EEP 603/ PUBP 773/ SYST 693
Spring 2003
Supply Chain Integration and Management

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Abstract: This course focuses on supply chain integration, with an emphasis on Advanced Planning and Scheduling. The course is taught from an SAP perspective, using R/3 4.6c and the Advanced Planning Optimizer. We also focus on product configuration and APS Cartridge Solutions from ILOG and SCOR model alignment using Oracle R11i. The focus is more on integration than management.

Prerequisites: EEP 601/ PUBP 771/ SYST 691 - Introduction to Enterprise Engineering and Policy

Location: Aquia Module, Room 103

Time: 1630-1910

Textbooks:

Carol A. Ptak and Eli Schragenheim, *ERP: Tools, Techniques, and Applications for Integrating the Supply Chain*. St. Lucie Press, 2000

G. Knolmayer, P. Mertens, and A. Zeier, *Supply Chain Management Based on SAP Systems*. Berlin: Springer-Verlag, 2002. ISBN 3-540-66952-3

There may be an additional required book, but I am still evaluating

Technical Reports from SAP, Oracle, and ILOG that I will supply

Online Resources:

Supply Chain Management Resource Center
http://www.cio.com/scm/

Office:

The PAC Office is located in Suite 205-206 of the Finley Building, Fairfax Campus, and the office is open from 0830-1700 Monday through Friday

Lecture Plan

012703 - Overview of Enterprise Integration (Review of Material from Prerequisite)

- Vertical Integration
- Horizontal Integration
- Business Process Aligned Information Systems
- Architectural Planning, Procedural Models and Gap Analysis

020303 - Function- and Business Process-Oriented Standard Software Solutions [Enterprise Resource Planning (ERP) Systems]

- ERP Overview
- Reference Models
- Implementation Methodologies and Issues
- Relationship to MRP and MRP II

021003 – Enterprise Management (from a supply chain perspective)

Read Section I in the textbook by Carol Ptak

This material is easy read about Enterprise Management from a practitioner's perspective.

021703 - eHubs and Supply Chain Integration

- Components of an exchange
- Any-to-any document swap and hubs
- Issues for supply chain integration and management

022403 – Data Warehouse Solutions – Integrated Logistics Analysis Program (ILAP), Special guest lecture to be held at Calibre Systems, Inc., Alexandria, VA [http://www.calibresys.com/]

030303 - Operations Management

Read Section II in the textbook by Carol Ptak

This material is a general review of Operations Management. You may want to supplement this reading with material from any Operations Management textbook, but it is mainly the necessary background material for Collaborative Planning, Forecasting, and Replenishment (CPFR) as implemented in Advance Planning Systems (APS).

Also, review
www.cpfr.org

031003 - **Spring Break**–

031703 - Advanced Planning & Scheduling (APS) Systems

- Relationship to Operations Research
- Relationship to MRP II
- Positioning APS Solutions According to Industry Segments
- Packaged Software Solutions

032403 – End-to-end Order Execution

033103 - Aligning the SCOR model with End-to-end Order Execution

Read iSCOR paper by Gulledge and Cavusoglu and SCOR documentation

040703 – Introduction to SAP

Lecture delivered with the assistance of Mr. David Bailey

041403 - MRP Strategies in R/3

042103 - Introduction to the Advanced Planning Optimizer

Lecture delivered with the assistance of Mr. David Bailey

JOINT PAPER OUTLINE AND PRELIMINARY REFERENCES DUE!

042103 – Planning with R/3 and APO

042803 - Planning with R/3 and APO

050503 – **Examination**

Evaluation Procedures

Examination	40%
Research Paper	60%

There may be assignments throughout the semester, but they do not contribute to the calculation of the final grade. These assignments are to help you prepare for the examination.

Paper - Unique to this class we will produce a joint paper at the end of the semester that is publishable. We will select a particular problem from a relevant area of interest and develop the paper. The paper is part survey and part analysis, since we will synthesize, understand, and evaluate the relevant literature[1]. Most journal articles don't exceed 30 pages; so if possible, we will try to remain within this constraint. You will be graded based on your contribution to the paper.

Use the style of the journal, *Management Science*. That is, the abstract, references, section headings, captions for figures and tables, etc. should conform to the style of the above journal. Papers that are not in this style will automatically be reduced by one letter grade. Please be sure to use double-spacing and 12 point Times New Roman font for the word processing of the body of the manuscript. Use single space and a 10-point font for the abstract. Single-space individual references, but double space between references. Please submit an original copy, and retain a copy for yourself.

Plagiarism - All work must be your own. Inappropriate use of the work of others without attribution is plagiarism and a George Mason University Honor Code violation punishable by expulsion from the University. All students should familiarize themselves with this honor code provision (http://www.gmu.edu/facstaff/handbook/aD.html). To guard against plagiarism and to treat students equitably, written work may be checked against existing published materials or digital databases available through various plagiarism detection services. Accordingly materials submitted to all courses must be available in electronic format. Kingsley E. Haynes, Dean SPP/GMU

[1] Descriptive writing will not be accepted. This is not an opinion paper! The paper should follow the general rules for writing a scientific manuscript, and in general it should be outlined as follows: introduction and problem statement, literature review, analysis, analytical results, conclusions, and references. This outline may vary slightly depending on the problem under study.