University of South Florida Sarasota-Manatee
Syllabus
QMB 3200, Section 591, 3 Credit Hours
Business and Economic Statistics II
Summer 2014, Room: B224

Instructor: Ram Govindu, Ph.D.
Email: rgovindu@sar.usf.edu
Office: C229
Office Telephone: 941-359-4523
Class Time: 5:00 –6:50 p.m.
Tuesdays & Thursdays

Office Hours: 7:00 –8:00 p.m.
Tuesdays & Thursdays
(Otherwise, through prior appointments)

PREREQUISITES:
QMB 2100 is a prerequisite for this course. It is assumed that you are proficient in topics covered in that course. The topics covered in QMB 2100 (chapters 1-11 and 19 of the textbook) include: Data description, exploratory data analysis, introduction to probability, binomial and normal distributions, sampling distributions, estimation with confidence intervals, tests of hypotheses and control charts for quality improvement.

COURSE DESCRIPTION (of QMB 3200):
Catalog Description of the course: Simple linear regression and correlation, multiple regression and model building, forecasting models, analysis of variance, chi-square tests, nonparametric methods.

Purpose of the course: The first course in Statistics (QMB 2100) covers descriptive statistics, probability distributions, statistical inference and hypothesis testing. QMB 3200 is the second course in Statistics. The purpose of QMB 3200 is to prepare students to appreciate the role statistics plays in data analysis, in finding relationships between variables, and decision making in various business environments.

COURSE TOPICS:
In addition to a quick review of the topics from the first course QMB 2100 (namely probability distributions, hypothesis testing, and inference); QMB 3200 primarily covers advanced statistical techniques such as chi-square test, analysis of variance, simple linear and multiple regression, time series analysis & forecasting, and non-parametric methods.

COURSE OBJECTIVES: At the conclusion of the course students should be able to:
1. Perform tests of hypotheses using Chi-Square tests – contingency table tests and tests of independence.
2. Design an experiment and perform Analysis of Variance on data, understand and interpret the ANOVA output of some statistical software package, test some common hypotheses related to Analysis of Variance.
3. Formulate simple and multiple regression models for business data, understand and interpret the regression output from some statistical software package, test some common hypotheses about relationships between variables.
4. Perform forecasts using various forecasting techniques and discriminate different methods using forecast accuracy measures
5. Perform hypothesis tests using Non-Parametric methods.
TEXT AND MATERIALS:
Statistics for Business and Economics, 12th Edition by:
David R. Anderson, Dennis J. Sweeney, Thomas A. Williams, Jeffrey D. Camm, and James J. Cochran
• Focus of QMB3200 is primarily on: Chapters 12, 13, 14, 15, 17, and 18

CANVAS USE:
The class syllabus is posted in Canvas, an online course management system. In this class Canvas will be used for posting presentations, assignments, quizzes, and any other material. Information on how to use Canvas is available at:
http://www.usfsm.edu/infocommons/students.php

COMPUTER LAPTOP USE:
USFSM requires all students to have laptops that can be brought with them to class. The Professor’s policy is as follows:
• You MUST bring and USE the laptop to practice solving problems in class.
• If the laptops are being used for any purpose other than learning the subject in class, then the Professor reserves the right to ask you to leave the class.

FLIPPED CLASSROOM COURSE:
QMB3200 will be conducted as a flipped classroom course. The flipped classroom is a pedagogical model in which the typical lecture and homework elements of a course are reversed. Every week, students learn (at home before the class session) the subject matter with the help of pre-recorded lectures, the text book chapters, and solve homework problems based on their learning. Students are strongly advised to seek/make use of instructor’s help and tutoring support as needed. Students need to bring their work along to class. The in-class time is devoted to discuss and review the subject matter, classroom exercises; and solving example and homework problems. Students have to prepare in advance, engage themselves in classroom hands-on exercises, solve problems, and present them to fellow classmates to extract the maximum benefit. After the class students will finalize their homework reports, solve online quizzes before the submission due dates and times indicated.

GRADING, EVALUATION, AND ATTENDANCE POLICIES:
<table>
<thead>
<tr>
<th>Homework Assignments</th>
<th>20%</th>
<th>(on-line submissions through Canvas)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes</td>
<td>15%</td>
<td>(on-line through Canvas)</td>
</tr>
<tr>
<td>Exam #1 (Take Home)</td>
<td>15%</td>
<td>(on-line submission through Canvas)</td>
</tr>
<tr>
<td>Exam #2 (In-Class)</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Exam #3 (In-Class)</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Grade cutoffs will be as follows:
95.0% for A+, 92.5% for A, 90.0% for A-
87.0% for B+, 83.0% for B, 80.0% for B-
77.0% for C+, 73.0% for C, 70.0% for C-
67.0% for D+, 63.0% for D, 60.0% for D-
Below 60.0% for F

Your score determines your grade. No individual requests for grade adjustments shall be entertained.
HOMEWORK ASSIGNMENTS:
Every week specific topic/s will be covered in class along with solved example problems. All Homework assignments are individual tasks. Homework assignments consist of a set of problems similar to the solved example problems on the PPT files and the text book chapters.

Every week, students learn (at home before the class session) the subject matter with the help of pre-recorded lectures, the text book chapters, and solve homework problems based on their learning. Students are strongly advised to seek/make use of instructor’s help and tutoring support as needed. Students need to bring their work along to class. The in-class time is devoted to discuss and review the subject matter, classroom exercises; and solving example and homework problems. Students have to prepare in advance, engage themselves in classroom hands-on exercises, solve problems, and present them to fellow classmates to extract the maximum benefit.

After the class you will finalize the homework report, and scan the report into ONLY ONE file and submit it on Canvas. The strict deadline for HW submission into the digital drop box will be 11:59 p.m. US Eastern on FRIDAY of the week. No late submissions shall be allowed under any circumstances. Be prepared to lose HW points if the Report is not turned in before the deadline. No e-mail submissions or hard-copy submissions are accepted. You get partial credit for incomplete submissions. HW report must demonstrate student’s own work. If any HW reports are found to be copied, ALL students who either helped or received help shall be treated as violators, will receive a zero score, and be reported for academic dishonesty. All HW scores shall count towards the final grade. Homework Reports will be graded for ‘Relevancy’ and ‘Completeness’ but not for ‘Accuracy.’ As long as the submissions are on time, relevant, and complete; you get full points. Solutions will be made available on Canvas within a couple of days past the deadline. It is your responsibility to compare solutions with your answers and learn from the same in preparation for exams. Seek either instructor’s or tutors’ help if needed. Please remember that solving Homework Assignments on your own is the most important step in preparing for exams.

QUIZZES:
Quizzes will test conceptual understanding for the subject matter. Every week, students learn (at home before the class session) the subject matter with the help of pre-recorded lectures, the text book chapters, and solve homework problems based on their learning. Students are strongly advised to seek/make use of instructor’s help and tutoring support as needed. After the class you will finalize the homework, submit the report, and work on the Quiz.

There will be six Quizzes in all - one each on the ‘entire Stats I review’; and five on each of Chapters 12, 13, 14, 15, and 17. Quizzes are also individual tasks. An on-line quiz will be posted on Canvas. Each quiz consists of a set of “multiple choice” and/or “fill-in the blank” type of questions. Each quiz will be timed and must be completed within allotted time before the deadline which would be 11:59 p.m. Eastern on Friday of the week. No late submissions shall be allowed under any circumstances. All quiz scores shall count towards final grade. A missed quiz will result in a score of zero. It always helps and perhaps the performance will be better if the quiz is attempted after completing the homework. Solutions will be made available within a couple of days past the deadline. Academic dishonesty will be dealt with very strictly under university policies. A sample quiz may be posted on Canvas.
EXAMS:
There will be three exams in all. All exams are individual tasks. Exam #1 will be a take home one based on Stats I review. Exam #1 will be assigned on Canvas and you will be submitting your reports online just like what you do for the homework assignments. No late submissions shall be allowed under any circumstances. There will be two exams to be held in class – Exam #2 and Exam #3. You must make sure that you can attend the class for the Exam or be prepared to lose points. There will be no make-up exams given. Exams will be open text book and open notes type. PPT files are also allowed. You can use your Laptop for Excel, Calculator, and view the PPTs; but not for anything else. Power Supply cannot be guaranteed. While there will be certainly number crunching involved, it will be minimized to the possible extent. Exams will test the understanding for the application of subject matter and interpretation of reports. Exam problems will be similar to HW problems. You would not need statistical packages for the exams. Academic dishonesty will be dealt with very strictly under university policies. All exam scores shall count towards final grade.

ATTENDANCE AND CLASS PARTICIPATION:
Attendance is mandatory on all days the class meets. When attending class in-person, students cannot show-up/leave at will. They must be present for the entire class duration and actively participate in class proceedings and solve problems. The nature of the course is such and there is also strong evidence that students who attend and participate in the classes (be them face-to-face and on-line) regularly end up learning the subject matter better and earn good grades. There are two mandatory tutoring/review meetings scheduled before the Exam #2 and Exam #3. There is historical evidence that students who attend those sessions perform well in the exams. If you happen to miss any class for any reason, you need to seek permission in advance through e-mail and need to make up for course coverage. Quizzes, Homework assignments, and Exams are due by the deadline indicated irrespective of whether you have missed a class. When in class, students have to participate in class proceedings and are strictly prohibited from playing with their electronic gadgets (like cell phone, laptop … etc.) and indulging in disruptive behavior that hinders learning of fellow students. Any disruptive behavior shall be reported and dealt with strictly under the academic disruption policy of USFSM.

FREE TUTORING: Students are strongly encouraged to utilize tutoring help.
1) Faculty Instructor will provide tutoring support as needed outside of class time, during office hours, and also through prior appointment. If needed, additional group review sessions could be planned.
2) In addition, Student Learning Support Services at USFSM also offers an Excellent FREE TUTORING for QMB 3200 - Business and Economic Statistics II through faculty and student tutors. 1-on-1 sessions, group sessions, weekly workshops, and on-line (Skype) sessions are available. Tutors at USFSM work closely with the instructor. Hence you are strongly encouraged to approach USFSM tutoring for help in this course. For further details: http://usfsm.edu/information-commons/tutoring/. You can see how to make an appointment at: http://usfsm.edu/information-commons/make-an-appointment/
3) Tampa (http://lib.usf.edu/tutoring/appointments/) and St. Pete (http://www1.usfsp.edu/success/) campuses also offer tutoring support. However, the instructor is not knowledgeable of their extent of support for QMB 3200 at USFSM and its students.
It is important to note that tutoring services are offered to help student learning and not for solving homework assignments for students. Students have to do the Homework on their own.
USFSM AND USF SYSTEM POLICIES

A. Academic Dishonesty: The University considers any form of plagiarism or cheating on exams, projects, or papers to be unacceptable behavior. Please be sure to review the university’s policy in the catalog, USFSM Undergraduate Catalog or USFSM Graduate Catalog, the USF System Academic Integrity of Students, and the USF System Student Code of Conduct.

B. Academic Disruption: The University does not tolerate behavior that disrupts the learning process. The policy for addressing academic disruption is included with Academic Dishonesty in the catalog: USFSM Undergraduate Catalog or USFSM Graduate Catalog, USF System Academic Integrity of Students, and the USF System Student Code of Conduct.

C. Contingency Plans: In the event of an emergency, it may be necessary for USFSM to suspend normal operations. During this time, USFSM may opt to continue delivery of instruction through methods that include but are not limited to: Canvas, Elluminate, Skype, and email messaging and/or an alternate schedule. It’s the responsibility of the student to monitor Canvas site for each class for course specific communication, and the main USFSM and College websites, emails, and MoBull messages for important general information. The USF hotline at 1 (800) 992-4231 is updated with pre-recorded information during an emergency. See the Safety Preparedness Website for further information.

D. Disabilities Accommodation: Students are responsible for registering with the Office of Students with Disabilities Services (SDS) in order to receive academic accommodations. Reasonable notice must be given to the SDS office (typically 5 working days) for accommodations to be arranged. It is the responsibility of the student to provide each instructor with a copy of the official Memo of Accommodation. Contact Information: Disability Coordinator, 941-359-4714, disabilityservices@sar.usf.edu, http://www.usfsm.edu/students/disability/

E. Fire Alarm Instructions: At the beginning of each semester please note the emergency exit maps posted in each classroom. These signs are marked with the primary evacuation route (red) and secondary evacuation route (orange) in case the building needs to be evacuated. See Emergency Evacuation Procedures.

F. Religious Observances: USFSM recognizes the right of students and faculty to observe major religious holidays. Students who anticipate the necessity of being absent from class for a major religious observance must provide notice of the date(s) to the instructor, in writing, by the second week of classes. Instructors canceling class for a religious observance should have this stated in the syllabus with an appropriate alternative assignment.

G. Web Portal Information: Every newly enrolled USF student receives an official USF e-mail account. Students receive official USF correspondence and Canvas course information via that address.
# Tentative Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5/13</td>
<td>Course Outline and Introduction to Statistics</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Segment 1 of 3: Quick Review of Stats I (Chapters 2 through 11)</strong></td>
</tr>
</tbody>
</table>
|      | 5/15  | Review – Descriptive Statistics, and Probability  
(A quick review of QMB 2100 – Chapters 2, 3, and 4) |
|      | 5/16  | **HOMEWORK #1 is Due before 11:59 p.m. Friday 5/16/2014** |
|      | 5/16  | Drop/Add class period ends |
| 2    | 5/20  | Review – Continuous Distributions, Sampling Distributions, and Point Estimation  
(A quick review of QMB 2100 – Chapters 5, 6, and 7) |
|      | 5/22  | Review – Continuous Distributions, Sampling Distributions, and Point Estimation  
(A quick review of QMB 2100 – Chapters 5, 6, and 7) |
|      | 5/23  | **HOMEWORK #2 is Due before 11:59 p.m. Friday 5/23/14** |
| 3    | 5/27  | Review – Interval Estimation, Statistical Inference, and Hypothesis Testing  
(A quick review of QMB 2100 – Chapters 8, 9, 10, and 11) |
|      | 5/29  | Review – Interval Estimation, Statistical Inference, and Hypothesis Testing  
(A quick review of QMB 2100 – Chapters 8, 9, 10, and 11) |
|      | 5/30  | **HOMEWORK #3 is Due before 11:59 p.m. Friday 5/30/14**  
**QUIZ #1 (on QMB 2100 Review) is Due before 11:59 p.m. Friday 5/30/14** |
|      | 5/30  | Exam #1 (Take-Home – on Chapters 5, 6, 7, 8, and 9) is Assigned |
|      | 6/2   | Exam #1 (Take-Home – on Chapters 5, 6, 7, 8, and 9) is Due before 11:59 p.m. Monday, 6/2/14 |
|      |       | **Segment 2 of 3: Stats II Part 1 (Chapters 12, 13, and 14)** |
| 4    | 6/3   | Chapter 12 – Tests of Goodness of Fit and Independence |
|      | 6/5   | Chapter 12 – Tests of Goodness of Fit and Independence (Continued …) |
|      | 6/6   | **HOMEWORK #4 is Due before 11:59 p.m. Friday 6/6/14**  
**QUIZ #2 (on Chapter 12) is Due before 11:59 p.m. Friday 6/6/14** |
<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>6/10</td>
<td>Chapter 13 – Experimental Design and Analysis of Variance</td>
</tr>
<tr>
<td></td>
<td>6/12</td>
<td>Chapter 13 – Experimental Design and Analysis of Variance (Continued …)</td>
</tr>
</tbody>
</table>
|      | 6/13  | HOMEWORK #5 is Due before 11:59 p.m. Friday 6/13/14  
QUIZ #3 (on Chapter 13) is Due before 11:59 p.m. Friday 6/13/14 |
| 6    | 6/17  | Chapter 14 – Simple Linear Regression |
|      | 6/19  | Chapter 14 – Simple Linear Regression (Continued …) |
|      | 6/20  | HOMEWORK #6 is Due before 11:59 p.m. Friday 6/20/14  
QUIZ #4 (on Chapter 14) is Due before 11:59 p.m. Friday 6/20/14 |
| 7    | 6/24  | Mandatory Tutoring/Review session for Exam 2 – (Chapters 12, 13, and 14) |
|      | 6/26  | Exam 2 (In-Class) – (Chapters 12, 13, and 14) |
|      | 6/28  | Last day to drop from a course with a ‘W’ grade, no refund, no academic penalty |
|      |       | **Segment 3 of 3: Stats II Part 2 (Chapters 15, 17, and 18)** |
| 8    | 7/1   | Chapter 15 – Multiple Regression |
|      | 7/3   | Chapter 17 – Time Series Analysis and Forecasting |
|      | 7/4   | HOMEWORK #7 is Due before 11:59 p.m. Friday 7/4/14  
QUIZ #5 (on Chapter 15) is Due before 11:59 p.m. Friday 7/4/14 |
| 9    | 7/8   | Chapter 17 – Time Series Analysis and Forecasting (Continued …) |
|      | 7/10  | Chapter 18 – Non-Parametric Methods |
|      | 7/11  | HOMEWORK #8 is Due before 11:59 p.m. Friday 7/11/14  
QUIZ #6 (on Chapter 17) is Due before 11:59 p.m. Friday 7/11/14 |
| 10   | 7/15  | Mandatory Tutoring/Review session for Exam 3 – (Chapters 15, 17, and 18) |
|      | 7/17  | Exam 3 (In-Class) – (Chapters 15, 17, and 18) |