Course Syllabus

Digital Marketing Analytics

Instructor

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Course blog: http://vibhanshu.com/courses/marketing
Classes: HbH 1502 MW 1:30-2:50 (B), 4:30-5:50(C)

Teaching Assistant

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Course Overview

The effect of the Internet and related technologies on business and social institutions is more profound than that of any prior invention, including the printing press and the internal combustion engine. Last several years have seen a dramatic increase in the amount of time and money consumers spend online. As a consequence, the Internet has become an important channel that firms can use to reach out and connect to consumers, which has lead to the emergence of digital marketing. This course on Digital Marketing Analytics provides a quantitative approach to understanding and harnessing tools like online advertising and social media to meet business objectives.

Online advertising differs from traditional advertising in several ways. Traditional advertising was the forte of large firms with large advertising budgets. Due to the incremental costs of online advertising, e.g. per-click or per-impression, small and medium sized local firms can attract consumers through advertising. Online advertising is also extremely quantitative and requires data-savvy advertisers.

These differences from traditional advertising present new challenges and opportunities in the field of advertising. There is a dire need for talent that not only understands marketing or statistics but also can connect the two to drive meaningful business outcomes. This course is intended towards quantitatively focus students who will be exposed to core marketing techniques, which will be applied in the context of online advertising. More specifically, we will learn how to design, run, evaluate and improve online advertising campaigns to meet specific business objectives like customer acquisition, increased brand awareness etc. I hope that students participating in this course will become adept at data driven marketing techniques.

This course will cover basic marketing and statistical concepts and provide an introduction to different online marketing tools like email marketing, SEO/SEM and social media analytics. The course will be very hands on in nature, where students will be expected to work with marketing datasets based on instructions in lectures and class discussions. Experience with statistical tools is recommended but not necessary.

Learning Objectives

The main goal of the course is to help students understand digital marketing methods, from a variety of perspectives—as analysts, consumers and entrepreneurs. That is, we emphasize fundamental concepts rather than specific tactics. We will also look at modeling approaches for executing key marketing tactics. An ancillary goal is to establish the importance of theory and empirical analysis as key facilitators of this process. Taking this course will improve your familiarity with the following subjects:

1. Fundamental Marketing Concepts - CAC, CLV, ROI, Churn, Segmentation etc.
2. Regression Analysis and Experimental Design
3. Search Engine Optimization and Marketing
4. Mobile Marketing
5. Social Media Analytics
6. Email Marketing
7. Multi-channel Attribution
8. Marketing Mix Models (time permitting)

Upon completion of the course, participants will have a solid foundation from which to design, analyze and optimize digital marketing campaigns.

Grading
Your grade has **5 components**:

1. **Attendance - 5%**
   
   All or none grading for attendance. You need prior permission to miss class. However, no excuse will be entertained until it is extremely important. You are also expected to complete your online profile on Canvas, which describes your background, your motivation behind this course and a twitter handle.

2. **Class Participation - 15%**
   
   This course is intended to be extremely interactive. Don't feel shy to speak up, ask questions or answer them. All students are expected to **come prepared** for the class and **volunteer answers**. However, credit will be given for the quality of answers, not the quantity. Students are also expected to **discuss relevant topics and news articles** by participating in the course **blog, discussion forum** or through **social media**. The twitter tag for the course is **#DigitalMarketingCMU**. Remember to @vibhanshu for tweets you want to share with class.

3. **Assignments - 40%**
   
   There are **4 required assignment** that will be posted to Canvas one week in advance. These assignments are supposed to be done in **groups of 2**. You are free to consult any external resources for reference, but please **cite** anything you use apart from the lecture notes or reading material provided in class. The assignments should be submitted to Canvas before the due date. There is **NO credit** for late assignments.

4. **Quiz - 10%**
   
   There will be one in-class surprise quiz. It will cover fundamentals learnt in the class.

5. **Final Exam - 30%**
   
   There will be an in-class final exam on the last day of class. The exam will cover all the material discussed in the course.

**Lecture Slides, Assignments and Quizzes**

- Each homework is designed to make you exercise on and **think critically** about and topics discussed in class. Hence each homework will **challenge** you to reflect on a number of different topics and models discussed in class and **expand on the problems** we solve together in class, by **combining them and critically applying them to a variety of different scenarios** with different complexities. In other words, each homework **extends** the material and the exercises discussed in class. Some of the homework scenarios are numerical exercises. Some are open-ended questions that have **more than just one “right” answer**. In general, the homework will make you think – they will not simply ask you to “plug in” a formula and find a value.
- The quiz will be similar to the homework but **shorter**, with fewer exercises and fewer calculations involved.
- The lecture slides will **cover all the topics** that will be part of homework and quiz, but **not all the details**. They can be used as a summary of the relevant topics, but they are **not meant to substitute** the books and additional readings provided in class.

**Suggestions About the Course**

- Update your Canvas profile with your full name and a profile picture. If you need to, you can upload the pic to the Facebook folder on Canvas.
- **Come prepared for class**. This way the topic of the lecture will not be completely novel to you, and you will find it easier to follow the lecture.
- Study the readings and the book chapters once again **after** the lecture – the **lecture slides I will provide cover all the topics that will be part of homework and quizzes, but not in complete detail**.
- Seek feedback from the TAs on your assignments.
- Participate actively in discussions. I want this class to be extremely interactive. Remember **no question is too stupid**.
- From time to time, get some sleep (but **not** in class)

**Copyright Violation, Plagiarism and Proper Attribution**

The cases used in the class are properties of the respective publication agencies and cannot be copied or shared. Photocopying cases is an infringement of copyright law and can be seriously prosecuted. We will order the cases directly from HBS as a group to benefit from group discounts. However, each student is required to pay for each case. We will order cases for every student registered in the course unless we hear otherwise from you.

Plagiarism and cheating is strictly forbidden. This includes both copying your classmate's analysis and idea of other writers without crediting source. Any violation of this policy will result in an automatic "F" grade and a report to the academic action committee. Please review CMU's policy here: [http://www.cmu.edu/policies/documents/Academic%20Integrity.htm](http://www.cmu.edu/policies/documents/Academic%20Integrity.htm)

Please don’t do it. It is just not worth it.

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<th>Date</th>
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<tr>
<td>Jan 14</td>
<td>Tue</td>
<td>Introduction</td>
<td>2:30pm to 3:50pm</td>
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<td>Jan 16</td>
<td>Thu</td>
<td>Statistics Review</td>
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<td>Tue</td>
<td>Principles of Marketing</td>
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<td>Jan 23</td>
<td>Thu</td>
<td>Digital Marketing: Tools and Metrics</td>
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<td>Tue</td>
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<td>Jan 30</td>
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<td>Search Engine Marketing - II</td>
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<td>Guest Lecture</td>
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<td>Mobile Marketing: Incorporating Time and Space</td>
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<td>Social Media Analytics</td>
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<td>Case Discussion: Sephora Direct</td>
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<td>Purchase Funnel and Multi-Channel Attribution</td>
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<td>Guest Lecture/Email Marketing</td>
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<td>Course Summary</td>
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