

SYLLABUS: STATISTICAL RESEARCH METHODS

QMB 7565 (3 Credits) – FALL 2017, DBA20

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OFFICE HOURS: 9 am to 4 pm EST

COURSE WEBSITE: <http://elearning.ufl.edu>

COURSE COMMUNICATIONS: I check my e-mail all the time and e-mail is the easiest way to contact me. I will make every effort to reply ASAP. In case of emergencies I have provided my cell number. But that would be strictly for emergencies.

REQUIRED TEXT: An Introduction to Statistical Methods and Data Analysis, by R. Lyman Ott and Michael Longnecker (7th edition, Brooks/Cole Cengage Learning, 2010), ISBN 978-1-305-26947-7

REQUIRED SOFTWARE: We will use SPSS and Microsoft Excel to run our tests and analyze data

PURPOSE OF COURSE: Knowledge of statistics is important for any researcher who needs to extract information from quantitative or qualitative data. My purpose in this course is to introduce statistical tools required for hypothesis testing and linear models. This course should provide you with a package of statistical concepts and procedures that will help you understand how and why statistical techniques work and how to employ them in your research.

COURSE POLICIES:

ATTENDANCE POLICY: Necessary to attend all lectures as this is a fast paced course and missing certain sections would mean it would be difficult to understand later parts.

QUIZZES AND PROBLEMS: Throughout the course we will have quizzes to test the knowledge we have accumulated till that time. We will also give problems to be solved.

END OF COURSE FINAL EXAM: At the end of the course you will be given a final exam. Exam will consists of problems that will be similar to the ones we do in class. Sample final exam will be discussed in class.

MAKE-UP POLICY: Make-up assignments, quizzes and final exam will be given only if there is genuine emergency either of work related, medical, or personal nature. However, as much as possible you should discuss such things in advance with me. Then we can schedule an alternate place and/or time for your assignment/quizzes. In certain cases I will require documentary proof establishing the nature of emergency.

UF POLICIES:

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES: Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

UNIVERSITY POLICY ON ACADEMIC MISCONDUCT: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>.

GETTING HELP:

For issues with technical difficulties for E-learning in Canvas, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

TOPICS COVERED:

Module	Topics	Readings
Module 1 Descriptive statistics	<ul style="list-style-type: none">• Measures of central tendency• Measures of variability	Sections 3.3, 3.4, 3.5, 3.6
Module 2 Random variables and Random sampling	<ul style="list-style-type: none">• Probability distributions• Random sampling• Sampling distributions• Central Limit theorem and applications	Sections 4.6, 4.7, 4.8, 4.9, 4.10, 4.11, 4.12
Module 3 Statistical inference	<ul style="list-style-type: none">• Estimating population mean• Choosing sample size for estimation• Single variable hypothesis test• Level of significance of a statistical test• Power of a test• Inference about difference between two population means• ANOVA	Sections 5.2, 5.3, 5.4, 5.5, 5.6, 5.7 Sections 6.2, 6.4 Sections 7.2, 7.3 Sections 8.2, 8.3
Module 4 Regressions	<ul style="list-style-type: none">• Correlation• Estimating model parameters• Inferences about regression parameters• Lack of fit in linear regressions• Checking model assumptions	Sections 11.2, 11.3, 11.5, 11.7 Sections 12.2, 12.3, 12.4 Sections 13.4
Module 5 Categorical data	<ul style="list-style-type: none">• Goodness of fit Chi-square test• Contingency tables• Test for independence	Sections 10.3, 10.4, 10.5

Disclaimer: This syllabus represents my current plans and objectives. As we go through the course, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.