

IDS 420 Fall 2008 Business Models Simulation

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Section # 25394/25395 TR 2:00-3:15 SES205B/C Blackboard Site: IDS420F08

Office: UH 2407 Hours: T 4:00 – 5:00 R 1:00 – 2:00 (other hours by appointment)

Scope:

With advances in information technology and systems, business enterprises large and small are adopting simulation to analyze strategic decisions about investment, marketing, product introduction, and operational policies concerning inventory, production planning, supply chain management, etc. This course will be oriented towards demonstrating how simulation can be applied to aid these decisions. It will also provide the foundations of good simulation practice. The simulations will be performed using only MS Excel.

Recommended reference:

Wayne L. Winston, **Simulation Modeling using @Risk**, Updated for Version 4, Duxbury 2001. (ISBN 0-534-38059)

Ho, J.K., **From Data to Information – using data to your competitive advantage with spreadsheet software**, SPRINGS 1996. [under Course Documents]

Format:

Lectures, workshops, discussions.

Students work in teams (of 3) on workshop assignments and a term project.

Evaluation:

Workshops: 30% [each member **PRESENT** receives the same score]

Term Project: 30% [each member receives the same score]

Tests: 2 x 20% [must average 17/20 on tests for A]

Schedule (tentative):

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|-------|---------------------------------|-------|---------------------------------|
| 8/26 | Introduction | 8/28 | Random Numbers, Histograms |
| 9/2 | PDFs & CDFs | 9/4 | Foundation of Simulation |
| 9/9 | Sampling Distribution | 9/11 | Confidence Intervals |
| 9/16 | Sample Size | 9/18 | Supply Chain Management I |
| 9/23 | Online Auctions I | 9/25 | eBay Market for Team Project |
| 9/30 | Newsvendor Problem | 10/2 | Corporate Financial Planning I |
| 10/7 | TEST 1, Project Progress Report | 10/9 | Corporate Financial Planning II |
| 10/14 | Statistic Process Control I | 10/16 | Statistic Process Control II |
| 10/21 | Supply Chain Management II | 10/23 | Supply Chain Management III |
| 10/28 | Online Auctions II | 10/30 | Online Auctions III |
| 11/4 | Inventory Management I | 11/6 | Inventory Management II |
| 11/11 | Single Server Queuing System I | 11/13 | Single Server Queuing System II |
| 11/18 | Online Auctions IV | 11/20 | Review |
| 11/25 | TEST 2 | 11/27 | [Thanksgiving] |
| 12/2 | Team Term Project | 12/4 | Project Final Report |