**Lecturer**  
Daniel Barreto

**Course Description**  
This course will be focused on the new trends and disruptive technologies in IT. Emphasis will be given to the way technologies create a competitive edge and generate business value. There will be a broad range of views presented by different guest speakers, including entrepreneurs, analysts, and IT executives of Fortune 1000 companies. This year the course will have a special emphasis in virtualization, cloud computing, big data and mobility technologies.

**Units**  
3 Units (MS&E 238A available for 1 Unit)

**Prerequisites**  
A basic knowledge of Information Technology (computer software and hardware).

**Website**  
http://msande238.stanford.edu

**Class Times**  
Friday 2:15PM – 5:05PM

**Grading**  
Class Participation: 20%  
Readings & Homework: 30%  
Final Project: 50% (Term Paper or Programming Project)

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**Tentative Schedule**

**Lecture 1**  
Course Overview  
Information Technology Fundamentals  
Enterprise Hardware & Software  
Evolution of IT  
Guest Speakers Presentation

**Lecture 2**  
Virtualization  
- Types of Virtualization: OS, Storage, Network, Desktop.  
- Thin Clients and Zero Clients  
- Guest Speaker Presentations

**Lecture 3**  
Cloud Computing  
- What does “X as a Service” mean (X=Platform, Infrastructure or Software)
- Service Models
- Scalability and Reliability
- Development frameworks (e.g. AWS, Azure, AppEngine)
- Guest Speaker Presentations

**Lecture 4**  
Cloud Computing (Cont.)
- Business Benefits
- Cloud Security & Privacy
- Regulation
- Consumerization of IT
- Guest Speaker Presentations

**Lecture 5**  
Big Data
- Big Data technologies
- Applications and implications
- Guest Speaker Presentations

**Lecture 6**  
Mobile Computing and the “Post-PC” Era
- Smartphones & Tablets: Why now?
- Mobile Platforms (e.g. iOS, Android, BB, Windows)
- Applications Markets
- Guest Speaker Presentations

**Lecture 7**  
Guest Speaker & Student Presentations

**Lecture 8**  
Finals Week (Student Presentations)