

### COURSE DESCRIPTION AND OBJECTIVES

Marketers face a multitude of management problems that cannot be effectively solved by seat-of-the-pants thinking: demand forecasting, deployment of sale force, rating subunit effectiveness, competition between brands, measuring the effect of promotions, customer lifetime value contests, or sales territory design. The purpose of this course is to provide students with skills for evidence-based management by developing models, analyzing alternatives, and recommending solutions using modern spreadsheets. Evidence-based management is built on three types of models: optimization models, statistical models, and simulation models. In each type we will consider specific marketing illustrations.

#### Learning Objectives

- To build your knowledge of a variety of marketing management problems.
- To develop your ability to diagnose decision relevant information for marketing decisions.
- To increase your analytical skills and to expose you to several commonly used 'advanced' modeling techniques that help improve firm profitability.
- Develop experience building computer spreadsheets to facilitate evidence-based management.

We will accomplish this through video lectures, computer exercises, and discussion of business cases that cover a wide range of realistic business decisions.

### REQUIRED COURSE MATERIAL

This is a computer intense class. I use Windows Excel 2016 and 2019, but other versions of Windows Excel usually work fine. Past experience tells me that Apple Mac computers sometimes have glitches with advanced Excel. Having no experience with Apple Macs, if you have problems I cannot help much.

1. **Video Lectures:** prior to coming to class, it will be assumed that you have studied the video “lectures” and readings that explain the material; no class time will be devoted to repeating this material. Links to these video lectures are found on Blackboard Learn.
2. **Zoom Online Classes** For your health, this course will be taught synchronously online this semester. That is, Mondays 6:00pm-9:00pm, we will all meet in a Zoom video conference. These session will be case analysis and discussion, not lectures (see above comment). Expect an email from me, telling you about our first Zoom meeting.
3. **Readings:** The textbook is Wayne Winston’s *Marketing Analytics: Data-Driven Techniques with Microsoft Excel 1<sup>st</sup> ed.*, which can be purchased (\$24.50) from Amazon.com. This is an all-encompassing 690 page book, however, recognizing that you are time constrained, we will use only a proportion of it to supplement video lectures.
4. **Cases:** Each time the class Zooms, there will be a case related to marketing decisions and modeling based upon the video lectures. Read the case before class, but save your time, there is no need to do analysis until the class time – this is a team effort during the Zoom meeting.
5. **Software:** Computer applications will use EXCEL for Windows.

### Activities

**Case Discussion:** To keep the classroom lively, all sessions will include discussions of a marketing case. This great opportunity to practice presenting and discussing business issues from an analytic perspective. Teams will be assigned one case as a “primary” discussion leader and one as a “secondary” leader.

**Case Write-ups:** Please select **four** of the last **twelve** cases (not including the Session 1 case) and after the class discussion submit a **two page double-spaced** executive summary of your recommendations, along with the spreadsheet that you developed to analyze the problem. The spreadsheet could have been developed within your team, but the write up should be done independently. The write up is purely your professional “recommendation” as though submitted to a VP of Marketing. Cite specific parts of your spreadsheet (rather than cutting and pasting tables into the write up) to support your ideas. Write-ups are due before the next class; send as an email attachment to jhess@uh.edu.

**Term Project:** It is common practice for a firm to develop an operational version of a model created by academic researchers or to use it as the basis for consulting practice. To simulate this practice, each team will build an Excel-based business model that operationalizes a published model. Your team will be assigned one of the following models.

1. Neslin, Scott and Robert Shoemaker (1983), “A Model for Evaluating the Profitability of Coupon Promotions,” Marketing Science, 2: Fall, 361-388; with application: “Evaluating the Profitability of Ziploc Coupon Face Values.”
2. Eliashberg, Jehoshua, Jedid-Jah Jonker, Mohanbir S.Sawhney, Berend Wierenga (2000), “MOVIEMOD: An Implementable Decision-Support System for Prerelease Market Evaluation of Motion Pictures,” Marketing Science, 19(3), 226-243.
3. “Tuscan Lifestyles: Assessing Customer Lifetime Value,” Charlotte Mason, Journal of Interactive Marketing, 17:4, 2003, 54-60.

Each team member will independently provide a written explanation of team’s spreadsheet and the team will make a presentation to class.

**Examinations:** No exams. Yippee!

**GRADING** At the end of the course your accumulated points will be “z-scored” in comparison to others. Case write-ups 40%, Term Project Spreadsheet 30%, Project Explanation 20%, Project Presentation 10%.

**Blackboard Learn** We will use the Blackboard Learn as a bulletin board to facilitate electronic communication. You can log onto Blackboard Learn from any computer that has Web access to <http://www.uh.edu/blackboard/>.

**Accommodations for Students with Disabilities:** The C. T. Bauer College of Business would like to help students who have disabilities achieve their highest potential. To this end, in order to receive academic accommodations, students must register with the Center for Students with Disabilities (CSD) (telephone 713-743-5400), and present approved accommodation documentation to their instructors in a timely manner.

**Learning Goals: 1. Communication** - Students will demonstrate effective written and oral communication skills.

How? Case presentations/writeups and project report.2. **Cross-Disciplinary Competence** - Students will demonstrate the ability to integrate different functional areas in solving business problems. How? Cases and project..3. **Critical Thinking** - Students will demonstrate the ability to analyze business situations and recommend appropriate actions. How? Cases and project.

#### **Bauer Code of Ethics**

1. Bauer students shall maintain the standard of academic honesty set forth under the University of Houston's Academic Honesty Policy <http://publications.uh.edu>.

2. Bauer students shall respect other students, faculty, staff and the Bauer environment.

3. Bauer students shall maintain individual accountability and integrity.

Please be aware that students who engage in actions prohibited by the Bauer Code of Ethics will be subject to disciplinary action and may not receive credit for the course.

**Counseling and Psychological Services (CAPS)** can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS ([www.uh.edu/caps](http://www.uh.edu/caps)) by calling (713) 743-5354 for routine appointments or if you or someone you know is in crisis. There is no appointment necessary for the "Let's Talk" program, a drop-in consultation service at convenient locations and hours around campus. Visit [www.uh.edu/caps/outreach/lets\\_talk.html](http://www.uh.edu/caps/outreach/lets_talk.html) for more information.

#### **Excused Absence Policy**

Regular class attendance, participation, and engagement in coursework are important contributors to student success. Absences may be excused as provided in the University of Houston [Undergraduate Excused Absence Policy](#) and [Graduate Excused Absence Policy](#) for reasons including: medical illness of student or close relative, death of a close family member, legal or government proceeding that a student is obligated to attend, recognized professional and educational activities where the student is presenting, and University-sponsored activity or athletic competition. Additional policies address absences related to [military service](#), [religious holy days](#), [pregnancy and related conditions](#), and [disability](#).

#### **Recording of Class**

Students may not record all or part of class, livestream all or part of class, or make/distribute screen captures, without advanced written consent of the instructor. If you have or think you may have a disability such that you need to record class-related activities, please contact the [Center for Students with DisABILITIES](#). If you have an accommodation to record class-related activities, those recordings may not be shared with any other student, whether in this course or not, or with any other person or on any other platform. Classes may be recorded by the instructor. Students may use instructor's recordings for their own studying and notetaking. Instructor's recordings are not authorized to be shared with *anyone* without the prior written approval of the instructor. Failure to comply with requirements regarding recordings will result in a disciplinary referral to the Dean of Students Office and may result in disciplinary action.

#### **Syllabus Changes**

Due to the changing nature of the COVID-19 pandemic, please note that the instructor may need to make modifications to the course syllabus and may do so at any time. Notice of such changes will be announced as quickly as possible through (*specify how students will be notified of changes*).

#### **Synchronous Online Courses:**

This course is being offered in the Synchronous Online format. Synchronous online class meetings will take place according to the class schedule. There is no face-to-face component to this course. In between synchronous class meetings, there may also be asynchronous activities to complete (e.g., discussion forums and assignments). This course will have a final exam per the [University schedule](#). The exam will be delivered in the synchronous online format, and the specified date and time will be announced during the course. Prior to the exam, descriptive information, such as the number and types of exam questions, resources and collaborations that are allowed and disallowed in the process of completing the exam, and procedures to follow if connectivity or other resource obstacles are encountered during the exam period, may be provided.

#### **Helpful Information**

COVID-19 Updates: <https://uh.edu/covid-19/>

Coogs Care: <https://www.uh.edu/dsaes/coogscare/>

Laptop Checkout Requests: <https://www.uh.edu/infotech/about/planning/off-campus/index.php#do-you-need-a-laptop>

Health FAQs: <https://uh.edu/covid-19/faq/health-wellness-prevention-faqs/>

Student Health Center: <https://uh.edu/class/english/lcc/current-students/student-health-center/index.php>

Schedule of Topics, Readings and Videos

Session	Date	Topics	Readings	Excel	Case	Videos
1	23-Jan	Product Diffusion	2, 27	Goal Seek and Scatterplot	Nespresso Milk Frother	Excel Training Videos Building a Business Analytic Spreadsheet Part 1 Building a Business Analytic Spreadsheet.xlsx Building a Business Analytic Spreadsheet Part 2 Array Formulas Scatterplots Term Project Example Hanson and Martin Bundle Pricing Bundle Pricing.docx Bundle Pricing.xlsx Introduction to Macros using Visual Basic Bass Product Diffusion Model
2	30-Jan	Calibrating response functions	4, 26, Optical Distortion*	Solver	Chicken Contact Lens Pricing	Optimization using Excel Solver Response Models Calibrating parameters in a response function
3	6-Feb	Optimization Sales Force Allocation	Winston & Albright 3,7.1-7.4	Solver: constrained optimization	Callplan at UNILAB	Constraints in Optimization Deploying Scarce Resources
4	13-Feb	Identifying Efficient Sub-units	35, Winston & Albright 4.8	Solver: Simplex Linear Program	Coach Inc.	Linear Programming of Ad Media Plan Evaluating the Efficiency of Subunits
5	20-Feb	Sales Forecasting	9, 10	Regression	Hilti	Regression Analysis
6	27-Feb	Consumer Preferences	16	Conjoint Analysis	HOBBICO	Conjoint Analysis of Consumer Preferences
7	6-Mar	Brand Competition	Dixit and Nalebuff	VBA Macros	Liquid Dietary Supplements	Competition and Game Theory Game Theory via Excel Macros
	13-Mar	<b>Spring Break</b>				
8	20-Mar	Bundle Pricing	5	Evolutionary Solver	Statistical Software Bundling	Bundle Pricing
9	27-Mar	Territory Design	Zoltners and Sinha, Tyagi	Simplex LP and VBA Macros	Blue Bell Ice Cream	Territory Design Models
10	3-Apr	Retail Optimization	17	Logit Brand Choice via Solver	Jewel-Osco Category Mang	Brand Choice via Logit Models

11	10-Apr	Targeting Customers: Angels vs Devils	McWilliams, Pergolino	Scoring Leads via Logit model	Puritan Bennett	Scoring Leads/Customers Attitudes towards “Us” and “Them” Maximum Likelihood of Actual Choice Using SOLVER to Maximize Likelihood Interpreting; Forecasting Angels & Devils
12	17-Apr	Measuring Sales Bumps	12, 14	Exponential smoothing, Seasonality	Ecolab's Sales Contests	Sales Forecasting by Syam Accounting for Outliers by Syam Predicting Sales by Syam Sales Contests Exponential Smoothing of Sales Sales Bumps
13	24-Apr	Inventory Management	21, Winston & Albright 523- 527, 531	Monte Carlo Simulation in Excel	Ebony Bath Soap	Simulation in Excel Economic Order Quantity and s-S Inventory Models
14	1-May	Project Presentations				

\* Purchase Optical Distortion from Harvard Business Publishing by clicking link <https://hbsp.harvard.edu/import/1006590>