

Course Syllabus

SAN JOSE STATE UNIVERSITY

Lucas College of Business

Department of Marketing and Business Analytics

Analytic Strategy

Dr. Kenneth C. Gehrt

BUS195D

BT562

Spring 2019

408.924.3534

kenneth.gehrt@sjsu.edu

OFFICE HOUR CONSULTATIONS:

T, R 7:45-8:45 and by office appointment.

REQUIRED READINGS:

--Cadotte, Ernie (2018), Integrated Business Management, Extended (simulation)

-- **Your Game ID:**

-- **Do not purchase until I assign teams; purchase is made online**

CANVAS:

Copies of course materials such as syllabus, simulation tips, handouts, and other materials can be found on Canvas:

<https://sjsu.instructure.com/>

You are responsible for regularly checking the Canvas messaging system to stay abreast of course activities.

COURSE OBJECTIVE:

The course objective is to provide a hands-on experience in transforming large amounts of diverse data into useful and timely business intelligence that will be used to develop knowledge-driven business decisions. This skill set has become a highly valued commodity in a business environment that is growing exponentially in terms of its data richness but sometimes lags in terms of transformation of the data into business intelligence. This will be substantially accomplished via an engaging and complex simulation in which participants attempt to transform the data, ultimately, into sound tactical and strategic decisions. Participants make tactical and strategic decisions based on consumer, competitor, aggregate market, financial, and production function data. Decisions are made and success is gauged by monitoring a dashboard that includes measures such as human resource performance, manufacturing productivity, return on investment, asset productivity, investment in the future, market share, product and

advertising design quality, financial risk, and financial performance. The interlocking measures challenge participants in a contest of performance optimization.

PROGRAMMATIC LEARNING OUTCOMES FOR BUSINESS ANALYTICS:

- an understanding of the breadth of the discipline of business analytics
 - basic depth of knowledge for the various aspects of business analytics
 - competencies associated with undertaking custom-designed research
 - an understanding of the role of custom-designed research in business planning
 - competencies associated with data mining
 - an understanding of the role of data mining in business planning
- *- Thoroughly understand the importance of integratively assimilating data from diverse sources based on knowledge gained from course readings, lectures, and the simulation experience. Furthermore, demonstrate understanding via 1) development of a first half and second half analytics paper as well as a final presentation. These should all articulate metrics, models, and processes used to determine effective courses of action.
- *- Develop a thorough understanding of the that role that business metric dashboards play in business analytics based on knowledge gained from course readings, lectures, and the simulation experience. Furthermore, demonstrate understanding via 1) development of a first half and second half analytics paper as well as a final presentation. These should all articulate metrics, models, and processes used to determine effective courses of action.

* = learning outcome satisfied by this course

-

CLASS FORMAT:

Your command of the business analytics material and the development of critical thinking skills will be facilitated in the context of 1) briefings that I give to the class as a whole 2) briefings that I give to individual groups, and 3) course material readings.

Briefings to the entire class will provide information for all groups that highlight common strengths and challenges shared by teams and also highlight nuances that may not be adequately emphasized by course materials. They will provide you with preparatory tips that are suitable for all teams as you enter each new quarter. The simulation provides a meaningful opportunity in which to develop your business analytics skills as they pertain to strategic and tactical decision-making and demands that substantial energy be devoted to critical-thinking.

Briefings to individual groups will provide you with the opportunity to ask tailored questions about business analytics issues that are unique to your team or issues that your team does not wish to share with competitors. It is particularly important to attend these briefings, prepared to ask questions about important issues that have become apparent as a result of the metrics, models, and processes that you employ. During these sessions, I will operate essentially as a consultant. You will get the most out of your consultant if you ask astute, incisive questions that are driven by a thorough pre-meeting examination of data.

GRADING POLICY:

Grades will be determined on the basis of six grade components and subject to peer evaluation:

Simulation Performance 1	10 points
Simulation Performance 2	15 points
Simulation Performance 3	20 points
First Strategy and Analytics Paper	5 points
Second Strategy and Analytics Paper	5 points
Third Strategy and Analytics Paper	5 points
Quizzes (count 2 of 3)	20 points
Simulation Group Presentation	10 points
Participation	<u>20 points</u>
Total	110 points

ACADEMIC INTEGRITY

Students are encouraged to share intellectual views and discuss freely the principles and applications of the course materials. However, graded exercises must be executed independently, except where noted. This course operates under the SJSU academic code as described in the SJSU Catalog.

http://www.sa.sjsu.edu/download/judicial_affairs/academic_integrity_policy_S07-2.pdf

SIMULATION

The simulation provides you with the opportunity to apply your business analytics skills and knowledge across a broad spectrum of decision areas. The large number of interrelated decisions you will make are probably best managed by organizing/specializing within your group. But although specialization is recommended, coordination is absolutely essential to achieve success. Decisions made in isolation are likely to result in unsatisfactory performance indices since product, promotion, distribution, price, and other decisions are interrelated as is the need to balance the amount of resources devoted to tactical versus strategic initiatives. Thus, each team member is best served by knowing about everything else that is going on.

Each week in the briefing to the entire class, I will apprise you of critical issues that customarily arise as the simulation progresses as well as critical issues unique to the evolution of the simulation that you are currently playing. Each week I will also provide time for group briefings to consult with each team.

Analytics Papers

The business analytics papers should provide a roadmap for Q3-Q5, Q6-Q8, and Q9-Q11. The focus should be on metrics, models, and processes used to make strategic decisions such as new segments, new products, new cities, plant expansion, changeover, and new technology (purchase or license) and how data will drive your decisions in these areas. Funds must also be taken into account; therefore, how funds projections are driven by metrics, models, and processes is also important including unit sales forecasts, non emergency loans, and licensing income. Since the menu of strategic expenditures and fund sources does not expand substantially until Q6, you may also make mention of how data drives some key tactical decisions, space permitting. This could include data models and processes related to decisions such as advertising design and expenditure, product design, sales force allocation, pricing, and manufacturing operations, but need not include any of them. The paper is limited to 4 pages (double- spaced, 11-point Times New Roman, 1-inch margins top, bottom, left, right).

Simulation Performance

Teams can earn up to 45 points for their simulation performance. Points are determined by factoring your “cumulative balanced scorecard” points with regard to your performance compared to the other teams. Up to 10 points can be earned for your cumulative balanced score after quarter #5, up to 15 points after quarter #8, and 20 points after quarter #11.

Second Half Analytics Paper

The second business analytics paper should provide a roadmap for Q6 - Q8. How metrics, models, and processes inform decisions about new segments, new products, new cities, plant expansion, changeover investment, and new technology should be the paper’s focus. Similarly, how metrics and models/processes that utilize data are used to forecast future funds is another important focus of the paper. Funds sources include \$5M provided in Q5, revenue (forecasting required), licensing income (forecasting required), and loans (forecasting required). Decision #5 is a crucial decision since teams begin to invest in new R&D/technology. The choice of new R&D/technology investment is shaped by many factors including the segments that teams plan to pursue in the future and the moves that competitors have made and are expected to make. Both current and projected future financial status will determine whether a team is able to effectively pursue R&D investment for high-end segments and many other critical decisions with limited resources. The paper is limited to 5 pages (double-spaced, 11-point Times New Roman, 1-inch margins top, bottom, left, right).

Business Analytics Presentation

Teams can earn up to 10 points for their simulation presentation. It is possible to earn maximum points on the presentation without earning maximum points on performance. The corollary, maximum performance points do not ensure maximum presentation points. Presentations may be no longer than 20 minutes so you will have to be concise.

Teams should focus on a mortem of final results including critical successes and mistakes and what could have been done differently and how. A period-by-period recount of what was done is likely to be inadequate. Included in the presentation should be an explanation of how various metrics, models, and processes could have mined the data more effectively and how performance could have been enhanced by utilizing the dashboard (balanced scorecard sub-indexes) more fully. It will also be useful to suggest 1) shortcomings of the simulation-provided indexes and 2) additional metrics, models, and processes that could have effectively augmented those provided. Proprietary decision tools that your team developed and how they helped and/or hurt your company are also very important.

Participation

Be sure to maintain an active profile for all periods of the simulation with respect to the decision-making activities for simulation itself, pre-meeting preparation for those decisions (minimum 60 minutes on the simulation before you meet with your group), and all the related assignments. Participation points are earned the same as all other points—20 points are not a default.

COMPLIANCE:

If you need course accommodations, please contact me as soon as possible. Presidential Directive 97-03 requires students with disabilities who request accommodations to register with the DRC.

<http://www.sjsu.edu/drc/>

-

STUDENT TECHNOLOGY RESOURCES:

For students with campus access, computer labs are available on the 2nd floor of the Student Union, 1st floor of Clark Hall, and in BBC. Media equipment is available for checkout from IRC 112.

LEARNING ASSISTANCE CENTER:

Room 600 in the Student Services Center provides support services such as skills assessment, tutorials, subject advising, and basic skills development.

<http://www.sjsu.edu/writingcenter/>

SJSU WRITING CENTER:

Clark Hall 126 is staffed by professional instructors and upper-division and graduate writing specialists who can assist students to become better writers.

<http://www.sjsu.edu/writingcenter/>

TECHNICAL HELP

For technical help, you can access any of the following resources:

SJSU Information Technology Support Services (ITSS) help desk: Password resets, log-in issues, email support, account requests: <http://www.sjsu.edu/at/hd/support/>

Canvas: <http://www.sjsu.edu/at/ec/canvas/index.html> or <http://guides.instructure.com/>

CALENDAR

Week	Topic
1/21	Intro to Marketplace Live
1/28	Intro to Marketplace Live Q1, Q2
2/4	First Analytics Paper (Strategic Roadmap for Q3 4 5)
2/11	Q3
2/18	Q4
2/25	Q5
3/4	Second Analytics Paper (Strategic Roadmap for Q6 7 8)
3/11	Q6

3/18 Q7

3/25 Q8

4/1 SPRING BREAK

4/8 Third Analytics Paper (Strategic Roadmap for Q9 10 11)

4/15 Q9

4/22 Q10

4/29 Q11

5/6 Q12

5/13

Exam Presentations