Syllabus QMB-5304 Introduction to Managerial Statistics

Sections 2400 & 2404, 2 credits, Fall 2017, Mod 1

Instructor: Keith Florig. The best way to reach me is by email (<u>kflorig@ufl.edu</u>) rather than by the in-mail facility in Canvas. Office hours (in 225 Stuzin): M/W 2:30-3:30 pm or by appointment

<u>Teaching Assistant:</u> Pratik Pattnaik, <u>pratik.pattnaik@ufl.edu</u> Office hours (in Hough 3rd floor lounge): W 2:00-3:00 pm

Meeting coordinates:

Section 2400	Section 2404
M/W, 8/21-10/04	M/W, 8/21-10/04
9:35am – 11:30am, HGS 240	11:45am -1:40pm, HGS 240
No class on M, 9/4 (Labor Day)	No class on M, 9/4 (Labor Day)

<u>Course Description</u>: Business decisions can be better informed by collecting and analyzing data. Gaining insight from data is the main goal of Statistics. This course offers some basic concepts and methods to make good use of data, and to assess the uncertainty in conclusions drawn from it. For list of topics covered in this course, see the Course Schedule on the last page of this syllabus.

Prerequisite: Students are assumed to have completed an introductory course in probability and statistics. A brief review at the start of the course will refresh concepts previously encountered.

<u>Course Website</u>: Course materials will be posted on our course's Canvas website. The login page is located at <u>lss.at.ufl.edu/</u>

Textbook : The recommended textbook is Albright & Winston's <u>Business Analytics: Data Analysis and</u> <u>Decision Making</u>, 6th edition. You can purchase either the ebook alone (ISBN 9781337094993, \$92.44 through the UF bookstore) or the ebook bundled with a loose-leaf paper copy of the book (ISBN 9781337358446, \$144.00 through the UF bookstore). The ebook for both options allows printing of individual pages. Both options also include access to a number of helpful resources through the publisher's online MindTap[®] system. For instructions on how to register with MindTap and access your ebook and other resources, read "How to access your MindTap course.pdf" in Canvas>Files.

Supplemental resources:

The textbook publisher's MindTap systems has video tutorials and other aids to help you. In addition, Khan Academy has many excellent video tutorials on probability and statistics. Each is brief and accessible. <u>https://www.khanacademy.org/math/probability</u>

Software: Because it is readily available, we will use Excel for data analysis. You will need to assure that Excel's Analysis Toolpak add-in is installed on your computer. For help with installation and use of the Analysis Toolpak, go to Canvas > Files and download "Using Excel's Analysis ToolPak Add-In." For help

with other functions of Excel, consult the Excel Tutorial in the same location. Short video tutorials on specific excel functions can be found by searching Youtube.

Although purchasing the textbook enables free access to a statistical package called StatTools, we will not use StatTools in this course because it is not common in the outside world. However, you might want to download StatTools and explore its capabilities.

Lecture PPTs: Lecture slides will be posted to Canvas>Files. You will learn the material best if you review the PPTs before lecture, rather than read them during class.

Component	Weight	
Syllabus quiz	3 %	
Attendance & class participation	7 %	
Individual homework	10%	
Team assignment	10%	
Exam 1	30 %	
Exam 2	40 %	

Grading: Final grades will be determined from the following components:

Your final grade for this course will depend on your relative ranking in the class. Following college guidelines, final grades will be assigned so the grade-point average for the entire section is no greater than 3.50. For instance, 20% A, 30% A-, 30% B+, and 20% B, is one possible distribution. Grades lower than B will be assigned if performance warrants. To monitor your relative performance on each exam/quiz/assignment, compare your score against the mean score posted on Canvas > Grades.

Syllabus quiz. All students must complete a brief quiz on the contents of this syllabus within one week of the start of the course. The quiz is available on Canvas. To get full credit for the quiz, you must get a perfect score, but you can take it as many times as you like.

<u>Attendance and class participation</u> are part of your grade. Excused absences are available only for certain documented situations as defined by <u>UF's attendance policy</u>. Job interviews are not excused absences. Religious observances are excused absences, provided I am notified by email (kflorig@ufl.edu) BEFORE the absence.

The following are particularly important for receiving full credit for attendance and class participation:

- Attend the section for which you are registered.
- Attend all classes
- Arrive on time.
- To assure credit for remarks in the classroom, each student should display a name card in large bold lettering at their seat.
- Contribute to class discussion.
- Silence your phone during class.
- Use your electronic devices only for class-related work during class.
- If you know in advance that you will miss an upcoming class, send me an email (kflorig@ufl.edu) to let me know.

Individual Homework:

Practice homework problems will be periodically assigned from the textbook. These problems and their solutions will be posted on Canvas > Files. Do not hand in your solutions to these practice problems.

Required homework problems will also be assigned from the textbook. There are 4 required individual homework assignments. The due dates for these are listed in the Course Schedule below.

Submit your required homework **in pdf format** via Canvas > Assignments. Include all of your calculations so the grader can follow your reasoning. Required individual assignments must be submitted before the start of class on the date that they are due. No late assignments will be accepted. When you upload your homework file, please use the following file name: FAM_GIVEN_SECTION, where FAM is your family name, GIVEN is your given name, and SECTION is your course section (either 2400 or 2404).

To receive full credit for a required homework assignment, your work must (1) reflect a good faith effort to address the assigned problem on your own, (2) show all the steps in your calculations, and (3) be submitted on time. Points will <u>not</u> be deducted for any errors that your solution might contain. Submitting solutions that have been copied from other students is plagiarism, for which there are serious penalties.

Solutions to required homework problems will be posted on Canvas > Files following the due date.

Team Assignment: During the last few weeks of the course, teams of 6-7 students will be formed to work on a team assignment involving some analysis and a team presentation. In grading this team assignment, the default assumption is that all team members contributed equally to the team product. If you feel this is not the case, you can send me email (kflorig@ufl.edu) asking me to survey your team members for an assessment of each team member's relative performance. Based on the results of this survey, team members' scores on the team assignment may be adjusted to better reflect the relative contributions of each team member. Your request for this survey must be sent to me before the date of your team presentation.

Exams: Exams test knowledge of concepts covered in the lecture notes (ppts) and assigned sections of the textbook. Exams will be on-line and multiple choice. Although exams are closed-book, you are permitted to use one handwritten 8.5x11 sheet of notes (ok to use both sides).

Exams may not be made-up unless there is a documented emergency (e.g., illness with doctor's note) as defined by the <u>UF's attendance policy</u>. In case of a medical emergency, requests for a make-up exam must be made to me via email (kflorig@ufl.edu) within one week after the test. Requests made after one week of the test date will not be honored.

To take an exam on the assigned day, **you MUST bring your wifi-enabled laptop to class**. You are responsible for having a working wifi connection. No make-ups will be offered for failure to bring your laptop with operational wifi.

<u>Student Performance and Accountability:</u> We follow the HGSB's guidelines at warrington.ufl.edu/graduate/academics/msm/docs/StudentPerformanceAccountability.pdf

Academic Honesty: UF policy provides serious penalties for academic dishonesty, including possible failure of the course and/or dismissal from the university. It is the student's responsibility to be familiar with the Student Honor Code: <u>dso.ufl.edu/sccr/process/student-conduct-honor-code/</u> Examples of honor code infractions include, but are not limited to, texting during an exam, copying from others during an exam, sharing contents of an exam with someone who has yet to take it, copying solutions to homework problems from others, submitting fake excuses for absences, forging a signature on a class sign-in sheet, and plagiarism (presenting the intellectual work of others as your own work without attribution).

<u>Accommodations for Students with Disabilities</u>: This course follows university guidelines for accommodating students with disabilities. Students can request accommodation by following the procedures at <u>dso.ufl.edu/drc/</u>

<u>Counseling Services</u>: Feeling overwhelmed? UF's Counseling and Wellness Center can help: <u>counseling.ufl.edu/cwc/</u>

Course Schedule, Readings, Quizzes, and Assignments

Subject to change. Monitor announcements on Canvas. The latest version of this syllabus will always be available on Canvas > Files > Syllabus

#	Day Date	Main Lecture Topic	Textbook sections to read BEFORE class	Today's deliverable (required)
1	М	Syllabus review	Ch. 2	
	8/21	Descriptions of a single variable: populations,		
		samples, data types, measures of central		
		tendency and variability, empirical rule for bell-		
		shaped numerical data		
2	W	Relationships among variables: COUNTIF,	Ch. 3	
	8/23	histograms, box plots, scatterplots, covariance,		
		correlation		
3	М	Probability, conditional probability,	Ch. 4	Syllabus quiz
	8/28	independence, probability trees, probability		Homework 1
		distributions, cumulative probability		
4	W	Normal and binomial distributions	Ch. 5	
	8/30	Sampling methods	Ch. 7-1 thru 7-3	
	M	Labor Day holiday. No class.		
	9/4			
5	W 9/6	Exam 1 on Chapters 2, 3, 4, 5 and 7-1 thru 7-3		Homework 2 Exam 1
6	М	Sampling distributions, standard error of the	Ch. 7-4 thru 7-5	
	9/11	mean, central limit theorem, confidence	Ch. 8	
		intervals		
7	W	Hypothesis testing	Ch. 9	Homework 3
	9/13			
8	М	Regression I: simple, multiple, dummy variables	Ch. 10	
	9/18			
9	W	Regression II: interactions, non-linear models,	Ch. 10, 11	
	9/20	training & validation, outliers,		
		heteroscedasticity		
10	М	Regression III: sampling distribution of	Ch. 11	Homework 4
	9/25	regression coefficients, ANOVA table,		
		multicollinearity, stepwise regression		
11	W	Team presentations on regression		Team PPTs and
	9/27			Excel workbook
12	M	Review session		
	10/2			
13	W	Exam 2 (cumulative)		Exam 2
1	10/4			

******* END OF SYLLABUS *******