STATISTICAL METHODS FOR MANAGEMENT

QMB 6305 3 Credit Hours

Lutgert College of Business, Florida Gulf Coast University
Professor Rajesh Srivastava
SPRING 2014 CRN 10441 Fridays 8:00-12:00
Lutgert Hall Room 2208

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E-mail: rsrivast@fgcu.edu
Office Hours: Tuesday 3:00- 6:00 PM, Thursday 1:00-2:00, and F 12:00 – 1:00 PM.
Other times by appointment.
Course Materials: Essentials of Modern Business Statistics with Microsoft Office Excel, 5e

Course Description
Statistics is the science of collecting, organizing, analyzing, and interpreting data to assist in making effective decisions. The purpose of this course is to learn how statistics can be used to help analyze and solve business problems. In this course, research methodology for collection and analysis of quantitative data is studied. Statistical concepts and techniques are learned that allow us to infer from the data, predict, and provide solutions to business problems. These statistical techniques have applicability in all areas of business, such as accounting, finance, marketing, human resources, and operations.

The course covers descriptive and inferential statistics. The application of these techniques to business will be discussed through case studies, problems and articles. At the end of this course, you should be able to apply the techniques to business problems, make rational decisions and conduct business research.

Course Objectives
The primary objective of this course is to help the student understand statistics and how statistical techniques can be applied in the business environment. More specifically, at the completion of the course, the following learning objectives should be achieved, and each student should be able to:
1. Understand basic descriptive and inferential statistics, its importance in effective decision-making in the business environment, its role in providing a competitive advantage to a firm, and its application in various functional areas of business.

2. Know the terminology, concepts, and methodology that are used in statistics.

3. Comprehend and apply selected statistical tools and techniques which might facilitate problem solving using readily available software such as Microsoft Excel.

4. To practice and improve your written and verbal communication skills, and therefore, enhance your ability to effectively interpret and communicate in business situations the results of your statistical analysis.

**Learning Outcomes**

The table below addresses the course learning outcomes and maps them to the EMBA learning outcomes.

<table>
<thead>
<tr>
<th>EMBA Learning Goals</th>
<th>EMBA Learning Outcomes</th>
<th>QMB 6305 Learning Outcomes</th>
<th>Assessment</th>
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</thead>
<tbody>
<tr>
<td>Technological proficiency</td>
<td>Graduates will be able to use technology to facilitate life-long learning, to enhance leadership development and to add value to stakeholders, customers, and employers.</td>
<td>Students will be able to use MS Excel and other Statistical Software to employ statistical techniques for data analysis</td>
<td>Exams, Project</td>
</tr>
<tr>
<td>Teamwork and interpersonal skills</td>
<td>Graduates will be able to work with others in diverse and cross-functional environments and to lead as the need arises.</td>
<td>Students will be able to analyze business data and work together to statistically analyze and infer from the data</td>
<td>Team project</td>
</tr>
<tr>
<td>Creative and analytical thinking</td>
<td>Graduates will be able to link data, knowledge, and insight to make quality strategic decisions on a timely basis.</td>
<td>Students will be able to select and apply the appropriate statistical technique to data for purposes of decision-making</td>
<td>Exam, Project</td>
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Performance Evaluation

Your final course grade will be determined according to the following requirements and their respective weights.

Exam I, Exam II 30%
Team project 35%
Class participation, cases 35%

Grades:

Grades will be assigned using the following letter grades scheme.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Letter</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;= 92</td>
<td>A</td>
<td>90-91</td>
</tr>
<tr>
<td>88-89</td>
<td>B+</td>
<td>82-87</td>
</tr>
<tr>
<td>80-81</td>
<td>B-</td>
<td>78-79</td>
</tr>
<tr>
<td>70-77</td>
<td>C</td>
<td>Below 70</td>
</tr>
</tbody>
</table>

Tentative Course Syllabus

Note: Cases should be prepared for class discussion

Session 1
1/03  Introduction to Class, Chapter 1: Data and Statistics
      Chapter 2: Descriptive Statistics: Tabular & Graphical Methods – Case 1 Pelican Stores, page 90

Session 2
1/17  Chapter 3: Descriptive Statistics: Numerical Methods
      Chapter 4: Introduction to Probability
      Chapter 5: Discrete Probability Distributions

Session 3
1/31  Chapter 6: Continuous Probability Distributions – Case Specialty Toys, page 281
      Chapter 7: Sampling and Sampling Distributions
      Chapter 8: Interval Estimation – Case 2 Gulf Real Estate, page 361

Session 4
2/14  Chapter 9: Hypothesis tests – Case 2 Ethical behavior of Business Students, page 411
Chapter 10: Analysis of Variance
Chapter 11: Comparisons involving proportions – Case – A Bipartisan Agenda, page 507.

Session 5
2/28  Chapter 12: Simple Regression – Case 1 Measuring Stock Market Risk, page 577, Case 3 Alumni Giving, page 578
Exam 1

Session 6
3/14  Chapter 13: Multiple Regression - Case Alumni Giving, page 635

Session 7
3/28  Chapter 15: Forecasting – Case – Forecasting Food and Beverage Sales,

Session 8
4/11  Review, Projects

Session 9
4/25  Exam 2

Project:
The project involves the analysis of sets of data collected by students, preferably from environments in which the student works or volunteers his/her time. Data may also be gathered from University processes for this project. Other examples are hobbies, sport activities, or some specific interest you may have. You are encouraged to submit your draft work to the instructor with sufficient time for review and feedback before presentation and final delivery. Again, you should pay attention to the quality of the work submitted since clarity, organization, and objectivity are an essential part of any management report. Points will be deducted for poor quality reports. The project is worth 35 points: 15 points for the analysis in a printed report, 15 points for work completed and presented for discussion in class at specified times, and 5 points for team presentation. The project data set(s) will be presented to and approved by the instructor by the end of meeting 2 (1/17/201423).

General:
If you have questions about any of the material ask me in class, e-mail a question to me, or see me in my office. Please follow the university guidelines regarding academic dishonesty and plagiarism.

Academic Behavior Standards and Academic Dishonesty
All students are expected to demonstrate honesty in their academic pursuits. The university policies regarding issues of honesty can be found in the FGCU Student Guidebook under the **Student Code of Conduct** and **Policies and Procedures** sections. All students are expected to study this document which outlines their responsibilities and consequences for violations of the policy. The FGCU Student Guidebook is available online at [http://studentservices.fgcu.edu/judicialaffairs/new.html](http://studentservices.fgcu.edu/judicialaffairs/new.html)

**Disability Accommodations Services**

Florida Gulf Coast University, in accordance with the Americans with Disabilities Act and the university’s guiding principles, will provide classroom and academic accommodations to students with documented disabilities. If you need to request an accommodation in this class due to a disability, or you suspect that your academic performance is affected by a disability, please contact the Office of Adaptive Services. The Office of Adaptive Services is located in Howard Hall 137. The phone number is 239-590-7956 or TTY 239-590-7930

**Student Observance of Religious Holidays**

All students at Florida Gulf Coast University have a right to expect that the University will reasonably accommodate their religious observances, practices, and beliefs. Students, upon prior notification to their instructors, shall be excused from class or other scheduled academic activity to observe a religious holy day of their faith. Students shall be permitted a reasonable amount of time to make up the material or activities covered in their absence. Students shall not be penalized due to absence from class or other scheduled academic activity because of religious observances. Where practicable, major examinations, major assignments, and University ceremonies will not be scheduled on a major religious holy day. A student who is to be excused from class for a religious observance is not required to provide a second party certification of the reason for the absence.

**ANGEL Learning Management System and Demonstration Site**

Information on ANGEL is available online at [http://elearning.fgcu.edu/frames.aspx](http://elearning.fgcu.edu/frames.aspx) and [http://elearning.fgcu.edu/section/default.asp?id=xxxDemoonlinecoursestudent](http://elearning.fgcu.edu/section/default.asp?id=xxxDemoonlinecoursestudent)

**Library Resources**

Main page: [http://library.fgcu.edu/](http://library.fgcu.edu/)

Tutorials & Handouts: [http://library.fgcu.edu/RSD/Instruction/tutorials.htm](http://library.fgcu.edu/RSD/Instruction/tutorials.htm)


Contact: [http://library.fgcu.edu/LBS/about/contactus.htm](http://library.fgcu.edu/LBS/about/contactus.htm)