

**Georgia Institute of Technology**  
**Scheller College of Business**  
**Business Process Analysis & Design (MGT 4057)**

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Instructor:	Professor Chris Forman	Semester: Fall 2012
Office:	472 College of Business Building	Phone: 404-385-2064
Class Time:	12:05pm – 1:25pm TR	Email: <a href="mailto:chris.forman@scheller.gatech.edu">chris.forman@scheller.gatech.edu</a>
Class Room:	Room 223	Office Hours: 11am–12pm TR and by appointment

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**COURSE OBJECTIVES**

This is a course on business processes and the underlying software infrastructure that supports them. Although the concept of business processes is deceptively simple, the complexity lies in the details and the myriad of different ways in which companies structure these processes. In a modern organization, business processes are supported by a complex software infrastructure (partly procured and partly developed in-house) that interlinks, automates and increases their efficiency. The emphasis of this course is on this software infrastructure and its relationships to business processes and organizational structure, and how firms can manage these relationships most effectively.

While technology is the facilitator of business process and organizational change, our focus will not be on specific technologies or programming per se. Rather, our focus will be on the effective management of these technologies to help firms achieve competitive advantage. In particular, we will view information technology (IT) as a *general purpose technology* (GPT), and to make most effective use of this GPT managers must make complementary investments in process, organization, and employee training. Through better management of IT and its organizational complements, a firm can create *IT capabilities* that give it an advantage over competitors.

One component of this course is the use of an ERP simulation game. There are three primary objectives to the use of the game: (1) to understand how to use the transactional data in ERP systems to make better business decisions; (2) to develop a hands-on understanding of the concepts underlying enterprise systems; and (3) to experience the benefits of enterprise integration firsthand. You will be placed in a situation in which you must run a business using an actual ERP system (SAP R/3). Teams of five students will operate a firm and must interact with supplier and customer teams by sending and receiving orders, delivering products, and completing the whole cash-to-cash cycle. Using standard reports, groups must analyze the transactional data from ERP systems to make business decisions and ensure the profitability of their operations.

I want to emphasize that while you will gain an understanding of the SAP R/3 system, this course is not about SAP R/3 or ERP software. The intent of the course is not to make you SAP R/3 experts – we may merely use the R/3 system to illustrate the type of features available in ERP software. You will get a detailed understanding of SAP technology (as one piece out of many that make up the software infrastructure), but we will not focus on the “keystrokes” of using the system.

### **TENTATIVE GRADING SCHEME**

Exam I	20 %
Exam II	15 %
4 Case Reports (Group)	20 %
Simulation Game (Group)	30 %
Class Participation & Case Discussion	15 %

### **ERP SIMULATION GAME**

Each group will participate in the ERP simulation game. During each round (quarter), students will react to market conditions (and other competitors) in the game in real time. At the end of the course students will be required to make a 10 minute presentation that detailed their firm's strategies, what they did successfully, and what did not go as well. A series of self-readable slides should accompany this presentation. The deliverables for this game will be a set of decisions for each quarter and the presentation (including slides). Teams should also use transactional data for the ERP system to help guide their business decisions, and in the course you will be provided a set of tools and frameworks for making use of this data.

As noted above, the simulation game will account for 30% of your total course grade. That 30% will be determined as follows:

Submission of first quarter decisions of extended game	2.5%
Submission of master data entry	2.5%
Financial Performance in Simulation	10%
Simulation Game Strategy	10%
Final Presentation	5%

### **EXAMS**

Exams will be closed book and will cover all reading assignments and material covered in class. There will be two exams: one given in-class during the semester and one given during the final exam period. All exams will be non-cumulative. Both exams will be 75 minutes in length.

### **CASE REPORTS**

The cases form an important part of the class and will significantly influence your final grade. You are required to submit reports for 4 cases (CVS, CEMEX, Bombardier, Harrah's). Case questions will be distributed on T-Square. **Case reports must be a maximum of 4 single spaced pages, with additional material in appendices if necessary.** The report should answer the case questions, but you can point out other interesting issues not covered by the questions. Turn in your case reports to me electronically on T-Square. One report is required for each group. Please form your groups by Tuesday, August 28. I think the following approach will work very well for writing the case reports:

In class but being disruptive  
Arriving in class late

0 points  
0 points

Attendance will be taken at the beginning of each class through a sign-in sheet. Late arrival to class will result in deductions for class participation. I understand that the College of Business is at some distance from the rest of campus and there may be unusual circumstances that may require you to be late once or twice during the semester. If that is the case for you and you are late, please let me know.

### Teams

The case reports and the simulation game will be done in the same team with maximum size of FIVE. You can freely compose your own team. By the end of the Tuesday, August 28 please inform me of the composition of your team. A fair contribution to each submission of every team member is the team's collective responsibility. All work for the case write-ups and simulation game will be done by the same team.

### Extra Credit Opportunity

There is an opportunity to earn one percentage point extra credit for the course. The local chapter of the America's SAP User Group (ASUG) has asked Georgia Tech to help them with their upcoming chapter meeting. These meetings have approximately 300 attendees and are a great place to network and learn about careers. Several companies who have attend these meetings have come and spoken to this class and have offered internships and full time positions to students. The meeting is on September 28 and will be at the Georgia Pacific Headquarters in downtown Atlanta. More details will be announced in class.

### COURSE POLICIES

#### *Exam Policies*

1. Exams missed due to an excused absence must be made up within one week of returning to class for full credit or no credit will be given. Exams missed due to an unexcused absence may not be made up. Documentation proving the excused absence may be required at the time the exam is made up.
2. Students who miss any exam, assignment, or project presentation (for a valid reason) must make arrangements with the instructor to complete that work within one week of returning to class. Failure to do so will result in a score of zero. If you are unable to attend a scheduled exam, prior written notice must be provided to the instructor including the reason for the absence.

#### *Assignment Policies and Quality Expectations*

1. Assignments are due on the day announced at the beginning of class. Assignments handed in 5 minutes after class has begun, or handed into my mailbox or emailed to me after class has begun, will be considered late.

**Tentative Schedule**  
(may be adjusted by guest speaker schedules)

**August 21, 2012**

**Topic:** Introduction to course

**Case:** None

**Readings:** Syllabus

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**Module 1: IT-enabled process change within the enterprise**

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**August 23, 2013**

**Topic:** Process Redesign 1

**Case:** None

**Readings:** Reengineering Work: Don't Automate, Obliterate, *M. Hammer et al.*, Harvard Business Review (Reprint 90406), 1993.

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**August 28, 2012**

**Topic:** Process Redesign 2

**Case:** None

**Reading:** Making Sense of Business Process Reengineering, *Loch, Christoph; Pich, Michael*, INSEAD, 1998 (Case No. 4750).

**DUE:** Decide on teams for case write-ups and simulation game.

**In-class Exercise: Innov8 Business Process Management Simulation**

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**August 30, 2012**

**Topic:** Case Study: IT-Enabled Process Change

**Case:** Pharmacy Service Improvement at CVS (A) *McAfee, Andrew F.*, Harvard Business School Publishing, 2007 (9-606-015)

**Readings:** None

**DUE: Case Write-up 1**

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**Module 2: Challenges of enterprise IT-enabled process change**

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**September 18, 2012**

**Topic:** ERP Systems – Functional and Technical Architecture

**Case:** None

**Readings:** None.

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**September 20, 2012**

**Topic:** Process-Enabled IT—Implementation issues and organizational change

**Case:** None

**Reading:** Putting the Enterprise into the Enterprise System, *Davenport, Thomas H.*, Harvard Business Review, Reprint 98401.

Worthen, Ben, "Nestlé's Enterprise Resource Planning (ERP) Odyssey," CIO Magazine, <http://www.cio.com/article/print/31066>

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**September 25, 2012**

**Topic:** Implementing and deriving value from ERP systems

**Case:** Successfully Navigating the Turbulent Skies of a Large-Scale ERP Implementation, *Benoit Aubert, Simon Bourdeau, and Brett Walker*; HEC Case HEC035, 2012.

**Readings:** None

**DUE: Case write-up 3**

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**September 27, 2012**

**Topic:** Evaluating the ROI of Enterprise Software Investments

**Readings:** None.

**Case:** The San Diego City Schools: Enterprise Resource Planning Return on Investment, Jeffrey, Mark, Kellogg School of Management Case KEL 174 (2006)

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**Readings:** Chapter 4 of Simulation Guide.

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**Module 4: Extending ERP: Business Intelligence and Recent Trends**

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**October 25, 2012**

**Topic:** Competing on Analytics: Business Intelligence 1

**Case:** Data Warehousing as a Strategic Tool at Bharti Airtel, *Ravi Bapna* and *Lakshmi Iyer*, Indian School of Business Case CS-08-001.

**Readings:** None.

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**October 30, 2012**

**Topic:** Business Intelligence 2

**Case:** None

**Readings:** Data Mining 101 – Chapters 1 and 2 from Shmueli et al, **Data Mining for Business Intelligence**. (Available on T-square)

**DUE: First Quarter Decisions of Extended Game Prior to Class**

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**November 1, 2012**

**Topic:** Using Transactional Data in ERP Systems to Make Better Decisions

**Case:** None

**Readings:** Chapters 5 and 6 of Simulation Guide

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**November 6, 2012**

**Topic:** CRM Execution and Strategy

**Case:** Harrah's Entertainment Inc., *Lal, Rajiv*, Harvard Business School Publishing, 2004 (9-502-011).

**DUE: Case write-up 4**

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**DUE: Simulation Game Presentations Due Prior to Class**

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**December 6, 2012**

**Topic:** Presentation of ERP Game Strategy to Board of Directors  
Course Wrap-up

**Case:** None

**Readings:** Class Handout

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