Marketing Analytics: Technology & Applications

Course   **Marketing Analytics: Technology and Applications**; Course contents © Stephan Sorger
University of San Francisco MBA 6322-01; Fall 2014

Professor   Stephan Sorger
Phone: 650.455.4411
 email: stephan@StephanSorger.com; www.StephanSorger.com

Meetings   October 20 – December 1, 2014; 6PM – 9:35PM; San Francisco Downtown

Course Description
From the USF General Catalog: This course represents a comprehensive examination of data analytics from a marketing perspective on four levels: strategically, functionally, methodologically, and technologically. It is designed for students who might seek employment in the analytics arena as well as for students who want to broaden their understanding of the field.

From the Professor: This course covers essential decision models and strategic metrics that form the cornerstone of marketing analytics. Using the insight gained in the course, students can predict the outcome of marketing plans to boost return on marketing investment (ROMI). The course emphasizes case studies and hands-on learning so students can immediately apply the tools and techniques in their organizations. A variety of relevant topics are discussed, such as market sizing, forecasting and positioning, promotion budget allocation, profit maximization, and communicating to senior executives through data-driven presentations.

Course Outcomes
- Understand the benefits and objectives of marketing analytics
- Learn how to apply quantitative techniques to drive marketing results
- Obtain hands-on experience through application of spreadsheet-based models
- Acquire proficiency in the application of strategic decision models and metrics
- Master the ability to communicate to senior executives through data

Prerequisites
- MBA 6016 Marketing or equivalent

Biography
Stephan Sorger, M.S., M.B.A. is an authority on marketing analytics, practicing it in his role as Partner at consulting firm On Demand Advisors, teaching courses in marketing analytics since 2008, sitting on analytics-related academic boards, advancing the topic through industry webinars, and defining the topic and approach as author of the new textbook, "Marketing Analytics: Strategic Models and Metrics." In addition to his work in marketing analytics, Stephan is an expert in marketing strategy and planning, and is the author of the Pearson Prentice-Hall textbook, "Marketing Planning: Where Strategy Meets Action."

Office Hours
Students are encouraged to meet during office hours to discuss questions about the course or to obtain general information, such as career advice in the field of marketing analytics.
- Wednesday Evenings: After class in USF Downtown Campus, 101 Howard Street, 5th Floor, San Francisco
- Saturday Afternoons: 12PM-1PM at 95 Third Street, 2nd Floor, San Francisco (please contact first via email)

Textbook
Print book version: Sorger, Stephan. "Marketing Analytics: Strategic Models and Metrics." Admiral Press/ CreateSpace, 2013. ISBN # 978-1481900300.
Kindle ebook version: Sorger, Stephan. "Marketing Analytics: Strategic Models and Metrics." Admiral Press/ CreateSpace, 2013. ASIN # B00BIVMC6U

Grading and Course Components
Grading is calculated from the components shown below, using standard grading cutoff points:
100 – 94 = A, 93 – 90 = A-, 89 – 87 = B+, 86 – 84 = B, 83 – 77 = B-, 76 – 65 = C

	Percent
Case Study Project	30%
Midterm Exam	30%
Final Exam	30%
Assignments	10%
Total	100%

Analytics Project
Students apply what they learn in class by forming teams and completing an analytics project.
- The model and its data must be non-confidential.
- Students must create their own original work and not re-purpose an existing model.
- Each person will receive their overall team's grade, using the "Project Grading Sheet".

Analytics Project Focus: Project must involve one of the five situations listed below, based on your organization's need.
- Market Sizing (Chapter 2): Assess size of existing or proposed market
- Perceptual Map (Chapter 3): Position new or existing product or service
- Forecasting (Chapter 6): Forecast sales of new or existing product or service
- Pricing (Chapter 8): Set prices for new or existing product or service
- Promotion Allocation (Chapter 10): Allocate advertising budget across programs

Analytics Project Deliverables: Students will deliver the following elements:
- In-class presentation, covering the areas outlined in the Project Grading Sheet
- Hardcopy for professor, consisting of PowerPoint printout, printed 2 slides per page
- Softcopy files for professor, consisting of PowerPoint presentation & Excel spreadsheet on USB flash drive

Midterm Exam
The midterm is closed-book, and tests the following chapters in the Book: 1, 2, 3, 5

Final Exam
The final exam is closed-book, and tests the following chapters in the Book: 6, 8, 10, 12

Assignments
Grading: The five areas below are worth one point each, for 5 points per assignment, and 10 points total.
1. **Originality:** Please do not copy the existing assignment Word doc from the website.
 Example: Use a new Microsoft Word document or Adobe PDF for the assignment.
2. **Content:** In the document, answer each of the questions. Show your calculations.
 Example: "For your question asking to estimate the size of the U.S. laundry detergent market: I calculate it as:
 Market Size = (Households) * (Annual Loads/HH) * (Cost/Load) = 114.8M * 400 * $0.23 = $10.56B"
3. **Comparison:** Cite a relevant reference to compare your result with that of the industry.
 Example Response: "The Wall Street Journal stated that total U.S. sales of laundry detergents decreased from $7.44 billion to $7.06 billion, which compares relatively well to the $8.0 billion estimated."
Source: Ziobro, Paul. "Is Innovation Killing the Soap Business?" Wall Street Journal Online. April 3, 2013.
http://online.wsj.com/article/SB10001424127887323916304578400521297972496.html
4. **Commentary:** State your assessment of the company and its situation.
 Example: "The U.S. laundry detergent market remains robust, but is facing social, economic, environmental, and other pressures which could affect the long-term value of the market as a whole. Furthermore,..."
5. **Communications:** Email the assignment to the instructor by the specified deadline.

<u>Schedule</u>

October 20, 2014: **Meeting 1**
- Administration Review syllabus; Set up teams; Review analytics project
- Project <u>Model Development</u>; <u>Sample Project</u>
- Chapter 1 <u>Introduction</u>
- Chapter 2 <u>Market Insight</u>
- Video Business Research Basics (9:59); Finding NAICS Codes (2:24)
- Case 1 (Ch. 1) Introduction: Project selection
- Case 2 (Ch. 2) Market sizing: U.S. laundry detergent market

October 27, 2014: **Meeting 2**
- Chapter 3B <u>Market Segmentation</u>: Positioning; Pages 83 - 91
- Video Malcolm Gladwell on segmentation (17:33)
- Case 3A (Ch. 3A) Market positioning: Smartphone market
- Project Time during class to work on analytics project

November 3, 2014: **Meeting 3**
- Chapter 5B <u>Business Strategy</u>: Strategic Metrics; Pages 150 - 166
- Chapter 8 <u>Price Analytics</u>
- Video Business strategy metrics dashboard (0:56); Balanced scorecard (10:54)
- Assignment 1 Case 5B: Strategic Metrics: Footwear market
- Assignment 2 Case 8: Pricing analytics: Lamp market

November 10, 2014: **Meeting 4**
- Chapter 6 <u>Business Operations</u>
- Technology <u>Statistical Analysis Software: SAS, SPSS, and R</u>
- Video Backlash of mass market on early adopters (4:31)
- Video Getting Started with R (16:30); Mass market backlash on adoption (4:31)
- Case: Chap. 6 Forecasting: Real estate market: Excel and R

November 17, 2014: **Meeting 5**
- Chapter 12 <u>Analytics in Action</u>: Pivot Tables: Pages 444 - 450
- Technology <u>Data Visualization: Tableau</u>
- Video Pimp My PowerPoint (2:58)
- Case: Chap. 12 Pivot Table: Multi-channel pharmacy
- Assignments Due Assignments 1 and 2 due
- Exam Midterm Examination (Ch. 1, 2, 3, 5); Students may leave class when finished

November 24, 2014: **Meeting 6**
- Chapter 10 <u>Promotion Analytics</u>
- Technology <u>Social Media Measurement Technology</u>
- Video Allocating Marketing Budget (4:30)
- Case 10 (Ch. 10) Promotion analytics: Restaurant market (Solver-based linear optimization)
- Exam Final Examination (Ch. 6, 8, 10, 12): Students may leave class when finished

December 1, 2014: **Meeting 7**
- Project Student presentations of analytics projects

Marketing Analytics
Analytics Project Grading Sheet

Date: _____
Topic: _____
Members: _____

No.	Grading Criterion	Score: 1-5	Total

Deliverables

1. Time: 15 min. max; Start: _____; End: _____; ____min   1 2 3 4 5   ____
2. Softcopy of Excel-based model and presentation on CD/DVD/USB flash drive   1 2 3 4 5   ____
3. Hardcopy of presentation, printed two slides per page   1 2 3 4 5   ____

Microsoft PowerPoint Presentation

4. Problem Statement: Described problem clearly & completely; success criteria   1 2 3 4 5   ____
   Comments: _____
5. Model Selection: Selected appropriate model type   1 2 3 4 5   ____
   Comments: _____
6. Solution Process: Explained step-by-step process; diagrammed model   1 2 3 4 5   ____
   Comments: _____
7. Research Method: Showed how data gathered: data sources, relevant data   1 2 3 4 5   ____
   Comments: _____
8. Research Analysis: Structured results, interpreted data   1 2 3 4 5   ____
   Comments: _____
9. Market Comparison: Model results compared against actual market behavior   1 2 3 4 5   ____
   Comments: _____
10. Scenarios: Model executed for typical scenarios   1 2 3 4 5   ____
    Comments: _____
11. Model Results: Results documented, including simulations and "what-if's   1 2 3 4 5   ____
    Comments: _____
12. Results Interpretation: Interprets findings in context of market situation   1 2 3 4 5   ____
    Comments: _____
13. Conclusion: Presentation indicates how problem was solved; insights   1 2 3 4 5   ____
    Comments: _____
14. Layout: Presentation emphasizes graphs and tables; Limits use of text   1 2 3 4 5   ____
    Comments: _____

Microsoft Excel Spreadsheet Model

15. Demo: Demonstration of model in class goes smoothly, no problems   1 2 3 4 5   ____
    Comments: _____
16. Procedure: Spreadsheet describes how to use model   1 2 3 4 5   ____
    Comments: _____
17. Inputs: Spreadsheet indicates user input area(s)   1 2 3 4 5   ____
    Comments: _____
18. Outputs: Spreadsheet indicates model output area(s)   1 2 3 4 5   ____
    Comments: _____
19. Calibration: Spreadsheet indicates calibration procedure, if any   1 2 3 4 5   ____
    Comments: _____
20. Structure: Spreadsheet is logically laid out for ease of use   1 2 3 4 5   ____
    Comments: _____

Total

Total Score: 20 criteria x 5 pts each = 100 points max   100 max   ____
Comments: _____