IT Project Management
IPMA6212/d/p
MODULE OUTLINE 2024
(First Edition: 2018)

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Introduction

Project management is more than merely parcelling out work assignments to individuals and hoping that they will somehow accomplish the desired result. In fact, projects that could have been successful often fail because of such take-it-for-granted approaches. Individuals need hard information and real skills to work successfully in a project environment and to accomplish project objectives.

Topics include:
- Project management life cycle and process;
- Identifying and selecting projects;
- Developing a project proposal;
- Techniques for planning, scheduling, resource assignment, budgeting, and controlling project performance;
- Project risks;
- Project manager responsibilities and skills;
- Project team development and effectiveness;
- Project communication and documentation; and
- Project management organisational structures.

In addition to learning the concepts, practices and principles of the traditional project management methodologies, you will explore and learn key aspect of agile project management.

Using this Module Outline

This module outline has been developed to **support your learning**. Please note that the content of this module is on Learn as well as in the prescribed material. You will not succeed in this module if you focus on this document alone.

- This document does not reflect all the content on Learn, the links to difference resources, nor the specific instructions for the group and individual activities.
- Your lecturer will decide when activities are available/open for submission and when these submissions or contributions are due. Ensure that you take note of announcements made during lectures and/or posted within Learn in this regard.

This Module on Learn

Learn is an online space, designed to support and maximise your learning in an active manner. Its main purpose is to **guide and pace** you through the module. In addition to the information provided in this document, you will find the following when you access Learn:

- A list of prescribed material;
- A variety of additional online resources (articles, videos, audio, interactive graphics, etc.) in each learning unit that will further help to explain theoretical concepts;
- Critical questions to guide you through the module's objectives;
- Collaborative and individual activities (all of which are gradable) with time-on-task estimates to assist you in managing your time around these;
- Revision questions, or references to revision questions, after each learning unit.

Kindly note:

- Unless you are completing this as a distance module, Learn does **not** replace your contact time with your lecturers and/or tutors.
- IPMA6212 is a Learn module, and as such, you are required to engage extensively with the content on the Learn platform. Effective use of this tool will provide you with opportunities to discuss, debate, and consolidate your understanding of the content presented in this module.
- You are expected to work through the learning units on Learn in your own time – especially before class. Any contact sessions will therefore be used to raise and address any questions or interesting points with your lecturer, and **not** to cover every aspect of this module.
- Your lecturer will communicate **submission dates** for specific activities in class and/or on Learn.

Icons Used in this Document and on Learn

The following icons are used in all your modules on Learn:

Icon	Description
Objectives	A list of what you should be able to do after working through the learning unit.
Prescribed Work	Specific references to sections in the prescribed work.
ThinkAbout	Questions to help you recognise or think about theoretical concepts to be covered.
Active Learning	Sections where you get to grapple with the content/ theory. This is mainly presented in the form of questions which focus your attention and are aimed at helping you to understand the content better. You will be presented with online resources to work through (in addition to the textbook or manual references) and find some of the answers to the questions posed.
Connect the dots	Opportunities to make connections between different chunks of theory in the module or to real life.
That is life!	Real life or world of work information or examples of application of theory, using online resources for self-exploration.

REMEMBER:

You need to log onto Learn to:

- Access online resources such as articles, interactive graphics, explanations, video clips, etc. which will assist you in mastering the content; and
- View instructions and submit or post your contributions to individual or group activities which are managed and tracked on Learn.

Module Resources

Prescribed Material (PM) for this Module	Gido, J., Clements, JP., Baker, R., Harinarain, N., and Eresia-Eke, C. 2022. *Successful Project Management in South Africa*. 2nd edition. Cengage Learning. 9781473780415

The prescribed articles and resources for this module are:

Learning Unit	Articles/ Resources
1	Layton, MC. 2017. Agile project management for dummies cheat sheet. [Online]. Available at: http://www.dummies.com/careers/project-management/agile-project-management-for-dummies-cheat-sheet/ [Accessed 25 September 2019]. Smartsheet. (nd). Agile Project Management 101: A beginner's Guide for Non-Project Managers. Available at https://www.smartsheet.com/sites/default/files/Agile-PM-101-Beginners-Guide-Non-Project-Managers-Updated.pdf or https://www.smartsheet.com/blog/e-book-agile-project-management-101 Spundak, M. 2014. Mixed Agile/Traditional Project Management Methodology – Reality or Illusion? [Online]. Available at: http://www.sciencedirect.com/science/article/pii/S187704281402196X Accessed 25 September 2019]. Evaluating an agile method for planning and controlling innovative projects. [Online] Ebscohost [Accessed 25 September 2019].
2	Wideman, M. [*s.a.*].*Major Types of Projects Based on Product of Project*. [Online]. Available at:

		http://www.maxwideman.com/guests/typology/projects.htm [Accessed 08 September 2017]. [Accessed 25 September 2019]. Wideman, M. [*s.a.*]. Common Characteristics of the Major Types of Projects [Online]. Available at: http://www.maxwideman.com/guests/typology/characteristics.htm [Accessed 25 September 2019]. Wideman, M. [*s.a.*]. Required Project Management Approach http://www.maxwideman.com/guests/typology/approach.htm [Accessed 25 September 2019]. Wideman, M. [*s.a.*]. Other Variables Common to All Types of Projects (secondary factors) http://www.maxwideman.com/guests/typology/variables.htm [Accessed 25 September 2019]. Project selection: https://www.tutorialspoint.com/management_concepts/project_selection_method.htm https://www.simplilearn.com/project-selection-methods-article [Accessed 25 September 2019].
	3	None
	4	Thomas, S. 2008. *Agile Project Scope*. [Online]. Available at: http://itsadeliverything.com/agile-project-scope [Accessed 25 September 2019]. Thomas, S. 2002. Controlled Scope Management. [Online]Available at: http://itsadeliverything.com/controlled-scope-management [Accessed 25 September 2019]. Aguanno, A. [*s.a.*].*Managing Scope Creep in Agile Projects*. [Online] Available at: http://agilepm.com/managing-scope-creep-in-agile-projects [Accessed 25 September 2019].
	5	None
	6	None

	7	Sliger, M. 2012. Agile estimation techniques. [Online]. Available at: https://www.pmi.org/learning/library/agile-project-estimation-techniques-6110 [Accessed 25 September 2019].
		Freedman, R. 2009. Agile project management: estimating the unknown. [Online]. Available at: http://www.techrepublic.com/blog/tech-decision-maker/agile-project-management-estimating-the-unknown/ [Accessed 25 September 2019].
		Writer, S. Agile Estimation Techniques And Their Pros And Cons [Online]. Available at: https://reqtest.com/agile-blog/agile-estimation-techniques/ [Accessed 23 December 2020].
	8	Smith, G. 2012. Risk Management in an Agile Lifecycle. [Online]. Available at: https://www.agilealliance.org/wp-content/uploads/2016/01/Agile-Risk-Management-Agile-2012.pdf Accessed 20 November 2019].
		http://www.gfoa.org/sites/default/files/GFR_JUN_10_30.pdf
		http://www.ef.uns.ac.rs/mis/archive-pdf/2009%20-%20No1/MIS2009_1_3.pdf
		http://www.iaeng.org/publication/IMECS2011/IMECS2011_pp732-737.pdf
	9	None

Software	Microsoft Project, latest (e.g. 2016 Edition)
Recommended Readings, Digital, and Web Resources	Please note that a number of additional resources and links to resources are provided throughout this module on the Learn platform. You are encouraged to engage with these as they will assist you in mastering the various objectives of this module. They may also be useful resources for completing any assignments. You will not, however, be assessed under examination conditions on any additional or recommended reading material.
Module Overview	You will find an overview of this module on Learn under the *Module Information* link in the Course Menu.
Assessments	Find more information on this module's assessments in this document and on the Student Portal.

Module Purpose	
The purpose of this module is to provide the student with the knowledge and skills required to effectively apply the Project Management Body of Knowledge elements in planning, organising, controlling and leading Information Technology projects integrated solutions in an organisation.	
Module Outcomes	
MO1	Demonstrate knowledge of the key concepts, principles and best practices of information technology project management in organisations.
MO2	Create an integrated project solution using an effective information technology project management methodology.
MO3	Demonstrate the use of project tools and techniques to support the management of project lifecycle an information technology project environment.

Assessments

Integrated Curriculum Engagement (ICE)	
Minimum number of ICE activities to complete	4
Weighting towards the final module mark	10%

Assignments/ Projects	Assignment 1	Assignment 2
Weighting	25%	30%
Duration	10 hours	10 hours
Period	3	4
Learning Units covered	LU1 - 4	LU1 – 6 (up to THEME 2)
Resources required	Refer to the assignment	Refer to the assignment

Tests/ Examination	Examination
Weighting	35%
Duration	2 hours
Total marks	120
Open/ closed book	Closed
Resources required	Calculator
Learning Units covered	ALL

Assessment Preparation Guidelines		
	Format of the Assessment *(The Focus/ Approach/ Objectives)*	Preparation Hints *(How to Prepare, Resources to Use, etc.)*
Assignment	Refer to the assignment for this information.	Refer to the assignment for this information.
Examination	Refer to the assessment brief for this information.	Refer to the assessment brief for this information.

Module Pacer			
Code	Programme	Sessions	Credits
IPMA6212	BCA3; BCIS3; BCN3; DCG3; BIB2; DIS2; DMT2; DNM2; BIS3	24 Lecture + 24 Lab	15
IPMA6212d	BIB2d; DMT2d	12 Lecture + 12 Lab	

Learning Unit 1	Introduction to Project Management

Overview:

This learning unit introduces you to the field of project management, in particular, Information Technology (IT) project management. We investigate the difference between IT project management and normal project management and the way in which these types of projects should be managed. We explore definitions of key concepts in the field, look at project constraints, the project life cycle as well as the project management process and stakeholder engagement.

Please work through Themes 1, 2 and 3 on Learn, together with the relevant sections of your prescribed source/s. To ensure that you are working towards mastering the objectives for this learning unit, please also ensure that you complete the LU1 activities on Learn.

Learning Unit 1: Theme Breakdown		
Sessions: IPMA6212: 1-6 IPMA6212d: 1-4	Theme 1: Project Management for Information Technology Projects	Prescribed Material (PM)

Academic Week: 1-2
 	
Related Outcomes:
MO001
MO002
MO003
	LO1: Define the concepts of
	    • Project
	    • Project Management;
	LO2: Explain the objectives of project management;
	LO3: Discuss the attributes of project management;
	LO4: Explain the key constraints of an IT project.
		PM: Chapter 1
		PM: LU1 articles

	Theme 2: Project Management Concepts	PM: Chapter 1 PM: LU1 articles
	LO5: Discuss the life cycle of a project; LO6: Apply the elements of the project management process; LO7: Evaluate the engagement of project stakeholders in an IT project; LO8: Discuss the benefits of project management in an IT project; LO9: Discuss a project's critical success factors.	
	Theme 3: Introduction to Project Management Guides, Frameworks and Methodologies	PM: Chapter 1 PM: LU1 articles
	LO10: Define concept of project standard, project guide and project methodology; LO11: Differentiate between project management methodologies and standards; LO12: Explain the role and benefits of agile project management in an IT project; LO13: Discuss agile project management in the context of technology projects; LO14: Apply different project management approaches and methodologies in managing an IT project.	

Learning Unit 2	Project Identification and Selection

Overview:

This learning unit introduces you to the initiation phase of the project life cycle. You will explore how projects are identified and selected, learn about the project charter and how to outsource and solicit projects using a Request for Proposal (RFP).

Please work through Themes 1 and 2 on Learn, together with the relevant sections of your prescribed source/s. To ensure that you are working towards mastering the objectives for this learning unit, please complete the LU2 activities on Learn1.

Learning Unit 2	Project Identification and Selection

Learning Unit 2: Theme Breakdown		
Sessions: IPMA6212: 7-10 IPMA6212d: 5-6	Theme 1: Project Identification and Selection	Prescribed Material (PM)
Academic Week: 3	L01: Apply project identification and selection techniques. L02: Discuss various agile project selection methods. L03: Explain the purpose of a project charter in technology-based project environments. L04: Develop a project charter.	PM: Chapter 2 PM: LU2 articles
Related Outcomes: MO001 MO002 MO003	**Theme 2: Request for Proposal Preparation** L05: Explain the role and purpose of a Request for Proposal (RFP) in technology-based project environments. L06: Prepare a request for proposal. L07: Explain how proposals are solicited. L08: Discuss the critical success factors relating to project identification and selection.	PM: Chapter 2 PM: LU2 articles

Learning Unit 3	Project Proposal

Overview:

In this learning unit, we explore the development of project proposals by interested contractors in response to a client's request for proposal and the subsequent contract that a client and contractor enter into once the client decides which contractor to engage with to perform the project.

Please work through Themes 1 and 2 on Learn, together with the relevant sections of your prescribed source/s. To ensure that you are working towards mastering the objectives for this learning unit, please complete the LU3 activities on Learn.

Learning Unit 3: Theme Breakdown		
Sessions: IPMA6212: 11-14 IPMA6212d: 7-8	Theme 1: Introduction to Project Proposals	Prescribed Material (PM)
Academic Week: 4	L01: Explain the key concepts and requirements of project proposals. L02: Create a credible project proposal. L03: Determine a fair and reasonable price for a proposal.	PM: Chapter 3
Related Outcomes: MO001 MO002 MO003	Theme 2: Project Proposal Success L04: Discuss types of contracts and various terms and conditions in a project. L05: Measure the success of proposal efforts. L06: Discuss the critical success factors relating to project proposals.	PM: Chapter 3

Learning Unit 4	Project Planning

Overview:

In this learning unit, we focus on project planning, scheduling, and closing. We explore the project scope document, quality, how to define project activities, who will be responsible for these activities and in what sequence they will be performed. The learning unit concludes with the critical success factors relating to project planning and project closure.

Please work through Themes 1, 2 and 3 on Learn, together with the relevant sections of your prescribed source/s. To ensure that you are working towards mastering the objectives for this learning unit, please complete the LU4 activities on Learn.

Learning Unit 4: Theme Breakdown		
Sessions: IPMA6212: 15-20 IPMA6212d: 9-10	Theme 1: Project Objective, Scope and Quality Plan	Prescribed Material (PM)
Academic Week: 5	L01: Establish a clear project objective; L02: Prepare a project scope document; L03: Apply the elements of a project quality plan.	PM: Chapter 4 PM: LU4 articles
Related Outcomes: MO001 MO002 MO003	Theme 2: The Work Breakdown Structure	PM: Chapter 4 PM: LU4 articles
	L04: Develop a work break down structure; L05: Sequence project activities; L06: Apply network diagram network principles.	
	Theme 3: Project Closing	PM: Chapter 9 PM: LU4 articles
	L07: Discuss the actions that should be taken during the process of closing a project; L08: Conduct a post project evaluation; L09: Explain the importance of organising and archiving project documents; L010: Describe situations that could result in early project termination; L011: Discuss the critical success factors relating to project planning and closing.	

Learning Unit 5	Introduction to Project Software
Overview:	

Overview:

In this learning unit, you are introduced to project management information systems and will learn how to work with a project software application.

Please work through Themes 1 and 2 on Learn, together with the relevant sections of your prescribed source/s. To ensure that you are working towards mastering the objectives for this learning unit, please complete the LU5 activities on Learn.

Learning Unit 5: Theme Breakdown		
Sessions: IPMA6212: 21-24 IPMA6212d: 11-12	Theme 1: Project Software	Prescribed Material (PM)
Academic Week: 6-8	L01: Use the project software interfaces and application components.	PM: LU5
Related Outcomes: MO001 MO002 MO003	Theme 2: Working with the project software or tools L02: Update project properties; L03: Apply project information; L04: Insert, sequence, schedule and link work package and activity entry; L05: Set working times and task duration; L06: Enter predecessor data; L07: Create resource pools; L08: Apply resource pools; L09: Use network diagram tools; L010: Set baseline for a project; L011: Use project reports.	PM: LU5

Learning Unit 6	Project Resource Utilisation and Schedule Development
Overview: Once a project starts, it is necessary to monitor progress by comparing the actual progress to the schedule. If everything is not going according to schedule, it is important to take corrective action to get back on schedule. In this learning unit, we explore monitoring and controlling the progress of a project and updating the project schedule. Please work through Themes 1, 2, 3 and 4 on Learn, together with the relevant sections of your prescribed source/s. To ensure that you are working towards mastering the objectives for this learning unit, please complete the LU6 activities on Learn.	

Learning Unit 6: Theme Breakdown		
Sessions: IPMA6212: 25-28 IPMA6212d: 13-14	**Theme 1: Project Scheduling**	**Prescribed Material (PM)**
Academic Week: 9	LO1: Estimate the resources required for activities; LO2: Estimate the duration of an activity; LO3: Determine the earliest start and finish for activities; LO4: Determine the latest start and finish for activities; LO5: Determine total slack; LO6: Prepare a project schedule.	PM: Chapter 5 and 6
Related Outcomes: MO001 MO002 MO003	**Theme 2: Project Control** LO7: Explain the critical path; LO8: Discuss the project control process; LO9: Apply approaches to update and control the project schedule; LO10: Discuss the critical success factors relating to project scheduling.	PM: Chapter 5 and 6
	Theme 3: Project Resource Utilisation LO11: Prepare a resource requirements plan; LO12: Discuss resource levelling; LO13: Discuss resource-limited scheduling; LO14: Discuss the critical success factors relating to resource utilisation.	PM: Chapter 5 and 6
	Theme 4: Project Scheduling and Resource Management Tools LO15: Use project software tool to schedule a project and manage resources.	PM: Chapter 5 and 6

Learning Unit 7	Project Costs and Budgets

Overview:

In this learning unit, we explore the project baseline budget. The budget is determined by aggregating the estimated costs for all the project activities. Once the project starts, it is important to monitor actual costs and earned value of the work performed.

Please work through Themes 1, 2, 3 and 4 on Learn, together with the relevant sections of your prescribed source/s. To ensure that you are working towards mastering the objectives for this learning unit, please complete the LU6 activities on Learn.

Learning Unit 7: Theme Breakdown		
Sessions: IPMA6212: 29-34 IPMA6212d: 15 -18	Theme 1: Project Costs and Budgets	Prescribed Material (PM)
Academic Week: 10	L01: Explain the project cost concept; L02: Explain the budget key concept; L03: Estimate the cost of activities; L04: Determine a project using estimated costs of activities; L05: Describe how to accumulate actual costs; L06: Calculate basic project costs; L07: Analyse key project performance measures; L08: Apply approaches to control the project budget; L09: Explain the project cash flow key concepts.	PM: Chapter 7 PM: LU7 articles
Related Outcomes: MO001 MO002 MO003	**Theme 2: Project Cash Flow** L010: Manage the project's cash flow; L011: Discuss the critical success factors relating to project costs and cash flow; L012: Use project software tools to manage costs and a budget for a project.	PM: Chapter 7 PM: LU7 articles

Learning Unit 8	Project Risk Management
Overview: Projects involve a degree of uncertainty which can impact on the outcome of the project. The purpose of this learning unit is to explore risk management as identifying, assessing, and responding to project risks in order to minimise the likelihood of occurrence and/ or potential impact of adverse events on the accomplishment of the project objective. Please work through Themes 1 on Learn, together with the relevant sections of your prescribed source/s. To ensure that you are working towards mastering the objectives for this learning unit, please complete the LU6 activities on Learn.	

Learning Unit 8: Theme Breakdown		
Sessions: IPMA6212: 35-40 IPMA6212d: 19-20	Theme 1: Project Risk Management	Prescribed Material (PM)

Academic Week:
11
Related Outcomes:
MO001
MO002
MO003
	L01: Discuss what is involved in managing risks;
	L02: Perform the following in project activities:
	    a. Identify risks;
	    b. Categorise risks;
	    c. Prioritise risks;
	    d. Assess risks.
	L03: Prepare a risk response plan;
	L04: Develop a risk assessment matrix;
	L05: Control project risks;
	L06: Use appropriate project tools and software to manage IT project risks;
	L07: Discuss the critical success factors relating to managing project risks
		PM: Chapter 8
		PM: LU8 articles

Learning Unit 9	Project Manager, Project Teams and Organisational Structures

Overview:

It is the people, not the procedures and techniques, who are key to project success. In this learning unit, the focus is on how the skills and knowledge of the project manager and project team can be leveraged to accomplishing the project objective. In addition, this learning unit explores the various configurations in which people can be organised to work on projects.

Please work through Themes 1, 2 and 3 on Learn, together with the relevant sections of your prescribed source/s. To ensure that you are working towards mastering the objectives for this learning unit, please complete the LU6 activities on Learn.

Learning Unit 9: Theme Breakdown		
Sessions: IPMA6212: 41--48 IPMA6212d:21 - 24	**Theme 1: The Project Manager**	**Prescribed Material (PM)**
Academic Week: 12	L01: Discuss the responsibilities and the competencies of a project manager. L02: Explain how project changes are managed. L03: Apply the approaches of effective delegation. **L04:** Discuss the critical success factors relating to the role of a project manager.	PM: Chapter 10, 11 and 13
Related Outcomes: MO001 MO002 MO003	**Theme 2: Project Teams** L05: Explain how teams are assigned and formed: • Plan for effective project meetings; • Describe the characteristics and barriers of effective teams; • Apply the problem-solving process in a project; • Apply effective brainstorming techniques; • Discuss the team development stages.	PM: Chapter 10, 11 and 13
	Theme 3: Project Management Organisational Structures L06: Explain the types of project management organisational structures. L07: Discuss the advantages of different types of project management organisational structures. L08: Discuss the disadvantages of different types of project management organisational structures.	PM: Chapter 10, 11 and 13