

Faculty of Management Sciences
Business Support Studies

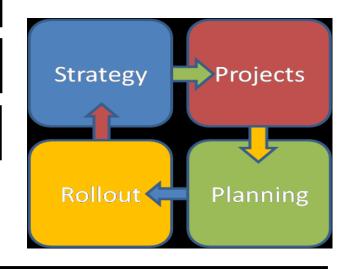
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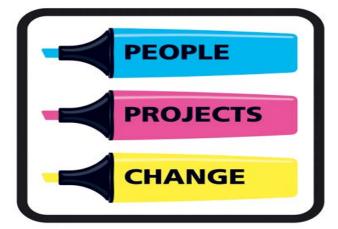
LEARNING GUIDE SEMESTER ONE 2016

SUBJECT: PROJECT MANAGEMENT PROCESS IV A

SUBJECT CODE: PKB41AB

PROGRAMME: BTECH PROJECT MANAGEMENT





PROGRAMME CODE: BEBTPJ

CREDITS: 12

NOF LEVEL: 7

Compiled by:

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1.0. COURSE DETAILS

Name of Module	Project Management Process IV A
Code	PKB41AB
NQF Level	7
Programme	BTech Project Management
Credit	12
Notional Hours	120
Facilitator:	Mrs I Kgololo-Ngowi
Facilitator's Contact:	Room B106 – Management Sciences Building
Programme Coordinator	Dr EK Agbobli
Programme Coordinator's Contact	Room B106 - Management Sciences Building

2.0. Introduction

The Project Management team cordially welcomes you to the Project Management Process IV course of the BTech Project Management programme. The course is pitched at post graduate (that is fourth year/honours) level. The Project Management Process IV is now offered on semester basis (PKB41AB A – First Semester and PKB42AB B – Second Semester). The first semester module PKB41AB A is a prerequisite for the second semester module PKB42AB B. This simply means a learner must pass the first semester (PKB41AB A) module to be admitted into the second semester module (PKB42AB B).

The course is made up of:

- The Tools and Techniques required of a Project Manager
- Assignments/Tutorials that will be made up of exercises and Case Studies
- Regular evaluations
- Practical Application using MS Project 2010

2.1. Course principles

The course is suitable for those Project Managers who are actively engaged in project management, as well as those who wish to go into the field of project management. The course will supply the tools required by the project manager to plan, manage and control a project.

2.2. Project Management Methodology

This course is structured as a generic project management course. That is, the principles that will be used apply to all types of project management. You will find that in your specific discipline specific project management methodologies will be used that have been fashioned for the particular industry.

2.2.1. Course Objectives:

- To give the project manager the latest tools, techniques and proforma documents to manage projects.
- To introduce and reinforce these tools and techniques by means of solid practical examples.
- ❖ To produce assignments that are relevant and applicable to the industry
- ❖ To use case studies wherever possible and feasible to give the practical aspects of Project management
- ❖ To understand and use MS Project as a Project Management tool

2.3. Prescribed Readings (Compulsory)

	Title	Edition	Authors	Publisher
1	Successful Project Management	6 th	Gido & Clement	Cengage Learning
2	New Perspective on Microsoft Project 2010: An Introductory	1st	Rachel Biheller Bunin	Cengage Learning

2.4. Recommended ReadingS

	Title	Edition	Authors	Publisher
1	Managing Projects: A Team-Based Approach	1 st	Karen B Brown & Nancy L Hyer	McGraw Hill
2	Contemporary Project Management	3 rd	Timothy Kloppenborg	Cengage Learning

2.5. General Information

Success in the Subject

In order to attain success in the subject, your own contribution is of vital importance. It is important that you realize that it is your responsibility to prepare for classes and to initiate class discussions.

Success is only possible if you approach your studies with commitment and diligence. Should you not understand any part of the work, please do not be afraid to ask your facilitator for help.

Class Attendance and Conduct in Class Class attendance is compulsory, it is during this time that:

- The facilitator will highlight the key aspects of the work
- You can ask relevant questions regarding the work.
- You can gain practical knowledge through the hand-on the experience of the facilitator
- ❖ It is the responsibility of every student to sign the class attendance register.

2.6. Important Notice

2.6.1. Group Formation

- ❖ A group should consist of **five (5) members only**. It is compulsory for you to belong to a group. Individuals or groups with fewer or more than the required number of members will not be acceptable for the submission of group work.
- Similarly individual work should be strictly treated as such.

2.6.2. Evaluation

Evaluation tests and assignments will be set on a regular basis. It is vital that you focus on each one of these. Experience has shown that lack of regular work is a formula for disappointment and stress.

2.6.3. Assessment

Assessment will be conducted according to any assessment method as approved by the department and the obtained marks may form part of the final mark. Assessment results will be made up from tests, assignments and practical. Evaluation criteria for assignments will be given to the learner in class

The learner is required to study all the work as set out in the learning guide as well as additional material.

2.6.4. Tests

Test dates and venues will be announced in class. Please pay attention in class to all the information that will be provided regarding tests and venues.

Should the learner miss a test it is his/her responsibility to inform the facilitator and bring a valid reason in writing within one week of writing the test

The learner should ensure that the facilitator receives the valid reason on time. The facilitator will then advise the learner on what course of action to take.

No excuse will be accepted for a class evaluation that was missed due to poor class attendance unless the learner can present a valid written reason within one week.

2.6.5. Assignments

Assignments must be submitted on time, on the due date, at the arranged venue, unless the facilitator makes other arrangements.

The facilitator accepts no responsibility for lost assignments. The learner must always keep a copy of every assignment that is submitted.

2.6.6. Assignments and Declarations

- 1. The following declarations must be inserted in the inside cover of every assignment
- 2. Assignments will be rejected without such declarations.

A) Individual Assignment

"Istudent number.......... declare that the work I am submitting is my own individual work. No other person contributed to it. It has never been submitted for any other purpose. I am aware of the consequences if this declaration is found to be untrue".

Signature	 	 	
Date	 	 	

B) Group Assignment

"We the undersigned students declare that the work we are submitting is our own work. It has never been submitted for any other purpose. We are aware of the consequences if this declaration is found to be false"

	Student Number	Student Name	Signature	Date
1				
2				
3				

NB

- 1. If you do not insert this declaration, your work will not be marked and you will be awarded zero.
- 2. A student who fails to sign the declaration shall be deemed NOT to have participated in doing the assignment and shall accordingly be awarded zero.

2.6.7. Class Activities and Homework

Class activities will be done during class times and the facilitator may take in the activity or part of the activity at the end of the session, for marking.

Homework will be given to students and the facilitator may take in the homework at the beginning of the class session.

2.6.8. Plagiarism

Violation of any of the following Central University of Technology, Free State (CUT) rules regarding the academic conduct of students will lead to disciplinary action against the learner:

A learner shall not reproduce or distribute copies of (CUT) learning material without the written consent of the course facilitator.

A learner may not submit any assignment or assessment task where essential parts of the assignment have been taken from the work of another person without giving full credit to that person.

A learner may not submit any forged document for assessment purposes...the learner will receive no marks.

2.6.9. Penalties

Faxed assignments will not be accepted.

The penalty rate for late assignments not submitted on the given due date or otherwise stipulated, will be **5% per day or part of an hour.**

Forged assignments will receive zero marks.

Assignments not complying with criteria on assignment outlays, will be penalized up to 5 marks. (The criteria will be given to the learner during the course of the year).

Assignments where plagiarism is at the order of the day will be penalized with 50%.

2.6.10. Extensions

Application for extension must be done in writing before the assignments due date.

The application must be accompanied by documentation of illness or other exceptional circumstances.

Granted extensions are only valid once the facilitator confirms it and the learner has received notification thereof.

2.7. The Primary aim of this study guide

This study guide serves as a guideline only and should be treated as such. Lectures will not be conducted on a page to page basis regarding the prescribed text books and other recommended references. Students are therefore strongly advised to read intensively within the framework of the study guide. Students are however encouraged to read beyond the scope of this guide and other relevant materials for enrichment.

However, the study guide forms the basis upon which all assessment tasks (formal and informal) will be done. Consequently, students should carefully note the following as contained in the study guide:

- Topics
- Objectives/Expected Outcomes
- Assessment Criteria

2.8. Critical Outcomes of the Module

After the accomplishment of this Program you will:

- Identify and solve problems in which responders display that responsible decisions, using critical and creative thinking, have been made.
- Work effectively with others as members of a team, group, organisation and community.
- Organise and manage yourself and your activities responsibly and effectively.
- Collect, analyse, organise and critically evaluate information.
- Communicate effectively using visual, mathematical and/or language skills in the modes of oral and/or written presentation.
- ❖ Use science and technology effectively and critically, showing responsibility towards the environment and health of others.
- ❖ Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation.
- * Reflecting on and exploring a variety of strategies to learn more effectively
- Participating as a responsible citizen in the life of local, national and global communities
- Being culturally and aesthetically sensitive across a range of social contexts
- Exploring education and career opportunities
- Developing entrepreneurial opportunities.

2.9. Methods of Assessment:

2.9.1. Formative Assessment

Formative assessment takes the form of:

- ❖ A number of written applicable assessments in the form of assignments that will be given during the theoretical part of the programme. A number of case studies will also be expected of you, also done in group context. These will cover all the main course themes.
- ❖ Computer based practical assignments which are assessed on a one-to-one basis by the facilitator on an ongoing basis at the computers. (Additional trained assistants are used to assist the facilitator in this assessment mode)

2.9.2. Summative Assessment

Summative assessment takes the form of:

- ❖ At least one applicable written assessments will be given each quarter. These assessments will be done individually by learners.
- ❖ A 3 hour assessment at the end of each semester will cover all the theory covered up to that point in time,
- ❖ Applicable practical assessments that are done by individual learners, real time on computer. These assessments are deigned to cover specific themes

2.9.3. Assessment Criteria:

The candidates will be capacitated to initiate and plan a small scale project using the selection models and process presented. Planning process output should include at minimum; a project plan: which in turn lists the phases, activities and time frames in the project; a resource plan, financial plan; a quality and risk plan. These aspects will be covered in the formative and summative assessment and again in the summative "assessments.

The candidates will also be capacitated to execute and close a small scale project; this will be evaluated by means of classroom simulation exercise

The knowledge to establish a project management environment is a knowledge thread which tracks through the course and will be assessed on a basic level on course conclusion by means of a comparative study with an existing environment.

2.9.4. Assessment Calculations: Course mark (40% of final mark)

- ❖ Formal group assignments and tests addressing the critical outcome areas as identified in the study guide.
- ❖ A minimum mark of 40% must be obtained in order to be admitted to the exam

The table below shows mark allocation for Tests in the semester.

Test 1 (Theory)	Test 2 (Practical)	Assignment (Test 3)	Total
45%	30%	25%	100

Exam mark (60% of final mark)

❖ A formal 3 hour examination (that counts 60% of the final mark) addressing the critical outcome areas as identified in the study guide.

Module Pass Mark

- ❖ 50% final mark is required to pass a course.
- ❖ A candidate who fails to obtain the pass mark (50%) will need a final mark ranging from 45% to 49% to qualify for supplementary exams.
- ❖ A final mark of 75% or more is required to pass a course with distinction.
- ❖ Final mark = [course mark (40% of CM) + [exam mark (60% of EM)] =100%

NB: Dates for the assignments, tests and exams will be announced in class.

2.10. PKB41AB THEORY SYLLABUS

2.10.1. Part One (1): Initiating a project

Learning Unit 1: Project Management Concepts (Chapter 1 of the prescribed textbook)				
Topics	Objectives/Expected Outcomes	Assessment Criteria (Not limited to these		
	After studying this unit, the learner should be able to:	questions)		
Project Attributes	Define what a project is	❖ Define project		
❖ Balancing Project Constraints	List and discuss the attributes of a project	Define project objective and give examples		
❖ Project Life Cycle	 Explain what is meant by project objective 	 List examples of resources that are used on a 		
✓ Initiating	Define what is meant by project deliverable	project		
✓ Planning	 Provide examples of projects 	❖ What is the role of a customer during the		
✓ Performing	❖ Discuss project constraints	project life cycle?		
✓ Closing	 Describe the phases of the project life cycle 	❖ What aspects of a project might involve some		
❖ Project Management Process	 Define and apply project management 	degree of uncertainty?		
❖ Stakeholder Engagement	 Discuss the steps of planning process 			
❖ Global Project Management	Identify the three elements of the executing process			
❖ Project Management Associations	 Create stakeholder register 			
❖ Benefits of Project Management	 Discuss stakeholder engagement 			
	 Discuss some implications of global project management 			
	 Discuss the project management institute 			
	List benefits of project management techniques			

Learning Unit 2: Identifying and Selecti	ng Projects (Chapter 2 of the prescribed textbook)	
Topics	Objectives/Expected Outcomes:	
	After studying this unit, the learner should be able to:	questions)
❖ Project Identification	❖ Discuss how projects are identified	Why is it important to do a thorough and
❖ Project Selection	 Explain how projects are prioritized and selected 	detailed job of needs identification?
❖ Project Charter	❖ Identify and describe at least eight elements of a project charter	 Describe how a business selects which
Preparing a Request for Proposal	❖ Prepare a project charter	projects to work on where there are
❖ Soliciting Proposals	 Prepare a request for proposal 	numerous projects that could be done
		❖ Why is it important for a business to try
		to quantify the expected benefits of
		implementing a solution to a problem?
		❖ What is meant by a customer
		requirement?

Learning Unit 3: Developing Project Proposals (Chapte			
Topics	Objectives/Expected Outcomes:	Assessment Criteria (Not limited to	
	After studying this unit, the learner should be able to:	these questions)	
❖ Building Relationship with Customers and Partners	 Develop relationships with customers and 	Why building relationships with	
Pre-RFP/Proposal Marketing	partners	customers and partners is important	
Decision to Develop a Proposal	❖ Decide whether to prepare a proposal in response	❖ What is meant by pre-RFP/proposal	
 Creating a Winning Proposal 	to a customer's RFP	marketing? Why should contractors	
 Proposal Preparation 	 Create a credible proposal 	do it?	
Proposal Contents	 Determine a fair and reasonable price for a 	Define proposal and describe the	
✓ Technical Section	proposal	purpose of a proposal	
✓ Management Section	❖ Discuss how customers evaluate proposals		
✓ Cost Section	 Explain types of contracts and various terms and 		
 Pricing Considerations 	conditions		
 Simplified Project Proposal 	 Measure the success of proposal efforts 		
Proposal Submission and Follow-Up			
 Customer Evaluation of Proposals 			
❖ Contracts			
✓ Fixed-Prices Contracts			
✓ Cost-Reimbursement Contracts			
✓ Contact Terms and Conditions			
 Measuring Proposal Success 			

2.10.2. Part Two (2): Planning, performing and controlling the project

Topics	Objectives/Expected Outcomes:	Assessment Criteria (Not limited to
	After studying this unit, the learner should be able to:	these questions)
 Establish Project Objective 	 Establish a clear project objective 	❖ What is planning? Who should be
❖ Define Project Scope	 Prepare a project scope document 	involved in planning the work?
Plan for Quality	❖ Discuss the importance and elements of a project quality plan	❖ What is the meaning of project
 Create Work Breakdown Structure 	 Develop a work breakdown structure 	objective?
❖ Assign Responsibility	 Prepare a responsibility assignment matrix 	◆ Describe what a scope document is
 Define Activities 	 Describe how to define specific activities 	❖ What is work breakdown structure?
 Sequence Activities 	 Create a network diagram 	
✓ Network Principles		
✓ Create Network Diagram		
 Planning for Information System 		
❖ Project Management Information Systems		

Learning Unit 2: Developing the Schedule (Chapter 5 o		
Topics	Objectives/Expected Outcomes:	Assessment Criteria (Not limited to
	After studying this unit, the learner should be able to:	these questions)
 Estimate Activity Resources 	 Estimate the resources required for activities 	Why does scheduling function
 Estimate Activity Durations 	 Estimate the duration for an activity 	depends on planning function and
 Establish Project Start and Completion Times 	 Determine the earliest start and finish times for 	which one must be done first?
❖ Develop Project Schedule	activities	Why should a project have a
✓ Earliest State and Finish Times	 Determine the latest start and finish times for 	regular reporting period?
✓ Latest Start and Finish Times	activities	 How is project control process
✓ Total Slack	 Explain and determine total slack 	used?
✓ Critical Path	 Prepare a project schedule 	*
✓ Free Slack	 Identify and explain the critical path 	
✓ Bar Chart Format	 Discuss the project control process 	
 Project Control Process 	 Develop updated schedules based on actual 	
 Effects of Actual Schedule Performance 	progress and changes	
Incorporate Changes into Schedule	 Discuss and apply approaches to control the 	
❖ Update Project Schedule	project schedule	
❖ Control Schedule	 Explain agile project management 	
❖ Scheduling for Information Systems Development		
 Project Management Information Systems 		

❖ Agile Project Management	
 Appendix 1: Probabilistic Activity Durations 	
✓ Estimate Activity Durations	
✓ The Beta Probability Distribution	
✓ Probability Fundamentals	
✓ Calculating Probability	

Learning Unit 3: Resource Utilization (Chapter 6 of the prescribed textbook)		
Topics	Objectives/Expected Outcomes:	Assessment Criteria (Not limited to
	After studying this unit, the learner should be able to:	these questions)
❖ Resource-Constrained Planning	Create a network diagrams that takes resource	❖ Being able to examples of resources
❖ Resource Requirements Plan	constraints into account	❖ Being able to identify and list the
❖ Resource Levelling	❖ Prepare a resource requirement plan	resources of a project
Resource-Limited Scheduling	❖ Explain resource levelling	Why resources need to be
Resource Requirements for Information Systems	❖ Discuss resource-limited scheduling	considered when developing a
Development		schedule
❖ Project Management Information Systems		❖ What technical and resource
		constraints are
		❖ The meaning of resource levelling or
		smoothing and its importance

Learning Unit 4: Determining Costs, Budget and Earned \	Value (Chapter 7 of the prescribed Textbook)	
Topics	Objectives/Expected Outcomes After studying this unit, the learner should be able to:	Assessment Criteria (Not limited to these questions)
❖ Estimate Activity Costs	 Estimate the cost of activities 	Why is it necessary to develop a
 Determine Project Budget 	 Aggregate the total budgeted cost 	baseline budget for a project?
✓ Aggregate Total	 Develop a time-phased baseline budget 	❖ Describing the project budging
✓ Budgeted Cost	 Describe how to accumulate actual cost 	process
✓ Develop Cumulative Budgeted Cost	 Determine the earned value of work 	Why is it necessary to track actual
 Determine Actual Cost 	performed	and committed cost once a project
✓ Actual Cost	 Calculate and analyse key project 	starts?
✓ Committed Costs	performance measures	Why is it necessary to calculate the
✓ Compare Actual Cost to Budgeted Cost	 Discuss and apply approaches to control the 	earned value of work performed?
Determine Value of Work Performed	project budget	 What does it mean when cost
❖ Analyse Cost Performance	❖ Explain the importance of managing cash flow	variance is negative?
✓ Cost Performance Index		
✓ Cost Variance		
 Estimate Cost at Completion 		
❖ Control Costs		
❖ Manage Cash flow		
❖ Cost Estimating for Information Systems Development		
❖ Project Management Information Systems		
❖ Appendix 1: Time-Cost Trade-Off		

2.11. PKB42AB B PRACTICAL SYLLABUS

Tutorial One	
Topic: Planning a Project	Objectives: After the completion of this tutorial, learners should be able to:
 Introduction to project management Benefits of Project Management Software Starting Microsoft Project 2010 	Session 1.1 ❖ Learn project management terminology ❖ Understand the benefits of project management
 Viewing the Project 2010 window Entering your first tasks Saving a project Closing a project file 	 Explore the Project 2010 window Check and change default settings Enter Task and save a project
	 Session 1.2 Open and explore an existing project Examine different project views Compare the Gantt chart and Network Diagram vies Use the project time scale and calendar Use backstage view and the Page Setup dialog box

Tutorial Two	
Topic: Creating a Project Schedule	Objectives: After the completion of this tutorial, learners should be able to
 Starting a new project and examining 	Session 2.1
scheduling defaults	❖ Start a new project
Reviewing task information	 Examine scheduling defaults
 Examining project calendars 	 Change a project calendar
Entering task and durations in the entry table	 Create a task calendar
Editing tasks and durations in the entry table	Enter and edit task and durations
Editing tasks and durations in other views	 Enter and edit recurring tasks and milestones
 Entering recurring tasks 	 Enter lag and lead times
 Entering milestones 	
 Understanding task dependencies 	Session 2.2
 Creating task dependencies 	Enter and edit task dependencies
Editing task dependencies	❖ View project statistics
Entering lead and lag times	Show the project summary
Creating a work breakdown structures with	Review project statistics
summary tasks	Manipulate summary tasks
Using WBS codes	❖ Develop a work breakdown structure

Tutorial Three	
Topic: Communicating Project Information	Objectives: After the completion of this tutorial, learners should be able to:
 Creating Reports using Project 2010 	Session 3.1
 Understanding the critical path 	 Review reports in Project 2010
 Filtering tasks information 	 Examine the critical path
 Formatting a project 	❖ Filter tasks
 Working with the network diagram 	❖ Format a Gantt chart
 Formatting a network diagram 	
 Shortening the critical path by changing task 	Session 3.2
information	Enter and edit tasks and dependencies in a network diagram
 Shortening the critical path by changing 	Expand, collapse, move and filter tasks in a network diagram
calendar and task constraints	 Format a network diagram
Viewing the entire project using the timeline	Shorten the critical path by changing task durations,
	dependencies and lag time
	 Analyse task constraints