UNIVERSITY *of* LIMERICK

OLLSCOIL LUIMNIGH

COLLEGE *of* SCIENCE *and* ENGINEERING

Department of Computer Science
and Information Systems

End-of-Semester Assessment Paper

Academic Year:	2008/2009	Semester:	Autumn
Module Title:	Project Management in Practice / Introduction to Project Management	Module Code:	CS4457/CS5041
Duration of Exam:	2 ½ hours	Percent of Total Marks:	70
Lecturer(s):	Michael T. Lane	Paper marked out of :	100

Instructions to Candidates:

- Please answer any 4 questions.
- Each question is 25 marks. Note that sub-parts of questions carry different amounts of marks.

Q1. Describe project management from the perspective of the Project Management Body of Knowledge (PMBOK).

Your answer needs to introduce the subject by defining the characteristics of projects and then explaining what project management involves. Your explanation must include brief descriptions of the different process groups used throughout a project lifecycle and also elaborate on the management of the triple constraints impacting projects. It is very important that your description of the triple constraints is supported by an example of how these constraints may conflict with each other as a project progresses. In looking at this area, a brief description of all knowledge areas should be provided.

25 Marks

Q 2. a) Project scope consists of a lot more than just the various parts or features of the software produced by a project – discuss.

5 Marks

b) You have been asked to assist a small company as they embark upon the use of project management techniques. Explain to this group that successful IT project management not only results in a working system or product, but also may leave their company with a number of "process assets". Your explanation should explain the differences between project deliverables and process assets and also describe 5 process assets (or artefacts) that may be produced from a project. For each of the five process assets, explain how they could be created and used during the project, and then stored for future use.

10 Marks

c) A key success factor for project management is change management. Describe the concept of change management and what key activities are performed within this area. Describe how you would apply these activities in the context of a software development project.

10 Marks

Q 3. a) Describe different types of dependencies that you must consider when attempting to put logic (sequence) on the list of tasks involved in a project. Each description should be supported by a clear example of the dependency. In each example, describe how you would sequence the sample tasks in order to manage the dependency.

3 Marks

b)

PROJECT A			
Activity	Description	Duration	Predecessors
0	Start	0	
1	Establish scope	3	0
2	Plan communications	63	1
3	Build detailed WBS	42	1
4	Develop schedule - times	15	2,3
5	Establish schedule - resources	40	2,3
6	Establish high-level budget	5	4,5
7	Build detailed cost baseline	50	6
8	Execute & Control project	160	7
9	Close project	63	8
10	Launch product	42	8
11		0	9,10

The tasks in project A are outlined above. Durations for each task have been estimated and dependencies have been identified.
Please produce an AON network diagram outlining the logical sequence of activities for Project A.

5 Marks

c) Using the network diagram produced in part (b), conduct a forward pass and backward pass of the network, establishing early start, early finish, late start and late finish values. List the project duration.

9 Marks

d) Using the work completed in part (c), outline the critical path. Describe how knowledge of the critical path can be useful to a project manager. Establish the float in each activity of the project. Briefly describe how you might use knowledge of task float (or slack).

8 Marks

Q4. a) What are project stakeholders? Why are they important? As the project manager, at what point should you consider the various stakeholders of the project?

4 Marks

b) Describe the technique of stakeholder analysis. Your description should include an outline of how you would work with the various stakeholder categories as a result of your analysis.

6 Marks

c) You are asked to manage a software development project to build a software system that will dramatically change existing procedures within the university. Attendance at all student lectures will be automatically logged as will start and completion times of lectures. This will influence how examinations must be graded and will also require student services to automatically block any students from continuing their studies if they fail to meet minimum attendance requirements.

Please conduct a stakeholder analysis of this project. Given that this exercise could take a large amount of time, please restrict your analysis to the identification and analysis of one stakeholder per different stakeholder analysis category. Describe why you analyzed the stakeholder as you did and how you would consequently work with them in the project. PLEASE NOTE – you are expected to spend no more than 10 minutes in this answer !

5 Marks

d) A communications plan can be vital to the successful implementation of a project. Discuss.

6 Marks

e) Present an excerpt from the communication plan that you might create as part of the planning for the software development project described in part c of this question. Your plan need only contain entries for the stakeholders that you identified in part c.

4 Marks

Q5. a) How would you establish a project's cost baseline?

6 Marks

b) How would you control a project using earned value management? Your answer needs to describe the concepts of planned value, actual costs and earned value. It is important that your answer clearly presents how you would establish the figures for each of these values and how you might calculate and use variances to understand the status of your project.

13 Marks

c) Understanding the critical path can be very useful when using earned value management – discuss.

6 Marks

Q6. PMI surveys have shown risk management to consistently rank as one of the top 3 critical success factors for project management.

a) Describe how you would identify project risk. What techniques would you use? When would you look at project risk?

5 Marks

b) Describe the technique of qualitative risk analysis and how you would use it to rank project risks.

5 Marks

c) You are the project manager for a project that is well underway. Describe how you would use a risk register (also known as a risk log), to manage the risks of your project. Your answer should include key columns you feel should be in such a log and how you would update the document.

5 Marks

d) Describe five risk response strategies that may be used to manage risk.

10 Marks

Q7. a) A key success factor for project management is senior management support. Please reflect on the importance of project governance and describe structures that can be put in place to enable effective project governance. Your answer should include the role that a project management office may play in supporting such activities.

10 Marks

b) The use of EVM efficiency indicators such as the cost performance index (cpi) can be very useful in supporting project governance – discuss.

5 Marks

c) Describe three schedule optimization techniques and outline (with an example) how they may be used to reduce a project's duration. Reflect on the importance of effective governance when contemplating project duration optimization.

10 Marks