

**San José State University**  
**College of Business/Marketing and Decision Science**  
**Bus 190 – Quantitative Business Analysis, Section (08), (28189) – Spring 2017**

**Course and Contact Information**

<b>Instructor:</b>	Benny Boveda
<b>Office Location:</b>	Business Tower 756
<b>Telephone:</b>	650-291-3204
<b>Email:</b>	Benny.Boveda@SJSU.edu
<b>Office Hours:</b>	Tuesdays 4:30 to 5:30 pm Thursdays 2: to 2:45 pm
<b>Class Days/Time:</b>	Thursday 3:00 pm to 5:45 pm
<b>Classroom:</b>	BBC 022
<b>Prerequisites:</b>	<b>BUS2 090 and MATH 071. Lower Division Business Pool or Business Minor. Not available to Open University Students.</b>

**Course Format**

Each class will consist of lectures by the instructor as a review of the assigned reading. The rest of the class time is scheduled as participation time for students to discuss chapter review problems, case review and discussion, learning group participation. Students are expected to do the assigned reading prior to class meeting.

Homework assignments will be listed on the course Canvas page. Assignments are due before the start of class on Tuesdays. Missing and Late homework assignments receive zero credit.

**Other Required Material**

Frontline Solver Analytics– Available to students for download from Cengage when purchasing a new textbook with access code.

**Required equipment**

A Laptop is required for classroom activities. Microsoft Excel (2011 or later version) competency is required, and familiarity with Frontline Solver, XLMiner Platform, and Data Analysis tools will be extremely useful.

**Faculty Web Page and MYSJSU Messaging**

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on my on the Canvas learning management system course website. You are responsible for regularly checking with the messaging system through MySJSU to learn of any updates.

## **Course Description**

This course covers several of the methodologies developed to assist managers with decision making. The curriculum includes a review of statistics fundamentals, probability, probability distributions, both continuous and discrete, and the use of decision trees for decision analysis. Linear, non-linear, and discrete optimization techniques are examined. Various aspects of CPM/PERT methods will be studied. The course encompasses the use of computer applications; primarily the Excel data analysis software application with a emphasis on the use of Solver, Goal Seeker and Statistical Analysis tools. Microsoft Project will be used for CPM/PERT plan development. Distribution and Network models will be introduced and a variety of decision making applications will be examined including Queuing Theory, Inventory Control

## **Learning Outcomes and Course Goals**

- Become familiar with several of the methodologies currently available to managers for making optimal decisions.
- Acquire an understanding of how to design and analyze decision trees.
- Enhance statistical analysis capabilities and familiarity with Discrete and Continuous Probability Distributions.
- Enhance understanding of Statistical Sampling, Simulation Tools and Regression Analysis in business applications.
- Learn how to set up and solve linear, non-linear, discrete and integrated optimization routines.
- Learn how to plan and manage a major business project using Microsoft Project.
- Learn how to apply and use Queuing Theory for process analysis.
- Learn how to model material flow, manage inventory and optimize inventory levels.

## **BSBA Program Learning Goals**

### **Goal One: Business Knowledge**

Understand basic business principles and demonstrate discipline-specific competencies as applied to local and global environments.

### **Goal Two: Communication**

Communicate ideas clearly, logically, and persuasively in oral and written format, using technology appropriately.

### **Goal Three: Ethical Awareness**

Recognize, analyze, and articulate solutions to ethical issues that arise in business.

### **Goal Four: Leadership, Teams and Diversity**

Comprehend the challenges and opportunities of leading and working in diverse teams and environments.

### **Goal Five: Critical Thinking**

Comprehend, analyze, and critically evaluate complex and unstructured qualitative and quantitative business problems, using appropriate tools and technology.

### **Goal Six: Innovation**

Recognize, analyze, and articulate strategies for promoting creativity and innovation.

## Course Learning Outcomes (CLO)

- Become familiar with several of the methodologies currently available to managers for the purpose of making optimal decisions.
- Acquire an understanding of how to design and analyze decision trees.
- Enhance statistical analysis capabilities and familiarity with Discrete and Continuous Probability Distributions.
- Enhance understanding of Statistical Sampling, Simulation Tools and Regression Analysis in business applications.
- Learn how to set up and solve linear, non-linear, discrete and integrated optimization routines.
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- Learn how to apply and use Queuing Theory for process analysis.
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## Required Texts/Readings

### Textbook

#### **Quantitative Methods for Business, 13th Edition**

By David R. Anderson, Dennis J. Sweeney, and Thomas A. Williams

**NEW Bundle:** Quantitative Methods for Business, 13th + CengageNOW™, 2 term ... (PAC 9781305717251. It comes with a Loose-Leaf book, 3-hole punch for a binder.

Here is the link to buy the access card only or the loose leaf bundle book and access card directly from Cengage, and not from our book store.

<http://services.cengagebrain.com/course/site.html?id=1496479>

CengageNow Access Card only, ISBN 9781305503236.

Class Section Key #E-Y84E2EKJYSSGN

CengageBrain registration textbook code (enter AQMB).

Course Code: BUS190S16

### Library Liaison

Library Liaison: Diana Wu – Phone: 408–808–2087 Email: [Diana.Wu@sjsu.edu](mailto:Diana.Wu@sjsu.edu)

## Course Requirements and Assignments

SJSU classes are designed such that to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in [University Policy S12-3](http://www.sjsu.edu/senate/docs/S12-3.pdf) at <http://www.sjsu.edu/senate/docs/S12-3.pdf>.

NOTE that [University policy F69-24](http://www.sjsu.edu/senate/docs/F69-24.pdf) at <http://www.sjsu.edu/senate/docs/F69-24.pdf> states that “Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but

because active participation is frequently essential to insure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading.”

## Grading Policy

### Final Examination

Final exam consists of multiple choice questions and word problems from the textbook. The final exam will place on the assigned date on the class schedule. More details can be found in [University Policy S06-4](http://www.sjsu.edu/senate/docs/S06-4.pdf) (<http://www.sjsu.edu/senate/docs/S06-4.pdf>) which states that “There shall be an appropriate final examination or evaluation at the scheduled time in every course, unless specifically exempted by the college dean who has curricular responsibility for the course.”

**Grade Distribution:** Exams will be graded on the accuracy of responses to key points asked in the questions. Exams consist of multiple choice questions, or essay questions. Some Quizzes and exams are taken on Canvas with browser lock-down. There will be no extra credit assignment for this class. Late assignments are not accepted and will receive zero credit. Missed assignments will receive zero credit, no make-up day.

Students are strongly encouraged to take courses to satisfy GE Areas R, S, and V from departments other than their major department. Passage of the Writing Skills Test (WST) or ENGL/LLD 100A with a C or better (C- not accepted), and completion of Core General Education are prerequisite to all SJSU Studies courses. Completion of, or co-- -registration in, 100W is strongly recommended. A minimum aggregate GPA of 2.0 in GE Areas R, S, & V shall be required of all students. See [University Policy S16-9](http://www.sjsu.edu/senate/docs/F15-12.pdf) at <http://www.sjsu.edu/senate/docs/F15-12.pdf>.

Final Exam	30%
Mid-term (1)	25%
Mid-term (2)	25%
Homework	15%
Participation (Impromptu Quizzes)	05%
Total	100%

### Final Letter Grade:

A+	97 – 100	B	83 – 86	C-	70 - 72
A	93 – 96	B-	80 – 82	D+	67 - 69
A-	90 – 92	C+	77 - 79	D	63 - 66
B+	87 – 89	C	73 – 76	D-	60 - 62
F	0 – 59				

Note that “All students have the right, within a reasonable time, to know their academic scores, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades.” See [University Policy S16-9](http://www.sjsu.edu/senate/docs/S16-9.pdf) at <http://www.sjsu.edu/senate/docs/S16-9.pdf> for more details.

## Classroom Protocol

### Class Participation:

Class participation is an important element of the course. Class members are asked to contribute to the class/case discussions through questions and offering insights into the topic discussed. Participation is measured by in-class impromptu quizzes at the beginning of class.

### Lucas College and Graduate School of Business: Program Goals and Class room policy

<http://www.sjsu.edu/cob/Students/policies/index.html>

### University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' [Syllabus Information web page](#) at <http://www.sjsu.edu/gup/syllabusinfo/>"

### Lucas College and Graduate School of Business:

Mission: We are the institution of opportunity in Silicon Valley, educating future leaders through experiential learning and character development in a global business community and by conducting research that contributes to business theory, practice and education.

## Bus 190 – Quantitative Business Analysis – Spring 2017, Thursday 3:00 pm to 5:45 pm

*The schedule is subject to change with fair notice and announcement on canvas will be made available.*

### Course Schedule

Week	Date	Topics, Readings, Assignments, Deadlines
1	1/26/2017	Introduction/Go over Syllabus/Set-up software apps/Review CengageNow and Brain <b>Chapter 1 – Introduction to QBS</b> In-Class Activity: Practice problems
2	2/2/2017	<b>Chapter 2 – Introduction to Probabilities</b> In-Class Activity: Practice problems Homework Assignment: Chapter 2 due by the start of class on 2/9
3	2/9/2017	<b>Chapter 3 – Distribution of Probabilities</b>

Week	Date	Topics, Readings, Assignments, Deadlines
		In-Class Activity: Pop quiz Practice problems Homework Assignment: Chapter 3 due by the start of class on 2/16
4	2/16/2017	<b>Chapter 4 – Decision Analysis</b> In-Class Activity: Practice problems Appendix 4.1 Pop quiz Homework Assignment: Chapter 4 due by the start of class on 2/23
5	2/23/2017	<b>Chapter 5 – Game Theory</b> In-Class Activity: Pop quiz Practice problems Mid-term #1 - Review
6	3/2/2017	<b>Mid-term #1- Chapters 1 - 5</b>
7	3/9/2017	<b>Chapter 6 – Time Series Analysis and Forecasting</b> In-Class Activity: Appendix 6.1 Homework Assignment: Chapter 6 due by the start of class on 3/16
8	3/16/2017	<b>Chapter 7 – Intro. To Linear Programing</b> In-Class Activity: Practice problems Appendix 7.1 Pop quiz Homework Assignment: Chapter 7 due by the start of class on 3/23
9	3/23/2017	<b>Chapter 8 – LP Sensitivity Analysis</b> In-Class Activity: Pop quiz Practice problems Appendix 8.1 Homework Assignment: Chapter 8 due by the start of class on 3/30 Mid-term #2 Review

Week	Date	Topics, Readings, Assignments, Deadlines
10	3/30/2017	<b>Spring Break – No Class</b>
		<b>Mid-term #2 Exam – Chapters 6 - 8</b>
11	4/6/2017	<b>Chapter 9 – LP Application in Marketing, Finance, and Operations</b> In-Class Activity: Pop quiz Practice problems Homework Assignment: Chapter 9 due by the start of class on 4/13
12	4/13/2017	<b>Chapter 10 – Distribution and Network Models</b> In-Class Activity: Pop quiz Practice problems Homework Assignment: Chapter 10 due by the start of class on 4/20
13	4/20/2017	<b>Chapter 11 – All-Integer LP</b> In-Class Activity: Pop quiz Practice problems Homework Assignment: Chapter 11 due by the start of class on 4/27
14	4/27/2017	<b>Chapter 12 – Data Development Analysis</b> In-Class Activity: Pop quiz Practice problems Homework Assignment: Chapter 12 due by the start of class on 5/4
15	5/4/2017	<b>Chapter 13 – Project Scheduling: PERT/CPM</b> In-Class Activity: Pop quiz Practice problems Homework Assignment: Chapter 13 due by the start of class on 5/11

Week	Date	Topics, Readings, Assignments, Deadlines
16	5/11/2017	<p><b>Chapter 14 – Inventory Model</b></p> <p>In-Class Activity:  Pop quiz  Practice problems  Appendix 14.1</p> <p>Final exam review – Chapters 9 - 14</p>
Final Exam	05/18/2017	<b>Final Exam - Chapters 9 – 14; 2:45 pm to 5:00 pm</b>