MET CS 567 Enterprise Systems

Fall 2012

Over the last two decades most large enterprises have implemented computer systems that integrate information and business processes over the entire enterprise. Enterprise systems have proven so valuable that essentially all larger organizations have implemented them, with different organizations choosing different approaches. Some large organizations such as Wal-Mart have decided to develop their own fully custom enterprise systems, but most have chosen to use highly configurable enterprise software systems commonly called Enterprise Resource Planning (ERP) systems, and usually supplementing the ERP systems with custom subsystems that provide competitive advantage. This course introduces the technical and business fundamentals of enterprise systems, enterprise system architecture, the design of enterprise systems, and the complex process of implementing enterprise systems. The course includes substantial hands-on exercises using the leading ERP system, which is sold by SAP. Note that the focus of this course is on enterprise architecture, design, strategy, and not just implementation.

Enterprise systems from SAP AG, PeopleSoft, Oracle, etc are becoming increasingly easier to use by the end-users, comprehensive in their end-to-end integration of business processes, and as a result these systems are very complex. Thus, implementations of enterprise systems are proving to be costly and challenging.

This course offers methodologies and hands-on techniques for a successful implementation of enterprise systems in organizations. In the first part of this course, participants will configure an SAP ERP system to support the main business processes for a fictitious company. In the second part of the course, students will review and discuss literature pertinent to the implementation and management of enterprise systems.

This course will also provide overview of SAP Computer Science and IT technologies pertaining to the following topics: SAP NetWeaver technology and development platform, service-oriented architecture (SOA), and Business Objects (including Business Intelligence) as a technical foundation for aligning with critical business requirements.

This course enables students identify both high-level technical implementation requirements, and organizational/employee resistors to information systems implementation. Through a variety of proprietary technological and Human Resources/Organizational Development technologies, we provide a comprehensive understanding of the technical and behavioral do’s and don’ts of Managing Enterprise System implementation.
Required Text

Core Topics:
1. Enterprise Resource Planning Systems
   - Functional organizational Structure
   - Business Processes
   - Global Bike Incorporated (GBI)
2. Introduction to Enterprise Systems
   - Enterprise Systems
   - Data in an Enterprise System
   - Reporting
3. Procurement Process
   - Organizational Data
   - Master Data
   - Key concepts
   - Process
   - Reporting
4. Enterprise Resource Planning Systems Implementation
   - Introduction to SAP Implementation
   - What an SAP Project looks like
5. Strategic Use of Enterprise Resource Planning Systems
   - Fulfillment Process
   - Production Process
6. Applications Programming Techniques (SAP’s ABAP programming language)
   - Purpose of ABAP
   - SAP Netweaver technology and development platform
7. ERP Systems using SAP Simulation
   - Comprehensive simulation of various key aspects
8. Business Intelligence (SAP’s BIW)
   - Review of the key BIW components
9. Human Resource Information Systems (SAP’s HR module)
   - HR Module at Boston University
10. Enterprise Applications Challenges
    - Challenges with ERP implementations
    - When SAP Implementations are less than successful
11. SAP Simulation Presentations
12. SAP Planning Best Practices in Implementation Reports
Components and Weights

Literature survey and Assignment 40%. Non SAP Written assignments: There will be four written two-page assignments throughout the semester -- such as Best Practices in Implementation Reports & when ERP or SAP Implementations are less than successful.

SAP (30%): This component will be evaluated on the basis of five (5) objective assignments,

Business Simulation: 30% The HEC ERP Sim business simulation game will be used during this course. There are two versions of this game, and the version played will depend on course enrolment level.

Literature Survey:
You are required to do an in-depth literature survey of a topic related to the objectives of this course. You should use peer-reviewed, academic journals and books on the selected topics, accessible through McMaster libraries and eLibrary only. Possible projects include:

1. Organizational structure of IT departments.
2. Project management in support of enterprise system implementation.
3. Best practices in an industry.
4. End-user computing issues.
5. Enterprise information requirements analysis.
6. Change management issues in enterprise system implementation

Business Simulation:
The HEC ERPSim is a real-time business simulation that uses the SAP ERP system. Two versions of the game exist. The distribution version is intended for small groups, and companies are run by participants either individually or in pairs. The manufacturing game is intended for larger groups, and companies are run by participants in teams of four or more. Which version will be run is dependent on enrolment levels in the class. The intent of the game is to demonstrate the value of business integration and reporting.