Syllabus for course 95-730  
E-Business Technology and Management  
Units: 12  
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Course description

The growth of the Internet continues to have a tremendous influence on many aspects of human life. One area this impact is most widely felt is commerce, where Internet has not only transformed existing market structures but also given rise to new markets. Some of these effects include emergence of Internet and mobile commerce, reorganization of supply chains, peer-to-peer markets and social commerce.

This course focuses on building a set of strategic and analytical tools that will give students a systematic approach to analyzing and understanding digital markets and how they interact with physical channels. The course will develop a core framework that focuses on customer behavior, firm and channel competition, and the effect of technology on these market forces. The framework will be used to answers questions such as:

- How are digital products and services fundamentally different?
- What are the differences between Internet and Brick-and-mortar retail and how do they interact with each other?
- How does digital commerce affect B2B applications?
- How do consumers make choices between different channels and how should firms respond to phenomenon such as showrooming?
- What is the impact of digital commerce on developing countries like India and China? What are differences between digital commerce in these countries vis-a-vis the western world?

This course will include the following topics:

- E-commerce Business Models  
  Understand the behavioral foundation of various e-commerce business models, including Internet retail, e-commerce marketplaces, subscription commerce, curated commerce, etc.

- Pricing in Digital and Physical Channels  
  Strategies that be used to price in digital channels, such as freemium pricing, subscriptions, dynamic pricing. You will also learn how pricing leads to interaction between digital and physical channels, and how to perform data analysis to price in these channels

- Improving the Supply Chain  
  Explore and discuss how companies can leverage e-commerce for performance gains like profitability, market share and improved customer service. Understand how to opportunities, limitations, issues, and risks presented by e-commerce

- Recommender Systems and User Generated Content  
  Understand the impact of recommender systems and reviews on product assortment and profitability.
Learn about different recommender system design and how they change the product mix.

Analytics for Digital Commerce
Learn how the enormous amount of data being collected through Digital commerce can be used improve the 4P’s of marketing.
Case studies and guest lectures supplement the lectures. Guest speakers from Microsoft, IBM and PNC Bank have been invited in past semesters.
To achieve these objectives we will use a combination of lectures, cases, Blackboard discussion, Guest speakers and exercises.
Assignments will be in the form of exercises, case analyses, final group project and final exam.

Prerequisites:
95-703 Database Management 12 Credits

Student expectations
- A high level of individual student motivation and initiative is expected. Students are expected to use extensive online resources on ebusiness and be well prepared to discuss issues on the discussion boards/presentations. Case studies are an important component of the course.
- Students at Carnegie Mellon are engaged in preparation for professional activity of the highest standards. Each profession constrains its members with both ethical responsibilities and disciplinary limits. To assure the validity of the learning experience Carnegie Mellon establishes clear standards for student work. You are required to be familiar with related university policies on this subject. An extract of these policies is reproduced here:

In any presentation, creative, artistic, or research, it is the ethical responsibility of each student to identify the conceptual sources of the work submitted. Failure to do so is dishonest and is the basis for a charge of cheating or plagiarism, which is subject to disciplinary action.
Cheating includes but is not necessarily limited to:
- Plagiarism, explained below.
  - Submission of work that is not the student's own for papers, assignments or exams.
  - Submission or use of falsified data.
  - Theft of or unauthorized access to an exam.
  - Use of an alternate, stand-in or proxy during an examination.
  - Use of unauthorized material including textbooks, notes or computer programs in the preparation of an assignment or during an examination.
  - Supplying or communicating in any way unauthorized information to another student for the preparation of an assignment or during an examination.
  - Collaboration in the preparation of an assignment. Unless specifically permitted, collaboration will usually be viewed by the university as cheating. Each student, therefore, is responsible for understanding the policies of the department offering any course as they refer to the amount of help and collaboration permitted in preparation of assignments.
  - Submission of the same work for credit in two courses without obtaining the permission of the instructors beforehand.
- Plagiarism includes, but is not limited to, failure to indicate the source with quotation marks or footnotes where appropriate if any of the following are reproduced in the work submitted by a student:
  - A phrase, written or musical.
Note: There is a zero tolerance policy for plagiarism in this course. All cases will be escalated to the Associate Dean and Dean for disciplinary action.

Grading
The grades will be based on performance in homeworks, final exam, case analysis, and the term paper. The breakdown is as follows:

- Final Exam: 25%
- Case Analyses (group work): 30%
- Homework: 15%
- Term Project (group work): 15%
- Blackboard participation/discussion: 15%*
- Total: 100%

Please note that all group work is subject to peer review to prevent free riding. Each group member will evaluate other group members at the end of the semester. Peer reviews will account for 10% of your group work grade.

* For weekly Blackboard discussion, we will provide discussion topics/themes. Some of the discussions may be team based.

Text Book and related resources
There is no required text for this class. Selected lecture material has been taken from the following two books, in case you are looking for recommended textbooks:

- Electronic Commerce 2015: (Turban et. al)
- e-Commerce: business, technology, society 2015 (Laudon, Traver)

Blackboard participation, review of lecture notes combined with the case studies and guest speaker sessions should give you a very good understanding of the material covered in class. The Wall Street Journal is a very good source of business specific issues. The New York Times and the magazine Information Week also have good coverage of the current issues relevant to the course.

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<tr>
<th>#</th>
<th>Date</th>
<th>Topics</th>
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<tbody>
<tr>
<td>1</td>
<td>7/7/2017</td>
<td>Business Analytics: Introduction &amp; Course Overview</td>
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<td>Understanding the framework</td>
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<td>Business Transformation leveraging Analytics</td>
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<td>HBR Reading (optional): Why IT fumbles Analytics</td>
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<td>2</td>
<td>7/14/2017</td>
<td>Web Analytics</td>
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<td>Strategy and Business Analytics</td>
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<td>HBR Reading (optional): Embed Analytics in business processes</td>
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<td>7/17/2017</td>
<td>Group case (Stratsoft) due- 5 pm ET</td>
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<td>7/17/2017</td>
<td>Group Case presentations (8 pm ET)- details to be announced</td>
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<td>3</td>
<td>7/21/2017</td>
<td>Strategy Driven Prioritization</td>
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<td>Business Transformation leveraging Analytics</td>
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<td>7/24/2017</td>
<td>Individual Homework due (11:59 pm)</td>
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<td>4</td>
<td>7/28/2017</td>
<td>Analytics Methods</td>
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<td>GM guest speakers</td>
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<td>7/31/2017</td>
<td>Group case (Lending Club) due-5 pm ET</td>
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<td>Group Case presentations (8 pm ET)- details to be announced</td>
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<td>5</td>
<td>8/4/2017</td>
<td>Big Data (lecture 5 part 2)</td>
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<td>Data Architecture and Business Analytics Planning</td>
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<td>6</td>
<td>8/5- 8/8</td>
<td>Take home final (Individual)- case</td>
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