

IT 460 – Integration Methodologies and Tools (new course)

1. INSTRUCTOR.

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Office Hours:
Tue/Thu 10:00-11:00 AM
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Or by appointment

2. COURSE TEXT AND MATERIALS.

Langenwalter G., “Enterprise Resource Planning and Beyond: Integrating Your Entire Organization”, The St. Lucie Press, 2000, ISBN 1-57444-260-0.

Greef A. and Fruergaa M., “Inside Microsoft Dynamics AX 4.0” Microsoft Press, 2006, ISBN 0-7356-2257-4.

3. LEARNING OBJECTIVES.

This course develops an understanding of applications architecture based on building IT systems out of common parts and a service-oriented architecture. These are collections of information services, modules and functional components that can be reused in a variety of common contexts. The course will apply several tools to exemplify the use of heterogeneous reusable modules to fulfill an information service. An underlying methodology for integration will be applied. The specific learning objectives of this course are to enable the student:

- To understand the issues involved in business process integration through information technology,
- To understand the architecture of a typical integration architecture,
- To understand the relationships between the various major functions of an Enterprise Resource Planning system,
- To recognize the concepts and capabilities of a complex ERP development and configuration tool,
- To create basic templates, logic and functions that extend the capabilities of an existing system,
- To understand and apply some of the tools of the Microsoft Dynamics AX architecture,
- To become capable of using the Microsoft Dynamics AX development environment

4. COURSE FORMAT AND EVALUATION.

This is a hands-on demanding course involving a series of individual projects to be completed using a current Database Management System.

The final evaluation will be based on a combination of these projects, exams, and class participation as follows:

Evaluation item	Weight
Projects	40%
Mid-term exam	25%
Final exam	25%
Participation	10%

5. ADMINISTRATIVE NOTES.

This is a placeholder for statements on course policies, academic integrity, disabilities, etc.

6. COMPUTER ACCESS AND RESOURCES.

Microsoft Dynamics AX Version 4.0 is required for this course, and is available in the labs. You will receive guidelines for accessing the system and for downloading the required client portions of the system so that you can complete your projects and assignments. Guidelines, instructions and accounts will be distributed at a later date. Note that there are 35 concurrent licenses available for this course, which gives you the certainty, that you will be able to log on to AX at any time when the system is available.

7. SCHEDULE, TOPICS AND COMPETENCIES.

Week	Topics and Competencies	Readings
1	Executive direction and support for Total Enterprise Integration (TEI)	Langenwalter: Chapters 1 and 2
2	Architectural overview: Rich client, web client and integration application client. The application framework	Greef: Chapter 1
3	Customer Integration	Langenwalter: Chapter 3
4	The MorphX Environment. Planning development with MorphX; Application model elements	Greef: Chapter 2
5	Manufacturing Integration	Langenwalter: Chapter 5

6	MorphX Designers. Project designer. Form and report visual designers.	Greef: Chapter 3
7	Support Services Integration	Langenwalter: Chapter 6
8	MorphX Development tools	Greef: Chapter 4
9	Technical considerations	Langenwalter: Chapter 7
10	Extensions to current architecture. Form Customization; report customization; table and class customization	Greef: Chapter 6
11	Multi-plan and Multi-division issues	Langenwalter: Chapter 8
12	The Business Connector. Integration technologies, the Connector, Usage scenarios	Greef: Chapter 8
13	Steps to successful implementation	Langenwalter: Chapter 10
14	The enterprise portal. The web framework, inside the enterprise portal	Greef: Chapter 10
15	The people side of TEI	Langenwalter: Chapter 11