



**NCC EDUCATION
POSTGRADUATE DIPLOMA IN
STRATEGIC BUSINESS INFORMATION
TECHNOLOGY
(PgD SBIT)**

**ENTERPRISE SOFTWARE AND BUSINESS
INFRASTRUCTURE**

Seminars, Tutorials and Self-Study Exercises

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Introduction to Enterprise Systems and Software

Seminar 1

Discussion Topic 1

Be prepared to discuss a wide range of applications and a little bit of what they encompass. (More details on the main ones are covered in later units)

Be sure to discuss the hybrid industry specific software that often evolves in specific industries (i.e. hospitals airports etc)

Discussion Topic 2

Discuss how individual applications can be seen together as providing individual components of a business model/integrated system.

Discussion Topic 3

Discuss what software features might be expected within an enterprise application.

Tutorial 1

Discussion Questions

1. Explain the role of the division of labour in organisations.
2. What has lead to the creation of “islands of automation in the organisation”?
3. Discuss the trade-off between connectivity and responsiveness in information technology. Do you believe there are any limits to this relationship? What role does the Internet play in terms of connectivity and responsiveness?

Self-Study Exercise 1

Evaluate the role of standards in the development of information technology.





Reference Models and Business Architectures (I)

Seminar 2

Discussion Topic 1

Discuss the process-based view of organisations. This is arguably the most important aspect to come out of the BPR movement of the 1990's and provides the basis for the integration that is facilitated by Enterprise Systems.

Discussion Topic 2

Discuss how client-server systems can provide connectivity, availability and performance.

Discussion Topic 3

Evaluate the 3-tier client-server architecture. Discuss the number of tiers that is appropriate and also evaluate fat and thin client models.

Tutorial 2

Discussion Questions

1. Compare work organised around a functional (departmental) structure versus a process-oriented grouping of work.
2. Why is there such a tension between distribution and control of IT resources in today's organisations?
3. What are the advantages and disadvantages of increasing the number of tiers in a client-server architecture?

Self-Study Exercise 2

List the negative connotations associated with Business Process Reengineering, including ethical issues, and make sure you can explain and justify your list.





Reference Models and Business Architectures (2)

Seminar 3

Discussion Topic 1

Discuss the role that a database has at the centre of any information system.

Discussion Topic 2

Evaluate the need for a database management system overseeing the data held in the database.

Discussion Topic 3

Discuss the dimensions of the logical architecture of the ES that defines the functions that the ES provides.

Tutorial 3

Discussion Questions

1. What became the major driver behind the adoption of enterprise systems?
2. What is the difference between the logical and physical enterprise system architecture?
3. Why might the construction of an ERD still be useful even if an off-the-shelf package was going to be purchased?

Self-Study Exercise 3

Consider how changes are best made in an enterprise system, and for what reasons?





IT Infrastructure and Administration of Enterprise Systems (I)

Seminar 4

Discussion Topic 1

Discuss the different emphasis shown in the system development lifecycle and the enterprise system implementation phases. Consider particularly the importance of treating an enterprise system not just as a technical product, but within an organisational context where processes, people and structures need to be considered also.

Discussion Topic 2

A key decision at the initiation stage is the scope of the implementation. Should a 'big bang' approach be used to provide a fully integrated system from go live, or should a phased approach be taken to reduce risk and minimise disruption? Discuss some examples.

Discussion Topic 3

Project planning is a key activity in any information system implementation. There has been a number of failures worldwide in implementing information systems and poor project planning is often blamed. Discuss why this might be the case.

Tutorial 4

Discussion Questions

1. Evaluate the Big Bang approach to Enterprise System initiation.
2. Discuss the importance of a Project Management method and the project management manager.
3. Describe the Analysis Phase of the enterprise system implementation, consisting of the "As Is", the "To Be" and a gap analysis.

Self-Study Exercise 4

Consider the relative importance of project team members from the technology, business process and change management areas.





IT Infrastructure and Administration of Enterprise Systems (2)

Seminar 5

Discussion Topic 1

Discuss the relative advantages and disadvantages of 1,2 and 3-tier development landscapes.

Discussion Topic 2

Discuss the link between creating authorisations and the security of the system.

Discussion Topic 3

Discuss transition approaches and provide examples of where different approaches are appropriate.

Tutorial 5

Discussion Questions

What are some of the activities that can potentially reduce the time spent in the realisation phase?

Provide examples of enterprise system inbound and outbound interfaces.

Why is it important to always write the interfacing program to go through the system itself and not write directly to the database?

Self-Study Exercise 5

Consider which design criteria may be important when designing security for enterprise systems, and why.





Enterprise Software Systems (I)

Seminar 6

Discussion Topic 1

The terms ERP and ES are sometimes used interchangeably. Discuss the difference between the two concepts.

Discussion Topic 2

Discuss the data requirements of an MRP system in terms of the master production schedule, the bill of materials and the inventory status file.

Discussion Topic 3

Get the students to obtain information about commercial CRM systems (for example the SAP module) and evaluate the claims for the software.

Tutorial 6

Discussion Questions

1. Discuss the concept of customer relationship management (CRM).
2. What is the difference between an Enterprise system and an Enterprise Resource Planning (ERP) system?
3. How does Sales Force Automation (SFA) achieve efficiencies in the supply chain?

Self-Study Exercise 6

How would you use a Customer Experience Management (CEM) system for an online retail store?





Enterprise Software Systems (2)

Seminar 7

Discussion Topic 1

Discuss how sharing information across the supply chain can limit the bullwhip effect.

Discussion Topic 2

Provide three real-life examples of disintermediation.

Discussion Topic 3

Discuss any technical and organisational barriers to vendor-managed inventory (VMI).

Tutorial 7

Discussion Questions

1. Evaluate the different levels of integration in supply chain management (SCM).
2. Which issues should be addressed when designing a supply chain management?
3. Discuss the concept of vendor-managed inventory (VMI)

Self-Study Exercise 7

What are the similarities and differences between the “build to order” and “channel assembly” supply chain models?





Enterprise Software Systems (3)

Seminar 8

Discussion Topic 1

ETL systems extract data from current legacy and packaged software into the data warehouse. The decision regarding what data is extracted will be defined by a requirements analysis, but the nature of Business Intelligence makes it difficult to predict what this data will be. Discuss the advantages and disadvantages of simply extracting all the data from organisational systems into the data warehouse using ETL.

Discussion Topic 2

Discuss why enterprise systems do not negate the need for a data warehouse.

Discussion Topic 3

Discuss the differences between a dashboard and a scorecard. Find examples of each from vendors such as MicroStrategy and Cognos.

Tutorial 8

Discussion Questions

1. What is data mining and how can it bring benefits to a business organisation?
2. What are some of the limitations of data warehouses?
3. Describe the differences between OLTP and OLAP. Provide examples of how each is used.

Self-Study Exercise 8

Why is scalability an important issue for data warehouses?





Myth, Messaging and Middleware (I)

Seminar 9

Discussion Topic 1

Discuss the historical developments of Business Process Management (BPM), from Business Process Reengineering (BPR) efforts to workflow systems, to the current approach, which is business driven and based on process-orientation.

Discussion Topic 2

Discuss the nature of variability and interdependence in business organisations.

Discussion Topic 3

Discuss the relationship between ES and BPM.

Tutorial 9

Discussion Questions

1. Discuss the philosophy and describe the tools of Business Process Management (BPM).
2. Evaluate the concept of BPM.
3. How could Business Process Simulation (BPS) and Business Activity Monitoring (BAM) work together?

Self-Study Exercise 9

Draw a process map for a potential property buyer making a telephone enquiry to a residential housing estate agency.





Myth, Messaging and Middleware (2)

Seminar 10

Discussion Topic 1

Discuss Enterprise Application Integration (EAI) at the different levels of integration (data, application, process, legacy). The level of integration will be constrained by the nature of the current systems in place.

Discussion Topic 2

Discuss the advantages of a linking architecture at the service layer (rather than the technology, application or business process layer).

Discussion Topic 3

Discuss the role of XML (eXtensible Markup Language), SOAP (Simple Object Access Protocol) and WSDL (Web Services Description Language) in enabling the standardisation necessary to integrate web services.

Tutorial 10

Discussion Questions

1. What is the purpose of the concept of Services Oriented Architecture (SOA)?
2. *'The combination of BPM and SOA is more powerful than either is alone'*. Discuss.
3. Explain the benefits of XML

Self-Study Exercise

Explain Enterprise Application Integration (EAI) in your own words.





Content Management

Seminar 11

Discussion Topic 1

Discuss what Enterprise Content Management System (ECM) provides to the enterprise that Enterprise Resource Planning (ERP) systems do not.

Discussion Topic 2

Discuss the role of PDF documents in ECM systems.

Discussion Topic 3

Visit the Microsoft Sharepoint website (www.microsoft.com/sharepoint) and evaluate its features in terms of the elements of ECM systems presented in the Lecture 11, slide 3.

Tutorial 11

Discussion Questions

1. Explain the features of a Enterprise Content Management (ECM) System
2. How has the concept of document management developed?
3. What are the advantages of portal technology?

Self-Study Exercise 11

'The results from search engines cannot be relied upon'.

Carry out any additional research required, in order to discuss in detail whether or not you think this statement is true.





Summary

Seminar 12

Discussion Topic 1

Discuss the main drivers for the adoption of enterprise systems. What are the major barriers to their more widespread adoption?

Discussion Topic 2

Discuss the importance of an IT governance framework when implementing ES systems.

Discussion Topic 3

Evaluate the popular use of Microsoft Excel as an interface for Business Intelligence systems.

Tutorial 12

Discussion Questions

1. Compare the concept of implementation in traditional software development and an Enterprise System development project.
2. Configuration allows a company to customise an enterprise system to its specific business needs. Other than configuration, what can a company do to customise the system to meet its unique requirements?
3. Outline the major phases or processes for an enterprise system implementation or development project

Self-Study Exercise 12

How is traditional Business Process Re-engineering (BPR) related to enterprise system implementation?