



Information Technology in the Enterprise – An Enterprise Computing Class for Business Majors

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Agenda

- 1. Class Overview**
- 2. Class Content**
- 3. First Offering at Marist College & Student Feedback**
- 4. Other College Activity Associated with This Class**
- 5. How/Where to Get the Materials for This Class**

Background

Enterprise Computing technical skills shortage widely understood

However, key business decisions involve business leaders and executives, not just technical personnel

Consequently, Marist College and IBM have developed an undergraduate enterprise computing class aimed at the business leaders of tomorrow:

“Information Technology in the Enterprise”

**Developed during the spring & summer of 2016
- initially available 8/1/2016**

Thanks to IBM for funding the development of this class !

Class Overview

The target audience for the class is sophomore or junior business majors who are familiar with:

- **basic computing technology**
- **business concepts**
- **economics**

One credit undergraduate class

15 meetings over 15 weeks

- **Each meeting is 50 minutes**

- **Other meeting arrangements can be implemented as long as the overall contact time remains the same (e.g. 3x week for 5 weeks)**

Course Abstract

This class provides a survey of several business areas and problems that benefit from the use of modern information technology. The focus of the class is large businesses or enterprises as opposed to small or medium size businesses.

The class will examine information technologies that can be applied to a business problem or area in order to improve efficiency, reduce cost, gain a competitive advantage or mitigate risk. Each technology will be discussed at the conceptual level and related to ordinary concepts and experiences whenever possible.

The business value and costs associated with a technology or business problem will also be covered.

Course Objectives

After successfully completing this class, a student will be able to

- **describe enterprise computing and its characteristics**
- **describe how enterprise computing differs from other types of computing (e.g. personal computing)**
- **describe enterprise computing technologies that can be used to address business problems or needs**
- **describe the economics of selected business problems and the business case for the application of enterprise computing technologies**
- **provide examples of possible future advances in enterprise computing technologies**

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Topic Outline – Business Problem (Technology)

- 1. Introduction / Overview**
- 2. Information Technology Evolution (History)**
- 3. Running the Business (Interactive Processing)**
- 4. Running the Business (Transaction Processing)**
- 5. Running the Business (Batch Processing)**

Suggested Quiz 1

- 6. Gaining Business Insight (Business Intelligence)**
- 7. The Global Enterprise (Availability)**
- 8. Risk Management (Disaster Recovery)**
- 9. Privacy and Intellectual Property (Security)**
- 10. Business Flexibility (Cloud Computing)**

Suggested Quiz 2

Topic Outline (cont.)

- 11. Business Flexibility (Service Oriented Architecture)**
- 12. Investment Protection (Application Modernization)**
- 13. Data Center Constraints (Server Consolidation)**
- 14. Enterprise Computing Directions / Futures**
- 15. Final Exam (comprehensive)**

Topic Content (Instructor Perspective)

1. Presentation material

- **30-50 minutes, 20-25 charts**
- **Quiz questions drawn from this material**
- **Extensive chart notes**
- **Relevant Dilbert comic strips**
- **Relevant short (1-2 minute) videos**

2. Required reading list

- **Articles, book chapters/pages, white papers, web sites/pages, etc.**
- **Quiz questions drawn from this material**

3. Supplemental reading list

- **For further study or to develop more depth of understanding for a topic**
- **Optional material for the student.**

4. Quiz questions and discussion questions

- **Organized into two quizzes and one comprehensive final exam**

5. Business Case (selected topics)

- **Illustrate the value and cost of selected technologies or business problems**

Other

1. Topic materials describe IBM Mainframe technologies with competing technologies included as appropriate to “balance” the materials
 - a) Required and supplemental materials will include white papers, etc. from vendors other than IBM whenever possible.
2. Coverage for any topic will not be “complete” or “exhaustive” due to time constraints
3. There are no “hands on” labs in this class
4. Other topics considered
 - Data Center Management and Economics
 - Testing
5. Professors may want to consider adopting individual topics from this class as modules in existing classes
 - May require minor re-work of the presentation and other materials
 - e.g. concepts and terminology covered in preceding topics

Class Content Summary

Topic	←	Present.	→	Readings	Readings	Quiz ?	Quiz ?
-	Charts	Minutes	Videos	Required	Suppl.	T/F, MC	Discuss.
Overview	44	70	1 (+1)	6	8	11	2
History	33	62	0 (+5)	5	12	11	2
Interactive	23	53	2 (+2)	2	0	13	0
Transaction	28	61	0	4	7	11	2
Batch	23	64	0	5	2	11	1
Bus. Intell.	39	80	2	1	19	13	2
Availability	37	102	0	3	20	14	1
Bus. Cont.	45	83	1	3	17	14	1
Security	49	103	1	3	46	13	2
Cloud	31	79	0	2	28	10	1
S.O.A.	29	61	1	1	13	11	1
Serv. Cons.	26	47	3	3	20	10	1
Appl. Mod.	30	65	2	2	13	9	1
EC Futures	31	60	5	5	32	10	2
Final Exam	0	0	0	0	0	TBD	TBD

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First Offering

Marist College, School of Management, Spring 2017

Offered as a “Special Topics” class since it has not yet been approved for credit

One credit fully “On line” class

- **2 Quizzes**
- **Final Exam**
- **Pass/No credit**

Met on campus twice

- **initial “get to know you” meeting**
- **guest speaker (Economics of mainframes vs. x86 servers)**

Initially 27 students

16 completions

13 – Pass

3 – No credit

Student Feedback from First Offering

14 questions

- **9 related to content**
- **5 related to class mechanics (pace, delivery methods, use of discussion forums, etc.)**

Summarized feedback on content follows

Individual student feedback forms (16) are available if anyone wants to read through them

Student Feedback

Most Useful Topic?

- Cloud Computing (3)
- Security (3)
- Business Intelligence (2)
- Business Continuity (2)
- All Topics (2)

Why?

- Used in Business/Major Business Trend (5)
- Business Related/Relevant (2)
- Easy to Understand (2)
- Now more aware
- I will encounter this
- Have used this

Student Feedback

Least Useful Topic?

- Batch Processing (3)
- History (3)
- Interactive Computing (2)
- Application Modernization
- Security
- Data Management
- None - all are useful (2)

Why?

- Career won't involve this (3)
- Will work in entertainment
- Least relevant
- Can't see how it applies
- Risks involved
- Not relevant in business
- Doesn't help me
- Data comes in all type/forms

Student Feedback

Most Interesting Topic?

- Cloud Computing (5)
- Business Intelligence/Big Data (3)
- Future of Enterprise Computing (2)
- Transaction Processing
- Availability
- Business Continuity
- Security
- Batch Processing

Why?

- Aware of it, but don't know how it works (3)
- Influence
- Volume of transactions & understand how they work
- Powerful
- Moore's Law
- Quantum Computing
- Good Overview
- Technology Trend
- I can explain it

Student Feedback

Least Interesting Topic?

- History (3)
- SOA (3)
- Batch Processing (2)
- Interactive Computing (2)
- Application Modernization
- Security

Why?

- Dry/Dull (2)
- Not Interested (2)
- Hard to understand (2)
- Hard to relate to (2)
- Listed tools
- Not in my field of study
- Irrelevant

Student Feedback

What surprised you most about Enterprise Computing?

- Power/Capabilities (5)
- Technical/Complex (2)
- Prevalence/Ubiquity (2)
- Size
- How reliant we are on them
- Relevance
- Cost
- How interconnected they are
- How long they have been around

Student Feedback

Comment on Business Content

- Good/Sufficient amount of business content (2)
- OK/Good (2)
- Very Cool
- Relevant
- Most appealing part of the class
- Made it Relatable
- Risk Management is Important
- Too much emphasis on IBM
- Not enough Business Content

Met your expectations?

- Expected more (8)
- Sufficient (3)
- More than Sufficient
- Computer Heavy

Student Feedback

Would you recommend this class to other business students?

- Yes (9)
- No (3)
- Maybe, too technical

Why or why not?

- Learn many new things/Breadth of Information (3)
- It is a class for IT, ITS, CS/Too Technical (2)
- Too much work for 1 credit (2)
- Too challenging
- Straight Forward with clear purpose

Why or why not?

- Good Information
- Makes business student well rounded
- Good class to learn about mainframes
- Hard to see connection to business
- Good to know how business computers work
- Pass/No credit

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Other College Activity

19 Downloads from On The Hub since 8/1/16 (~2/mo.)

9 in the United States

2 in Australia

2 in Canada

2 in Germany

1 in Brazil

1 in France

1 in Italy

1 in Switzerland

Several have plans to teach in Fall 2017

How/Where to Get the Class Materials

Go to the IBM Academic Initiative:

<https://developer.ibm.com/academic/>

Click on “Access Resources On The Hub”

<https://ibm.onthehub.com/WebStore/OfferingDetails.aspx?o=b46379bb-0463-e611-9420-b8ca3a5db7a1>

Click on “z Systems”, then “Courses”, then “Beginner Courseware”

Click on “Information Technology in the Enterprise (ZB010)”

Click on “Add to Cart” and follow the instructions

Note: Only faculty with a .edu email can obtain the courseware

Questions? Suggestions?

