

# DCU

## DUBLIN CITY UNIVERSITY

### SEMESTER ONE EXAMINATIONS 2010

<b>MODULE:</b>	CA441/CA441F. Business Process Management
<b>COURSE:</b>	B.Sc. in Computer Applications (Information Systems) Study Abroad (Engineering & Computing)
<b>YEAR:</b>	4/X
<b>EXAMINERS:</b>	Dr. P. Gibson Dr. F. Bannister Dr. M. Crane      Ext: 8974
<b>TIME ALLOWED:</b>	2 hours
<b>INSTRUCTIONS:</b>	Attempt Section A, and any two questions from Section B.

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**Please do not turn over this page until you are instructed to do so.**

The use of programmable or text storing calculators is expressly forbidden. Note that where a candidate answers more than the required number of questions, the examiner will mark all questions attempted and then select the highest scoring ones. Candidates are strongly advised to use their time wisely and answer only the number of questions instructed.

**Section A.**

**QUESTION 1** Case Study

**[TOTAL MARKS: 40]  
Compulsory**

The attached Case Study (Appendix A) is taken from the BPTrends web site (<http://www.bptrends.com/>). Read the case study carefully, and answer the following questions:

- 1(a) On the basis of overall size of budget allocated, which was the best activity to focus on from A&PS point of view? **[5 marks]**
- 1(b) Comment on the approach taken to process redesign as compared to, for instance, that given in Sharp & McDermott or any form of organizational redesign. **[20 marks]**
- 1(c) Why would you consider that A&PS wanted to "become more process-driven" in the first place? Give three possible different sources of motivation for A&PS. **[15 marks]**

[End of Question 1]

## Section B.

### QUESTION 2 Workflow Modelling

[TOTAL MARKS: 30]

- 2(a) What are the 'process enablers' that need to be considered when analysing a business process? What would you consider to be the interdependencies between them? [12 marks]
- 2(b) Describe a simple methodology for identifying and modelling processes within a business. [9 marks]
- 2(c) Describe and comment on the metrics by which the quality of a process could be assessed. How useful are they in a commercial context? [9 marks]

[End of Question 2]

### QUESTION 3 BPR & IT

[TOTAL MARKS: 30]

- 3(a) According to Davenport and Short in their book 'The New Industrial Engineering', BPR requires a broader view of both IT and business activity, and the relationships between them. Explain what you think is meant by this statement. [12 marks]
- 3(b) Define Quality of Work Life (QWL). Historically what has been meant by QWL? What more recent concerns have come under its remit? [18 marks]

How can Quality of Work Life of an individual worker be affected (both positively and negatively) by the use of IT?

[End of Question 3]

### QUESTION 4 Workflow Software

[TOTAL MARKS: 30]

- 4(a) Workflow management systems are designed to support the implementation of workflow process design. What are the main areas of functionality that you would expect to find in such tools? [12 marks]

- 4(b) The Workflow Management Coalition has produced a reference model for designers of workflow software. [18 marks]  
Discuss the purpose of the reference model, and the success it has enjoyed (or not) in the ten years since its publication.

[End of Question 4]

[END OF EXAM]

## Appendix A

From *BPTrends* Case Study March 2009  
University of California, San Diego (Submitted by Brian DeMeulle)

The Auxiliary & Plant Services (A&PS) group at UCSD encompasses a wide range of business activities, including Facilities Management, Transportation & Parking Services, Imprints (Full Service reprographics and other printing, copying, and scanning services), the Campus Research Machine Shop (a metal fabrication, manufacturing shop), the Early Childhood Education Center (an infant through K child development center), and the Campus Bookstore. Facilities Management (FM) includes all maintenance activity on the UC San Diego campus, as well as all Landscaping and Grounds, Custodial, all Trade Shops, Campus Fleet Operations, the Central Utility Plant, and Special Events Services.

In an effort to become more process-driven – to understand its processes, and to prioritize future improvement efforts – UCSD A&PS undertook the creation of an Enterprise Asset Management (EAM) system. Since more is spent on Facilities Management's (FM) – the largest amount going to Maintenance, Repair, and Operations (MRO), -- A&PS decided to focus initially on their operations and identify opportunities for improvement. The driver for the assessment was spending on materials with a mandate to look at procurement, maintenance processes, and supporting technologies. Their findings highlighted the need for increased collaboration, the benefits of combining redundant processes across A&PS, a lack of resources that drive FM into a reactive maintenance mode, and potential savings to be made by moving from a reactive to a preventative/predictive maintenance culture complemented by an improved training program. The team initially developed a process architecture of Facilities Management and then proceeded to identify process problems and to develop a roadmap for the elimination of defects.

Facilities Management plans to continue to use the architecture to implement process changes in the effort to become a more mature maintenance organization. The process methodology will be utilized to perform the same analysis on the processes for the other A&PS business units. In addition, A&PS has already begun low-level procedural modeling of activities and tasks utilizing the BPMN specification, aligning those within the process architecture. Long term, the vision is to implement such activities and tasks within a BPM execution package for end-to-end processes and procedures.

While all of the process work to date has been very valuable and a mainstay for A&PS for some time, the approach will be supplemented with an effort to educate staff using system thinking and system dynamics modelling to reinforce conclusions and provide tools to reinforce the new processes and activities. Such tools are now available in an interactive, game-like setting where fast-paced simulated real interactions are experienced in non-threatening learning environment. UCSD A&PS employed a consultant, Process Renewal Group (PRG), and used the PRG Enterprise Architecture Methodology. It also used a modelling tool, *Envision*, from *Future Tech Systems*, that is designed to work with the PRG approach to enterprise process architecture development

