# San José State University College of Business / Marketing & Decision Sciences Course Number-29669, Title-Bus 260, Section-9, Spring 2018

# **Course and Contact Information**

Instructor:	Dr. Reginald (Reggie) Murray
Office Location:	Business Tower: Room 756
Telephone:	(408) (206-6409)
Email:	Reginald.Murray@sjsu.edu
Office Hours:	Wednesdays from 5:00 to 6:00 pm. [See University <u>Policy S12-1</u> at http://www.sjsu.edu/senate/docs/S12-1.pdf for guidelines]
Class Days/Time:	Wednesdays from 6:00 to 10:00 pm January 24 to March 14. Saturdays from 9:00 am to 1:00 pm Feb 3, & Mar. 3, 2018.
Classroom:	TBD
Prerequisites:	Graduate Standing

# **Course Format**

This class utilizes a lecture format as the primary delivery mechanism. Secondary delivery mechanisms include class discussion, assigned homework and discussion (where required), an assigned project and its presentation. Students will have access to all prepared course materials via Canvas, so internet connectivity is required. Students will be required to use the solver add-in feature in Microsoft excel, and should be proficient in SPSS, Microsoft Excel, PHStat2 or another statistics package. Students should bring their computers and associated apps to each class. *See <u>University Policy F13-2</u> at http://www.sjsu.edu/senate/docs/F13-2.pdf for more details*.

# Faculty Web Page and MYSJSU Messaging

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

Note: The syllabus is located in the course information folder under <files>.

# **Course Description**

According to the catalog, this course covers several of the methodologies developed to assist managers with decision making. The curriculum includes the use of decision trees, value theory, analysis of criterion, the statistical measure of risk and uncertainty, pre-posterior analysis and problems of collective choice in a business environment. Linear, non-linear, and discrete optimization techniques are examined. The course encompasses the use of computer applications; primarily the Excel data analysis tool-pak and Solver add-ins with a particular emphasis on the Solver, Goal Seeker and Statistical Analysis tools.

# **Learning Outcomes**

# **Course Learning Outcomes (CLO)**

Upon successful completion of this course, students will be able to or will be:

- 1. CLO 1 Familiar with several of the methodologies currently available to managers for the purpose of making optimal decisions.
- 2. CLO 2 Understand how to design and analyze decision trees.
- 3. CLO 3 Enhance statistical analysis capabilities and familiarity with Discrete and Continuous Probability distributions.
- 4. CLO 4 Understand the use of Statistical Sampling, Simulation Tools, and Regression Analysis in business applications.
- 5. CLO 5 Set up and solve linear, non-linear, discrete and integrated optimization routines.

# **Required Texts/Readings**

#### Textbook

Data, Models and Decisions: The Fundementals of Management Science, D. Bertsimas & R. Freund, Dynamic Ideas, 2<sup>nd</sup> Edition, 2004. ISBN-10: 097591460X. The book can be purchased at the bookstore, online from the publisher or via Amazon or the equivalent.

#### **Other Readings**

Case studies and access to other readings can be located on Canvas under lecture material, course information or supplemental materials.

# Other equipment / material requirements

MicroSoft applications - Excel, Word, PowerPoint

# Library Liaison

Diana Wu - Phone: 408-808-2087, email: Diana.Wu@sjsu.edu

#### **Course Requirements and Assignments**

SJSU classes are designed such that in order 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 <u>University Policy S12-3</u> at <u>http://www.sjsu.edu/senate/docs/S12-3.pdf</u>.

The scheduled course contact hours are in compliance with the required course credit hours (<u>http://info.sjsu.edu/web-dbgen/narr/catalog/rec-13692.14082.html</u>) and the required course culminating experience (<u>http://info.sjsu.edu/web-dbgen/narr/catalog/rec-13692.14089.14090.html</u>).

Homework is assigned on a weekly basis. Refer to the Homework Listing on canvas for the problem sets. It is the student's choice to do it or not do it. The homework is designed to provide practice with solving relevant analytical problems, prepare the student for exams, and re-enforce lecture material.

A group project will be assigned. The project will require each group to solve the following case and present their solution to the class:

- Discrete Linear Optimization Supply Chain Management at Dellmar
- Put together a PowerPoint presentation that addresses the following:
  - Explains or introduces the problem.
  - Outlines why it encompasses 2 of the 3 categories of Optimization Problems.
  - Formulates the Optimization algorithms including: (I want to see the algorithms.)
    - Resource Data
    - Optimization Function
    - Variables
    - Constraints
  - Presents Solver results output including sensitivity analysis where appropriate.
  - Summarizes findings and makes a managerial decision/recommendation on a course of action.
  - This presentation will be submitted for purposes of evaluation and grading.

The project is intended to provide the student with a thorough understanding of the use and development of linear, discrete and binary linear programming coding techniques.

The team project and presentation accounts 20% of the course grade weighting. A project presentation schedule will be developed in conjunction with students. Project presentations can be done at the students' desired time or no later than the last day of class (March 14, 2018).

NOTE that <u>University policy F69-24</u> 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**

Grade Weighting:	
Midterm Exam	40%
Final Exam	40%
Project & Presentation	20%
Total	100%
Grading Scale:	
90 +	A or A-
80 to 89	B+, B, or B-
70 to 79	C+,C, or C-
60 to 69	D+, D, or D-
< 60	F

The grading scale is used as a general guideline for assigning grades. I rarely use it. I tend to use clustering of student scores and an element of curving for actual grade assignments.

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 <u>University Policy F13-1</u> at http://www.sjsu.edu/senate/docs/F13-1.pdf for more details.

### **Classroom Protocol**

Adult learning theory will be used to conduct this class. While a portion of the class will consist of a lecture format, a considerable amount of learning will consist of class discussion. Interactive and relevant class discussions from the student's perspective are essential for enhancing the comprehension of material and for fostering greater critical thinking and application skills. The classroom setting is informal-your questions and contributions are always welcomed and encouraged. Students are also encouraged to keep in mind that we are a learning community, and each individual student should be given the opportunity to express their thoughts, ask questions, and participate fully while being respectful to the views of others. Academic and inquisitive questioning is expected – judgements are not.

Class attendance is strongly encouraged, but I realize life can get in the way of the best of intentions. For that reason, all my course lecture materials are posted on canvas.

Please try to arrive on time, so class can start on time and finish on time. I realize many of you will be tired from work and the commute. I will try to keep the energy level up and make the classes as engaging as possible. I will start classes on time. If you are late, please come in and find an available seat.

I strongly encourage students to turn off the ringers on their cell phones during class periods. Cell phone use is not allowed during exams. I have a zero tolerance policy on this subject.

# **University Policies**

# General Expectations, Rights and Responsibilities of the Student

As members of the academic community, students accept both the rights and responsibilities incumbent upon all members of the institution. Students are encouraged to familiarize themselves with SJSU's policies and practices pertaining to the procedures to follow if and when questions or concerns about a class arises. See <u>University Policy S90–5</u> at http://www.sjsu.edu/senate/docs/S90-5.pdf. More detailed information on a variety of related topics is available in the <u>SJSU catalog</u>, at http://info.sjsu.edu/web-dbgen/narr/catalog/rec-12234.12506.html. In general, it is recommended that students begin by seeking clarification or discussing concerns with their instructor. If such conversation is not possible, or if it does not serve to address the issue, it is recommended that the student contact the Department Chair as a next step.

# **Dropping and Adding**

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester's <u>Catalog Policies</u> section at http://info.sjsu.edu/static/catalog/policies.html. Add/drop deadlines can be found on the current academic year calendars document on the <u>Academic Calendars webpage</u> at http://www.sjsu.edu/provost/services/academic\_calendars/. The <u>Late Drop Policy</u> is available at http://www.sjsu.edu/aars/policies/latedrops/policy/. Students should be aware of the current deadlines and penalties for dropping classes.

Information about the latest changes and news is available at the <u>Advising Hub</u> at http://www.sjsu.edu/advising/.

# Consent for Recording of Class and Public Sharing of Instructor Material

<u>University Policy S12-7</u>, http://www.sjsu.edu/senate/docs/S12-7.pdf, requires students to obtain instructor's permission to record the course and the following items to be included in the syllabus:

- "Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor's permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material."
  - It is suggested that the greensheet include the instructor's process for granting permission, whether in writing or orally and whether for the whole semester or on a class by class basis.
  - In classes where active participation of students or guests may be on the recording, permission of those students or guests should be obtained as well.
- "Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent."

#### Academic integrity

Your commitment, as a student, to learning is evidenced by your enrollment at San Jose State University. The <u>University Academic Integrity Policy S07-2</u> at http://www.sjsu.edu/senate/docs/S07-2.pdf requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The <u>Student Conduct and Ethical Development website</u> is available at http://www.sjsu.edu/studentconduct/.

#### Campus Policy in Compliance with the American Disabilities Act

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. <u>Presidential Directive 97-03</u> at http://www.sjsu.edu/president/docs/directives/PD\_1997-03.pdf requires that students with disabilities requesting accommodations must register with the <u>Accessible Education Center</u> (AEC) at http://www.sjsu.edu/acc to establish a record of their disability.

#### Accommodation to Students' Religious Holidays

San José State University shall provide accommodation on any graded class work or activities for students wishing to observe religious holidays when such observances require students to be absent from class. It is the responsibility of the student to inform the instructor, in writing, about such holidays before the add deadline at the start of each semester. If such holidays occur before the add deadline, the student must notify the instructor, in writing, at least three days before the date that he/she will be absent. It is the responsibility of the instructor to make every reasonable effort to honor the student request without penalty, and of the student to make up the work missed. See <u>University Policy S14-7</u> at http://www.sjsu.edu/senate/docs/S14-7.pdf.

#### **Student Technology Resources**

Computer labs for student use are available in the <u>Academic Success Center</u> at http://www.sjsu.edu/at/asc/ located on the 1st floor of Clark Hall and in the Associated Students Lab on the 2nd floor of the Student Union. Additional computer labs may be available in your department/college. Computers are also available in the Martin Luther King Library. A wide variety of audio-visual equipment is available for student checkout from Media Services located in IRC 112. These items include DV and HD digital camcorders; digital still cameras; video, slide and overhead projectors; DVD, CD, and audiotape players; sound systems, wireless microphones, projection screens and monitors.

#### **SJSU Peer Connections**

Peer Connections, a campus-wide resource for mentoring and tutoring, strives to inspire students to develop their potential as independent learners while they learn to successfully navigate through their university experience. You are encouraged to take advantage of their services which include course-content based tutoring, enhanced study and time management skills, more effective critical thinking strategies, decision making and problem-solving abilities, and campus resource referrals.

In addition to offering small group, individual, and drop-in tutoring for a number of undergraduate courses, consultation with mentors is available on a drop-in or by appointment basis. Workshops are offered on a wide variety of topics including preparing for the Writing Skills Test (WST), improving your learning and memory, alleviating procrastination, surviving your first semester at SJSU, and other related topics. A computer lab and study space are also available for student use in Room 600 of Student Services Center (SSC).

Peer Connections is located in three locations: SSC, Room 600 (10th Street Garage on the corner of 10<sup>th</sup> and San Fernando Street), at the 1st floor entrance of Clark Hall, and in the Living Learning Center (LLC) in Campus Village Housing Building B. Visit <u>Peer Connections website</u> at http://peerconnections.sjsu.edu for more information.

# SJSU Writing Center

The SJSU Writing Center is located in Clark Hall, Suite 126. All Writing Specialists have gone through a rigorous hiring process, and they are well trained to assist all students at all levels within all disciplines to become better writers. In addition to one-on-one tutoring services, the Writing Center also offers workshops every semester on a variety of writing topics. To make an appointment or to refer to the numerous online resources offered through the Writing Center, visit the <u>Writing Center website</u> at http://www.sjsu.edu/writingcenter. For additional resources and updated information, follow the Writing Center on Twitter and become a fan of the SJSU Writing Center on Facebook. (Note: You need to have a QR Reader to scan this code.)



# SJSU Counseling Services

The SJSU Counseling Services is located on the corner of 7<sup>th</sup> Street and San Fernando Street, in Room 201, Administration Building. Professional psychologists, social workers, and counselors are available to provide consultations on issues of student mental health, campus climate or psychological and academic issues on an individual, couple, or group basis. To schedule an appointment or learn more information, visit <u>Counseling Services website</u> at <u>http://www.sjsu.edu/counseling</u>.

#### 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.

#### MBA Program Goals:

(Not all program learning goals are covered in every course)

#### Goal One: Business Concepts

Develop a strategic level understanding of the key functions of business including marketing, accounting, finance, and organizational behavior.

#### Goal Two: Analysis and Decision Making

Understand decision making methods including decision trees, expected value, risk and uncertainty, and the value of information.

#### Goal Three: Cultural and Ethical Awareness

3a. Understand the major issues facing multinational corporations in the management of their international operations—particularly those of an intercultural nature.
3b. Explain the ethical, legal, and social consequences that ensue when ethics and the law are disregarded in favor of other objectives.

#### Goal Four: Leadership and Teams Skills

Comprehend the factors that contribute to effective leadership of teams and understanding of the skills and behaviors necessary to be an effective team member.

#### Goal Five: Global Change and Dynamics

5a. Demonstrate an ability to understand and adapt to global market changes 5b. Demonstrate an ability to integrate knowledge and develop innovative solutions to remain competitive given industry dynamics (strategic integration).

#### Goal Six: Communication Skills

6a. Demonstrate an ability to plan, prepare, organize, and present effective oral presentations.

6b. Demonstrate the principles and processes of effective written communications.

# Lucas College and Graduate School of Business Policies:

To ensure that every student, current and future, who takes courses in the Boccardo Business Center has the opportunity to experience an environment that is safe, attractive, and otherwise conducive to learning, the College of Business at San José State has established the following policies:

# Eating:

Eating and drinking (except water) are prohibited in the Boccardo Business Center. Students with food will be asked to leave the building. Students who disrupt the course by eating and do not leave the building will be referred to the Judicial Affairs Officer of the University.

# **Cell Phones:**

Students will turn their cell phones off or put them on vibrate mode while in class. They will not answer their phones in class. Students whose phones disrupt the course and do not stop when requested by the instructor will be referred to the Judicial Affairs Officer of the University.

# **Computer Use:**

In the classroom, faculty allow students to use computers only for class-related activities. These include activities such as taking notes on the lecture underway, following the lecture on Webbased PowerPoint slides that the instructor has posted, and finding Web sites to which the instructor directs students at the time of the lecture. Students who use their computers for other activities or who abuse the equipment in any way, at a minimum, will be asked to leave the class and will lose participation points for the day, and, at a maximum, will be referred to the Judicial Affairs Officer of the University for disrupting the course. (Such referral can lead to suspension from the University.) Students are urged to report to their instructors computer use that they regard as inappropriate (i.e., used for activities that are not class related).

#### **Academic Honesty:**

Faculty will make every reasonable effort to foster honest academic conduct in their courses. They will secure examinations and their answers so that students cannot have prior access to them and proctor examinations to prevent students from copying or exchanging information. They will be on the alert for plagiarism. Faculty will provide additional information, ideally on the green sheet, about other unacceptable procedures in class work and examinations. Students who are caught cheating will be reported to the Judicial Affairs Officer of the University, as prescribed by Academic Senate Policy S04-12.

# Course Number - 29669 / Bus 260, Spring 2018, Course Schedule

List the agenda for the semester including when and where the final exam will be held. Indicate the schedule is subject to change with fair notice and how the notice will be made available.

Week	Date	Topics, Readings, Assignments, Deadlines
1	1/24	Welcome & Introductions, Chapter 7 – Linear Optimization – Acquire Microsoft Excel with Data Analysis and Solver add-ins, Read Chapters 7 & 8.
2	1/31	Chapter 8 – Non-linear Optimization, Hands on with Excel Solver, Read Chapter 9
2	2/3	Chapter 8 – Non-linear Optimization, Chapter 9 – Discrete Optimization.
3	2/7	Chapter 9 – Discrete Optimization, Programming Applications & other Quantitative Analysis applications. Read Chapters 2 & 3.
4	2/14	Chapter 2 – Fundamentals of Discrete Probability, Chapter 3 – Continuous Probability Distributions & Applications, Go over Midterm 1 Exam Questions.
5	2/21	Midterm 1 – Chapters 2 & 7 – 9. Read Chapters 1 & 4.
6	2/28	Chapter 3 – Continuous Probability Distributions & Applications, Chapter 4 – Statistical Sampling, Chapter 1 – Decision Analysis, Read Chapter 5.
6	3/3	Chapter 1 – Decision Analysis (cont.), Chapter 5 – Simulation Modeling: Concepts & Practice. Chapter 6 – Simple Linear Regression Models: Concepts and Practice, Read Chapter 6.
7	3/7	Chapter 6 – Multiple-variable Regression Models: Concepts and Practice. Project Presentations, Go over Final Exam questions.
8	3/14	Final Exam, Chapters 1 & 3 – 6.

# **Course Schedule**

Week	Date	Topics, Readings, Assignments, Deadlines
Final Exam		Venue and Time