

**MARK 7377 – Customer Relationship Management / Database Marketing**

**Spring 2013**

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**The syllabus is a general plan for the course; changes announced to the class by the instructor may be necessary. You are responsible for keeping up with any adjustments.**

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<b>Class Number</b>	<b>Day/Time</b>	<b>Location</b>
17879	Tue 6 – 9 PM	CEMO 105

**Office Hours:** By appointment

**Course Materials:**

1. Required textbook – “Data Mining for Business Intelligence: Concepts, Techniques, and Applications in Microsoft Office Excel with XLMiner,” **2<sup>nd</sup> edition**, by Galit Shmueli, Nitin R. Patel, and Peter C. Bruce. Publisher: Wiley, ISBN-10: 0470526823; ISBN-13: 978-0470526828. Make sure you purchase a new copy, which will ensure a free 6-month license for XLMiner, the software needed for this class.
2. Recommended reading – “Moneyball: The Art of Winning an Unfair Game,” by Michael Lewis, W. W. Norton & Company, available @ amazon.com
3. Recommended reading – “Competing on Analytics: The New Science of Winning,” by Thomas H. Davenport and Jeanne G. Harris, available @ amazon.com
4. Recommended reading – “Super Crunchers: Why Thinking-by-Numbers Is the New Way to Be Smart,” by Ian Ayres, Bantam Books, available @ amazon.com
5. Additional reading – “Database Marketing: Analyzing and Managing Customers,” by Blattberg, Kim and Neslin, available @ amazon.com
6. Articles, notes, datasets, slides, etc. available @ Blackboard course website

7. Check your email on a regular basis for class announcements

### **Software:**

Each original purchaser of the textbook is entitled to a 6-month license to the full education version of XLMiner, the only comprehensive data mining add-in for Excel (for Windows only). As an add-in program for Excel, XLMiner nests within an interface that users of Excel will find entirely familiar. Only one license is provided per book; **purchasers of used books are not entitled to a license.** XLMiner can be downloaded from <http://www.solver.com/xlminer/wiley.html>.

It would be ideal if you can install this software on your own laptop and bring it to the classroom for in-class demonstrations. Note – XLMiner requires Excel 2000 or later; also, make sure that Excel macro is enabled. For installation-related questions, check <http://www.solver.com/xlminer/>.

### **Course Background:**

Customer Relationship Management (CRM) represents Marketing's return to its pre-industrial revolution origins of doing business through one-to-one relationships, using the new technological advances brought up by the information revolution. Traditionally, marketers have grown accustomed to focusing on the acquisition of new customers through mass advertising and price-oriented promotions, accepting as a fact of life that these customers would eventually switch to competitors. As more and more markets reach saturation, customer acquisition comes mostly at the expense of competitors, leading to a frontal battle for "switchers." As a result, the focus of marketing has been shifting from customer acquisition to development and retention, particularly for the firm's "best" customers.

This shift from customer acquisition to development and retention requires a change of mindset from product-centric, transactional marketing to customer-centric, relational marketing, and a new set of analytical tools for understanding and predicting customer behavior. Since the customer base is now treated as one of the most valuable assets of the organization, the customer database becomes the focus of analysis and the platform for developing and implementing marketing strategies and tactics.

This course addresses two broad themes: 1) customer-centric value-based marketing, and 2) customer data analytics. The first theme explores what customer relationship management means. The customer lifecycle is introduced as an integrating framework. The importance of customer profitability and lifetime value as a criterion in CRM decisions is emphasized. The second theme emphasizes the analysis of customer database, with a particular focus on different types of predictive models (e.g., whether a customer will respond to a marketing offer, whether a customer will churn, or which products a customer would be most likely to buy next).

This course also introduces issues, techniques and terminology associated with database marketing and data mining. Specific topics include, for example, decile analysis, RFM analysis, lift and gains charts, logistic regression, decision trees, k-nearest neighbors and cluster analysis, association rules/market basket analysis, share of wallet imputation, customer churn management, experimental design and test marketing, loyalty card programs, etc.

## **Learning Objectives:**

- To build your knowledge of a rapidly emerging marketing arena - customer-centric marketing - which some claim is the beginning of a new business paradigm;
- To emphasize the importance of the customer lifecycle and customer valuation in CRM decisions;
- To emphasize how analytical CRM can help accomplish strategic marketing initiatives and improve firm profitability;
- To expose you to various commonly used modeling and data mining techniques for database marketing.

## **Class Format:**

The primary teaching philosophy of this course will be *learning by doing*. We will use a variety of tools to help understand the basic concepts of CRM, and learn the tools for its implementation with direct hands-on experience:

- Lectures (finish assigned readings before class)
- In-class case discussions (prepare for assigned case questions beforehand)
- In-class software demonstration (bring laptop to class)
- Case analyses (write-ups due at the beginning of class)
- Data-intensive exercises (write-ups due at the beginning of class)
- Modeling contest with real-life data (grades directly tied to profits)

## **Individual and Group Exercises:**

Much of the learning during the course will take place with the help of individual and group exercises. If an exercise is labeled “individual” you are not allowed to work with other students – the write-up should reflect your own work only. If an exercise is labeled “group” you should work on it in groups and only hand in one write-up per group (3 students per group). Groups should remain constant for all group exercises.

It will be a violation of academic integrity if you base your assignments on solutions you have found on the Internet or which you have obtained from others inside or outside of UH. I reserve the right to fail you for the course if I become aware of such a violation.

## **Class Participation, Group Assessment and Attendance:**

Quality contributions which are relevant to the discussion will improve your participation grade. **I will cold call on students at random to open case and assignment discussions.** Your class participation grade will be significantly hurt if you are called upon to offer your analysis on a case or assignment question and you are not prepared.

Every group member is expected to participate actively in all aspects of the group exercises. Group participation grade will be determined by the average of peer evaluations. Specifically,

each group member will evaluate, at the end of the course, the contribution made by the other group members on a 100-point scale.

**Grading:**

Assignments and activities will contribute to the final grade according to the distribution shown in the table below. **All assignments are due at the beginning of class.**

Grading Element	Weight
In-class discussion participation	20%
Grupo IUSACELL case write-up ( <b>individual</b> )	10%
Harrah’s Entertainment case write-up ( <b>individual</b> )	10%
Charles Book Club case write-up ( <b>group</b> )	10%
Tayko Software Reseller case write-up ( <b>group</b> )	10%
Special topic presentation ( <b>group</b> )	10%
eTOTS.COM case contest ( <b>group</b> )	30%
<p><b>Grading Distribution</b></p> <p>92-100      A (there is no A+)</p> <p>91,90,89,88    A-</p> <p>87,86,85,84    B+</p> <p>83,82,81,80    B</p> <p>79,78,77,76    B-</p> <p>75,74,73,72    C+</p> <p>71,70,69,68    C</p> <p>67,66,65,64    C-</p> <p>63,62,61,60    D</p> <p>59-0            F</p>	
<p><b>Class Attendance</b></p> <p>Attendance is mandatory at all class sessions. If you have an emergency and thus cannot attend, let me know by <b>emailing</b> me in advance; if you miss <b>3</b> or more classes for non-emergency reasons I reserve the right to fail you for the course; <b>1% will be deducted from the final grade for each unexcused absence.</b></p>	

## **Academic Integrity, Honor Code and Classroom Etiquette:**

All academic work must meet the standards contained in “A Culture of Honesty.” All students are responsible to inform themselves about those standards before performing any academic work. You are expected to comply with UH Student Honor Code.

Our classroom should have a professional environment. In keeping with such an environment I ask the following of you:

- Please do not enter or leave the room while class is in session
- Please limit your sidebar conversation
- Please turn off your mobile phone before the start of class

I expect you to help me enforce these norms, so we can have a good environment free of distractions. If we all cooperate, this will be no big deal and we will be more productive.

## **About Cases:**

The case situations that will be discussed have been developed after careful research on actual situations in real companies. The case writer(s) has (have) attempted to describe enough of the background and details of the situation in order to provide an adequate basis for class discussion.

Thorough preparation on the part of all class participants is essential to having a good and fruitful class discussion. Merely reading the case is not to be enough. After an initial reading to get a broad overview, go back and study the case thoroughly. Make any notes you find helpful and mark up the case to facilitate structuring your understanding of the situation. Identify the major problems and key relationships. Conceive alternative solutions to the problem and identify the advantages and disadvantages of each. Be prepared to defend your stand and recommendation in the class.

Each case is bound to lack some information that you would like to have in order to make a decision. As in real life, management decisions frequently must be made in the absence of information. A key executive skill is the ability to make effective decisions under uncertainty. A case discussion is preparation for just such situations.

Rarely, if ever, does a case contain an ideal solution to the problem highlighted in it. So do not expect a perfect all-encompassing solution at the end of the case discussion. In most cases, no such answer will emerge because each management problem often has multiple alternative solutions, each involving different degrees of risk, cost and complexity of execution. The major benefit of case discussion is that it provides the participants with a perspective and a repertoire of ideas which non-participants will lack. Another benefit of the case discussion is that concepts which may appear theoretical in a textbook come to life when seen from the perspective of a case.

**Class Schedule: This a general outline for the course; changes announced to the class by the instructor may be necessary. Last Updated on Jan 02, 2013.**

<b>Session</b>	<b>Date</b>	<b>Topics</b>	<b>Format</b>
1	1/15	Introduction and Course Overview	Lecture
2		Marketing Mix and Customer Lifecycle	Lecture
3	1/22	Customer Profitability and Lifetime Value [Course Packet / Blackboard]	Lecture
4		Customer Equity [Blackboard]	Lecture
5	1/29	HBS Case - The King-Size Co. [Course Packet]	Discussion
6		HBS Case - Grupo IUSACELL (Revised) [Blackboard]	Individual Write-up
7	2/5	Database Marketing	Lecture
8		HBS Case - Harrah's Entertainment Inc. [Course Packet]	Individual Write-up
9	2/12	RFM Analysis, Lift & Gains Charts [Blackboard]	In-class Demo
10		Introduction to Data Mining [Chapters 1, 2 & 5]	In-class Demo
11	2/19	XLMiner Installation & Tutorial Multiple Linear Regression [Chapter 6]	In-class Demo
12		Data Exploration & Visualization [Chapters 3]	In-class Demo
13	2/26	HBS Case - Pilgrim Bank (A): Customer Profitability [Course Packet]	In-class Demo
14		HBS Case - Pilgrim Bank (B): Customer Retention [Course Packet & Chapter 10]	In-class Demo

15	3/5	HBS Case - Pilgrim Bank (C): Electronic Billpay (Logistic Regression) [Course Packet & Chapter 10]	In-class Demo
16		First-half Course Review	Q & A
3/11 – 3/16 Spring Break			
17	3/19	K-Nearest Neighbors [Chapter 7]	In-class Demo
18		Decision Trees [Chapter 9]	In-class Demo
19	3/26	Cluster Analysis [Chapter 14]	In-class Demo
20		Textbook Case - Charles Book Club [Chapter 18.1]	Group Write-up
21	4/2	Association Rules / Market Basket Analysis [Chapter 13]	In-class Demo
22		Textbook Case - Tayko Software [Chapter 18.3]	Group Write-up
23	4/9	HBS Case - Bancaja: Developing Customer Intelligence (A & B) (Experimental Design) [Course Packet]	Lecture
24		Size and Share of Customer Wallet [Blackboard]	Lecture
25	4/16	Special Topic Presentation	Group Presentation
26			
27	4/23	Customer Care at eTOTS.COM	Group Contest
28		Course Review	Q & A