



COLLEGE OF INFORMATION TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE SYLLABUS/ SPECIFICATION

Course Code & Title:	ITCS 401 – Software Project Management
Weight:	(2-2-3)
Prerequisite:	ITCS 327
NQF Level Allocated:	8

NQF Notional Hours / Credits: 120 notional hours/ 12 NQF credit

Description: The course focuses on the key aspects of software project management. It develops the ability of managing software projects, including organizing the software development team; selecting the best approach and tailoring the process model; estimating software cost and schedule; planning and documenting the plan; risk management and resource allocation.

Objective:

1. To explain the key components of a project plan.
2. To explain roles and responsibilities for key project personnel and stakeholders.
3. To explain the importance of a cost/benefit analysis to the successful implementation of a project plan.
4. To critically understand project budgeting, scheduling, and evaluation.
5. To prepare a project plan, as part of a team, for an IT project and demonstrate ability to follow standard project management methodology.
6. To use appropriate project planning and tracking tools.

Semester:

Instructor (s):

Office Telephone: EXT:

Email (s):

Intended Learning Outcomes (ILOs):

A. Knowledge and Understanding		NQF Descriptor/ Level
A1	Concepts and Theories: Demonstrate critical knowledge and understanding of the process of developing and managing software projects.	Knowledge: theoretical understanding [Level 8]
A2	Contemporary Trends, Problems and Research: Recognize emerging aspects and trends in software project management.	Knowledge: theoretical understanding [Level 8]
A3	Professional Responsibility: Acquaint students with tasks undertaken during project management, tasks of each team member, and the skills needed for a project manager to lead his team.	Knowledge: theoretical understanding [Level 8]
B. Subject-specific Skills		NQF Descriptor/ Level
B1	Problem Solving: Demonstrate the ability to estimate efforts, estimate budget, solve resource allocation together with project schedule problems and address any obstacles that may jeopardize the completion of projects.	Knowledge: Practical Application [Level 8] Skills: Communication, ICT & Numeracy [Level 8]
B2	Modeling and Design: N/A	N/A
B3	Application of Methods and Tools: Apply appropriate project planning and tracking tools such as ROI, COCOMO, Gantt charts, CPM, PERT utilizing EXCEL and Microsoft Project.	Knowledge: Practical Application [Level 8] Skills: Communication, ICT & Numeracy [Level 8]
C. Critical-Thinking Skills		NQF Descriptor/ Level
C1	Analytic skills: Critically analyze project requirements in order to define the scope of work, conduct organizational planning, identify and evaluate risks and assess how well a project follows its project	Generic Problem Solving & Analytical skills

	plan.	[Level 8]
C2	Synthetic: Integrate various components of project plan to implement the project.	Generic Problem Solving & Analytical skills [Level 8]
C3	Creative: N/A	N/A
D. General and Transferable Skills (other skills relevant to employability and personal development)		NQF Descriptor/ Level
D1	Communication: Demonstrate ability to communicate information in appropriate oral and written forms to a variety of audience.	Communication, ICT and Numeracy Skills [Level 8]
D2	Teamwork and Leadership: Function and work effectively as member/leader of a team.	Competence: Autonomy, Responsibility and Context [Level 8]
D3	Organizational and Developmental Skills: Demonstrate ability to organize ideas and effectively allocate time in given assignments and project.	Competence: Autonomy, Responsibility and Context [Level 8]
D4	Ethical and Social Responsibility: Predict and learn the impact of one's behavior on the work and colleagues in a software project management process.	Competence: Autonomy, Responsibility and Context [Level 8]

Course Structure (Outline)

Week	Hours		ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
	Lecture	Lab				
1	2	2	A1	Course Overview & Introduction: Why is Project Management Important?	Lecture/ Class Discussion	
2	2	2	A1	Introduction to Software Project Management: Characteristics of Projects	Lecture/ Class Discussion	
3-4	4	4	A1, B1, B3, C1	Project Evaluation & Programme Management: - The Business Case For a Project - Project Portfolios - Project Evaluation - Cost Benefit Analysis - Cash Flow Forecasting - Programme Management - Benefits Management	Lecture/ In-Class Supervised Work/ Lab Demonstration	In-Lab Exercise
5	2	2	A1, B1, C1	Overview of Project Planning: - Step Wise - Gantt Charts	Lecture/ In-Class Supervised Work	Case Study
6-7	4	4	A1, B1, C1, D1, D3	Software Effort Estimation: - What Makes a Successful Project - Estimating Methods	Lecture/ In-Class Supervised Work	Assignment1/ Case Study
8	2	2	A1, B1, B3, C1, C2	Activity Planning: - Scheduling - Activity Networks - PERT Diagram	Lecture/ In-Class Supervised Work/ Lab Demonstration	In-Lab Exercise/ Case Study

9-10	4	4	A1, B1, C1	Risk Management: - Definition of 'Risk' and 'Risk Management' - Some Ways of Categorizing Risk, Risk Management	Lecture/ In-Class Supervised Work	Case Study/ Major Test (Week 9)
11	2	2	A1, B1, B3	Resource Allocation: Resource Smoothing	Lecture/ Lab Demonstration	In-Lab Exercise
12	2	2	A1, A2, A3, D1, D3	Managing Contracts, - Types of Contracts - The Tendering Process	Lecture/ Independent Learning	Assignment2
13	2	2	A1, A3	Managing Teams: - Becoming a Team - Virtual Projects	Lecture/ Class Discussion	Case Study (Simulation)
14	2	2	A1, C1	Software Quality - The Importance Of Software Quality - ISO 9126 Software Qualities	Lecture/ In-Class Supervised Work	Case Study
15	2	2	A3, B1, B3, C1, C2, D1, D2, D3, D4	Student Projects	Project Supervision	Evaluation of Project Presentations and Reports
16	2	-	A1, A2, B1, C1, C2	All Topics		Final Exam

Teaching Materials:

Textbook(s):	<ol style="list-style-type: none"> Schwalbe K. (2018) <i>Information Technology Project management</i>, 9th Edition, Cengaged learning. Anna P. Murray (2016) <i>The Complete Software Project Manager: Mastering Technology from Planning to Launch and Beyond</i>, Wiley, ISBN: 978-1119161837
Handout(s):	PowerPoint slides available on Moodle i.e. http://www.ahlia.edu.bh/moodle
Reference(s):	<ol style="list-style-type: none"> Hughes B. and Cotterell M. (2009) <i>Software Project Management</i>, 5th Ed., McGraw- Hill Gray C. and Larson E. (2018) <i>Project Management The Managerial Process</i>, 7th Edition, McGraw-Hill Tagarden D. P. (2012) <i>Systems Analysis and design with UML</i>, 4th Edition International Student Version, Wiley. Other references can be found on Moodle. 7. Hoffer J. A., George J. and Valacich J. A. (2016) <i>Modern Systems Analysis and Design</i>, 8th Edition, Pearson.

Assessment

Method of Assessment	Description	Learning Outcomes	Weighting
In-Lab Exercise	Each lab exercise consists of a set of practical tasks to be implemented by students individually in lab times as shown in the above weekly structure. Students work will be observed and graded directly during the lab sessions.	B1, B3, C1	Formative Assessment
Case Studies	Different project management cases are analyzed, simulated and studied.	A3, B1, C1	Formative Assessment
Assignments	Two assignments, each worth 10%. The assignments consist of essay, problem-solving and research based questions covering topics in software project management. The purpose of the assignments is to assess students individually where they have to demonstrate their extensive and detailed knowledge and critical understanding of key concepts of software project management.	A2, B1, C1, D1, D3	20%

Major Test	The test will be an in-class 1-hour test that will consists of short-answer, essay, and problem solving questions and cover the topics studied in the first 9 weeks.	A1, B1, C1, C2	20%
Project	Starting from weak 4, the class will be divided into teams of 2-3 students where each team will be asked to develop a software project plan for an actual client. In this project, the team will work together and go through each of the steps in the Step Wise framework.	A3, B1, B3, C1, C2, D1, D2, D3, D4	20%
Final Exam	The final exam is comprehensive and will be of two hours duration. It will consist of short-answer, essay and problem- solving questions.	A1, A2, B1, C1, C2	40%
Overall:			100 %

Admissions	
Minimum number of students	5
Maximum number of students	20

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