



University/Academy: Arab Academy for Science and Technology & Maritime Transport
Faculty/Institute: College of Computing and Information Technology
Program: Software Engineering / Computer Science / Information Systems

Course title	Project Management
Course code	SE391

Form no. (11-A) Knowledge and skills matrix for a course

Course content	Week study	Knowledge	Intellectual skills	Professional skills	General skills
Introduction to Project Management	1	<ul style="list-style-type: none"> Understand the growing need for better project management, especially for information technology projects Describe what project management is and discuss key elements of the project management framework Understand the history of project management 	<ul style="list-style-type: none"> Demonstrate an introduction to MS Project 	<ul style="list-style-type: none"> Analyze different examples of information technology projects Examine the project management profession, including recent trends in project management research, certification, and software products 	<ul style="list-style-type: none"> Verify how project management relates to other disciplines
The project Management and Information Technology Context	2	<ul style="list-style-type: none"> Understand the systems view of project management and how it applies to information technology projects Explain the differences among functional, matrix, and project organizational structures Understand the concept, development, implementation, and close- 	<ul style="list-style-type: none"> Analyze a formal organization using the structural, human resources, political, and symbolic organizational frames 	<ul style="list-style-type: none"> Evaluate why stakeholder management and top management commitment are critical for a project's success Analyze the attributes of a good project manager in general and in the information technology field 	<ul style="list-style-type: none"> Verify the difference between project development and product development

		out phases of the project life cycle			
The Project Management Process Groups	3	<ul style="list-style-type: none"> Describe the five project management process groups, the typical level of activity for each, and the interactions among them 		<ul style="list-style-type: none"> Evaluate how organizations develop information technology project management methodologies to meet their needs Analyze a case study of an organization applying the project management process groups to manage an information technology project 	<ul style="list-style-type: none"> Verify how the project management process groups relate to the project management knowledge areas
Project Scope Management	4	<ul style="list-style-type: none"> Understand the elements that make good project scope management important Explain the scope planning process and contents of a scope statement 	<ul style="list-style-type: none"> Apply Weighted Scoring model Demonstrate Financial Analysis using NPV, ROI and payback analysis Demonstrate the importance of creating a project charter 	<ul style="list-style-type: none"> Explore the strategic planning process Analyze different project selection methods, such as a net present value analysis, a weighted scoring model, and a balanced scorecard 	
Project Scope Management	5	<ul style="list-style-type: none"> Discuss the scope definition process and construct a work breakdown structure using the analogy, top-down, bottom-up, and mind mapping approaches Understand the importance of scope verification and scope change control to avoid scope creep on information technology projects 	<ul style="list-style-type: none"> Apply WBS techniques Demonstrate Scope management important documents Demonstrate Scope Management on MS Project 2007 		<ul style="list-style-type: none"> Verify how software can assist in project scope management
Project Time Management	6	<ul style="list-style-type: none"> Understand the importance of project schedules and good project time management Define activities as the basis 	<ul style="list-style-type: none"> Apply examples on Activity on-Arrow diagrams and Dummy activities Apply examples on Precedence diagrams 	<ul style="list-style-type: none"> Compare various tools and techniques that help project managers perform activity duration estimating and schedule 	<ul style="list-style-type: none"> Verify how project managers use network diagrams and dependencies to assist in activity sequencing

		for developing project schedules	<ul style="list-style-type: none"> • Demonstrate a Gantt chart for schedule planning and tracking schedule information 	development	
7 th week Examination	7	<ul style="list-style-type: none"> • 90 minute exam to test students understanding of all the concepts introduced in chapters 1, 2, 3, 5 and 6 			
Project Time Management	8	<ul style="list-style-type: none"> • Understand and use critical path analysis • Explain the basic concepts behind critical chain scheduling and Program Evaluation and Review Technique (PERT) 	<ul style="list-style-type: none"> • Demonstrate Time management on MS Project 2007 	<ul style="list-style-type: none"> • Analyze several techniques for shortening project schedules 	
Project Cost Management	9	<ul style="list-style-type: none"> • Understand the importance of good project cost management • Explain basic project cost management principles, concepts, and terms • Explain cost estimating using definitive, budgetary, and rough order of magnitude (ROM) estimates 	<ul style="list-style-type: none"> • Apply on Earned Value Management Calculations 	<ul style="list-style-type: none"> • Evaluate how resource planning relates directly to project cost management • Evaluate how resource planning relates directly to project cost management 	
Project Cost Management & Project Quality Management	10	<ul style="list-style-type: none"> • Understand the processes involved in cost budgeting and preparing a cost estimate for an information technology project • Understand the benefits of earned value management and project portfolio management to assist in cost control • Describe quality planning and its relationship to project scope management 	<ul style="list-style-type: none"> • Demonstrate Cost Management on MS Project 2007 	<ul style="list-style-type: none"> • Evaluate how software can assist in project cost management 	<ul style="list-style-type: none"> • Verify the importance of project quality management for information technology products and services • Verify project quality management and understand how quality relates to various aspects of information technology projects

		<ul style="list-style-type: none"> • Discuss the importance of quality assurance • List the three outputs of the quality control process 			
Project Quality Management	11	<ul style="list-style-type: none"> • Describe important concepts related to Six Sigma and how it helps organizations improve quality and reduce costs • Summarize the contributions of noteworthy quality experts to modern quality management • Understand how the Malcolm Baldrige Award and ISO 9000 standard promote quality in project management 	<ul style="list-style-type: none"> • Apply the tools and techniques for quality control, such as Pareto analysis, statistical sampling, Six Sigma, quality control charts, and testing 	<ul style="list-style-type: none"> • Evaluate how software can assist in project quality management 	<ul style="list-style-type: none"> • Verify how leadership, cost, organizational influences, and maturity models relate to improving quality in information technology projects
12 th week Examination	12	<ul style="list-style-type: none"> • 90 minute exam to test students understanding of all the concepts introduced in chapters 6, 7, and 8. 			
Project Human Resource Management	13	<ul style="list-style-type: none"> • Define project human resource management and understand its processes • Understand important issues involved in project staff acquisition and explain the concepts of resource assignments, resource loading, and resource leveling • Explain organizational planning 	<ul style="list-style-type: none"> • Apply on Resources Leveling • Demonstrate HR Management on MS Project 2007 • Create a project organizational chart, responsibility assignment matrix, and resource histogram 		<ul style="list-style-type: none"> • Verify the importance of good human resource management on projects, especially on information technology projects
Project Procurement Management	14	<ul style="list-style-type: none"> • Understand the importance of project procurement management and the increasing use of outsourcing for information technology projects 	<ul style="list-style-type: none"> • Demonstrate the procurement planning process, procurement planning tools and techniques, types of contracts, and statements of work • Demonstrate types of software 	<ul style="list-style-type: none"> • Assess the importance of good contract administration 	

		<ul style="list-style-type: none"> • Discuss what is involved in solicitation planning and the difference between a request for proposal and a request for quote • Explain what occurs during the solicitation process • Describe the source selection process and different approaches for evaluating proposals or selecting suppliers • Describe the contract close-out process 	available to assist in project procurement management		
Revision	15	<ul style="list-style-type: none"> • Revision 			

Course Instructor

Name:

Signature:

Head of Department

Name:

Signature:

