of prohibited forms of discrimination, definitions, and examples, please visit University Policies - Oklahoma City University to access the Nondiscrimination Policy.

The University’s Civil Rights Investigator, Dr. Kristi Pendleton, oversees prevention and response programs addressing discrimination in our community. To make a report, ask questions, or learn more, please contact Dr. Kristi Pendleton at (405) 208-6301 or e: mail to:kapendleton@okcu.edu.

**STATEMENT ON SEX AND GENDER-BASED DISCRIMINATION SEXUAL HARRASSMENT AND MISCONDUCT (TITLE IX):**

Under Title IX, you have the right to an education free of sex or gender-based discrimination, harassment, and violence. Issues addressed by Title IX include acts of discrimination, sexual harassment, sexual violence, dating violence, domestic violence, stalking, and sex or gender-based hate crimes. Title IX also addresses acts of discrimination and/or harassment that are based on gender identity, gender expressions, sexual orientation, and pregnancy and/or parenting status. Title IX applies to students, faculty, staff, guests, and anyone accessing OCU programs and services. If you would like to make a report or learn more, please contact OCU’s Title IX Coordinator Joey Croslin by calling (405) 208-5075, e:mail: [jcroslin@okcu.edu](mailto:jcroslin@okcu.edu) or visit <http://www.okcu.edu/admin/hr/titleix>. That website also contains links to other local resources, OCU’s non-discrimination policies and procedures, and contact information for the University’s Title IX administrators. When on campus, for emergencies, please call campus police at (405)208-5911 or local police at 911.

**RELIGIOUS ACCOMMODATION**

Oklahoma City University seeks to be supportive of religious observance among the members of our diverse campus community and to be as accommodating as possible. Students should discuss with their instructor at the beginning of the semester forms of religious observance (dress, fasting, specific prayer times) that may affect their full participation in the course. Students should also compare the class schedule to their own religious calendar to determine if there will be any class days in which the student expects to be absent due to the observance of a religious holiday. Students must notify the instructor, in writing, of the expected absence within the first two weeks of the semester. The instructor will then work with the student to develop a plan to reschedule any exams, assignments, or course activities for that day. The instructor, at his/her own discretion, will make reasonable accommodations wherever possible. Students should recognize, however, that there may be some course aspects that cannot be rescheduled or accommodated, and it will therefore rest upon the student to determine whether they wish to remain enrolled in the course or have their grade potentially affected.

**RESOURCES ON CAMPUS**

* For emergencies when you are on campus, you can contact OCU’s police department at (405) 208-5001.
* For free and confidential support on campus, you can contact University Counseling by calling (405) 208-7901.
* For medical issues, you can contact the Campus Health Center at (405) 208-5989. They are confidential as well.

**EVACUATION AND SHELTER LOCATION**

* If you are on campus, in case of inclement weather or some other need to evacuate and take shelter, for the Meinders School of Business, the appropriate Tornado Shelter is on the first floor, in either the North or South Hallways or First Floor Bathrooms. For Evacuation Location, please gather at the West Plaza of the Meinders School of Business.

**DISCLAIMER**

* The instructor reserves the right to make modifications to this information throughout the semester.

**Course Schedule of topics, readings and Assignments**

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| --- | --- | --- |
| **DATE** | **TOPICS & DUE DATES** | **ASSIGNMENTS** |
| **WEEK ONE** | | |
| **1-13 to**  **1-19** | * Welcome to Data Analytics * Introduction to Class; * Icebreaker – Input from students about themselves; * Original threads due on or before Weds. * 2 responses due question by Sat. * Tuesday-Weekly zoom office hours meeting 5-7 pm | * Reading: * Chapter 1: data and business decisions * Chapter 2: descriptive statistics and data analysis * Assignment #1 due on Jan 20 * Discussions: |
| **WEEK TWO MODULE** | | |
| **1-20**  **NO Class**  **MLK Holiday**  **1-21 to**  **1-26** | * Original threads due Weds 2 responses per question due on or before Sat. * Tuesday-Weekly zoom office hours meeting 5-7 pm | * Reading: Chapter 4: sampling and estimation * Assignment #2 due on Jan 27 * Discussions: |
| **WEEK THREE MODULE** | | |
| **1-27 to 2-2** |  | * Reading: Chapter 5: hypothesis testing and statistical inference * Assignment #3 due on Feb 3 * Discussions: |
| **WEEK FOUR MODULE** | | |
| **2-3 to 2-9** | * Original threads due on or before Weds. * 2 responses per question due on before Sat. * Tuesday-Weekly zoom office hours meeting 5-7 pm | * Reading: Chapter 6: regression analysis * Assignment #4 due on Feb 10 * Discussions: |
| **WEEK FIVE MODULE** | | |
| **2-10 to**  **2-16** | * Original threads due on or before Weds. * 2 responses per question due on or before Sat.  Tuesday-Weekly zoom office hours meeting 5-7 pm | * Reading: Chapter 7: forecasting * Assignment #5 due on Feb 17 * Discussions: |
| **WEEK SIX MODULE** | | |
| **2-17 to**  **2-23** | 2 responses per question due on or before Sat.   * Tuesday-Weekly zoom office hours meeting 5-7 pm | * Reading: Chapter 9: building and using decision models * Chapter 10: decision models with uncertainty and risk * Assignment #6 due on Feb 24 * Discussions: |
| **WEEK SEVEN MODULE** | | |
| **2-24 to 3-1** | * Original threads due on or before Weds * 2 responses per question due on or before Sat * Tuesday-Weekly zoom office hours meeting 5-7 pm | * Reading: Chapter 11 decision, uncertainty and risk * Assignment #7 due on March 2 * Discussions: |
| **WEEK EIGHT MODULE** | | |
| **3-2 to 3-8** | * Original threads due on or before Weds. * 2 responses per question due on or before Sat. * Tuesday-Weekly zoom office hours meeting 5-7 pm | * Reading Chapter 13 linear optimization * Assignment #8 due on march 9 * Discussions: |
| **WEEK NINE MODULE** | | |
| **3-9 to 3-13** | * Finals week * Projects are due | * Course Projects are Due * Discussions: |