



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section	Course	Code	Date
Master	18 / 03 / 2021.	Thursday	(PMG506)

Advanced project Management

Instructions:

- اخر موعد للتسليم هو يوم الخميس ٢٠٢١-٠٥-٢٥ في تمام الساعة ٩ مساءً.
- الإجابة متاحة باللغة الإنجليزية أو اللغة العربية مع مراعاة أن تكون المصطلحات العلمية باللغة الانجليزية.
- يتم تسليم المشروع في صيغة ملف pdf مع الالتزام نموذج الجامعة ولن تقبل أي مستندات أخرى.
- يجب مراعاة أقسام البحث الرئيسية (مقدمة Introduction، دراسات علمية سابقة Literature Review، طريقة البحث Methodology، النتائج والمناقشة Results and Discussion، وأخيراً المراجع References. وان كان هناك ملحقات Appendices يتم إضافتها)
- يجب الالتزام بـ Theme موحد كما يلي:
- حجم الخط ١٢.
- نوع الخط Arial.
- لون الخط أسود.
- المسافة بين الأسطر line spacing ١,٥
- عدد صفحات البحث (لا يقل عن ثلاث صفحات ولا يزيد عن ست صفحات).

Instructor's Name: ~~Eng. Amaal Aburumman~~ **Eng. Dr. Akram M. S. Ali**

Project:

You are required to document your role in administering a project. The project may be set in a business, social, sporting, or family environment but must be of a significant size and scale. If you do not have an actual project to write about you may complete the project hypothetically.

This report will be between three to six pages in length. This is a significant research project.

Your report must address ~~each~~ **ONE** of the following issues:

1. Identify and describe the purpose, scope, and objectives of the project. **Display this information using an appropriate tool.**
2. Describe how the team is given an outline of the project.
3. Describe the strategies that are going to be set up to maintain communication with the team members.
4. Describe the tools that are going to be used to monitor the goals, time frames or milestones.
5. Identify project milestones and activities. **Display this information using an appropriate tool.**
6. Create a budget and link the costs to the key milestones for a project.
7. Describe how you are going to divide tasks and resources amongst a project team. **Display this information using an appropriate tool.**
8. Briefly describe how the progress will be monitored.
9. How are current project records maintained? Who has responsibility for this? provide some recommendations on how this process could be improved.
10. Describe the current procedure for finalizing projects. Create your own procedure and identify how you will evaluate the success of the project.
11. Legislation that may affect the project including health and safety, and anti-discrimination legislation.

Best of luck...

مطلوب منك توثيق دورك في إدارة مشروع. قد يتم تعيين المشروع في بيئة تجارية أو اجتماعية أو رياضية أو عائلية ولكن يجب أن يكون بحجم مناسب. إذا لم يكن لديك مشروع فعلي لتكتب عنه ، فيمكنك إكمال المشروع افتراضياً. ستكون هذا التقرير من ثلاث إلى ست صفحات.

يجب أن يعالج تقريرك ~~كل~~ **احد** القضايا التالية:

١. تحديد ووصف الغرض والنطاق والأهداف من المشروع. اعرض هذه المعلومات باستخدام أداة مناسبة.
٢. صف كيف يتم إعطاء الفريق مخططاً تفصيلياً للمشروع.
٣. وصف الاستراتيجيات التي سيتم وضعها للحفاظ على التواصل مع أعضاء الفريق.
٤. صف الأدوات التي سيتم استخدامها لرصد الأهداف أو الأطر الزمنية أو المعالم.
٥. تحديد معالم المشروع والأنشطة. اعرض هذه المعلومات باستخدام أداة مناسبة.
٦. إنشاء موازنة وربط التكاليف بالمعالم الرئيسية للمشروع.
٧. صف كيف ستقوم بتقسيم المهام والموارد بين فريق المشروع. اعرض هذه المعلومات باستخدام أداة مناسبة.
٨. صف بإيجاز كيف سيتم رصد التقدم.
٩. كيف يتم الاحتفاظ بسجلات المشروع الحالية؟ من المسؤول عن هذا؟ تقديم بعض التوصيات حول كيفية تحسين هذه العملية.
١٠. وصف الإجراء الحالي لإنهاء المشاريع. قم بإنشاء الإجراء الخاص بك وحدد كيفية تقييم نجاح المشروع.
١١. التشريعات التي قد تؤثر على المشروع بما في ذلك الصحة والسلامة ، وتشريعات مكافحة التمييز.

مع تمنياتي بالتوفيق..

Construction Companies

1.Introduction

Engineering projects go through different stages during their life cycle that start as an idea imagined by the owner To achieve its goals, then it develops to pass through several stages until it reaches the stage of operation and benefit that is It continues until it reaches liquidation, and the life cycle of each project differs from the other according to its nature It is sized and there is no standard cycle that fits all projects, but it all starts and ends with the owner It is normal for any error in the early stages of the project to be reflected in the later stages Extremely difficult if not impossible, and the project life cycle varies Correction becomes a mother Construction and other courses, according to the different rationale for the construction project For other projects But in general, it is characterized by a life cycle with a clear and definite beginning and end, each engineering project consists Of the processes through which the specified work is accomplished, and each process can be divided into stages .

The stages are:

- 1- The planning and feasibility study stage.
- 2- the design stage.
- 3- The tender stage.
- 4- The contract stage.
- 5- the implementation.
- 6- the receiving and documentation phase.

2.Literature Review

Projects vary in size and complexity, but they are all organized into four successive phases.

They represent the life cycle of the project, and each of them can be viewed as an independent project.

The First of these phases is the initiation phase, which usually involves the owner expressing his desire to start the project with respect to For construction projects and preparation of pre-investment studies, which usually include market and study studies Feasibility and selection of the project from among alternatives, setting the initial budget, naming the consultant or assigning The contractor for the project in the event that the contract includes design and implementation.

The Second phase is the Regulation and planning phase (design), in which the consultant - or the contractor in the case of Design / Implementation Contracts - Preparing tender documents from drawings, specifications, lists of quantities and the program The initial time schedule, and the owner submits the documents or assigns the consultant to put them out in a tender The owner shall contract with a specific contractor by direct order (according to the authority available to him), and the consultant shall undertake The technical and financial analysis of the implementation offers and the recommendation to choose one of the bidders according to the analysis.

The Third phase is the implementation phase, in which the winning contractor - or who has been appointed by direct order - will implement The offering documents are in accordance with the specifications and requirements of the owner and under the supervision of the consultant, and the contractor shall deliver Project outputs and avoid the comments received from the stakeholders.

The Fourth phase is the closing phase, in which the expectations and requirements of the owner / stakeholders are met Filing project documents, documenting and preserving lessons learned.

2.1 INITIATION

Among the objectives of the contracting company : Executing projects at the lowest cost
(This means getting the highest profit). Implement projects as quickly as possible
(This helps the company to get many new job opportunities) And (This helps increase the company's ability to obtain letters of guarantee from banks for its business)
Therefore, the company works to make the best use of resources to achieve its objectives, which are: To finish the project with a suitable profit.

2.2 PLANNING

It is the first step to control the execution time of the construction project, which is the same Time is also the first step in the administrative process after setting the required goals. Preparing general planning for major project activities to include governing histories and achievement of priorities The owner's needs for the project components .
The project implementation time is also estimated under the different circumstances and the frame timetable for the project phases is known Different.

This stage includes the work of architectural, structural, executive and detailed designs and specification of specifications Public and private materials, equipment and labor required for the project, in addition to schedules of quantities.

2.2.1 Objectives of the planning phase

- Determine the objectives of the project and its fields of work.
- Determine the organizational structure of the project and its work teams.
- Define the main and detailed business items.
- Reaching an estimated time to implement the project.
- Determine the project's resource requirements.

To make a good planning program, it has to go through the following two stages.

2.2.2 Milestone Planning

In this stage, interim objectives are defined with existing restrictions set as prior dates for their implementation. The planner faces a set of questions when starting planning, and the important question may be: How can the project be organized? We may notice by reviewing the documents that it is divided into parts, but the question still arises Are these sections suitable for scheduling or not?

This is an excellent way to start planning because it brings the following benefits :

- 1- Determine the results required of the project

2- Describes in a simple way what should be achieved during the project phases

3- The project is a number of conditions that must be taken into consideration.

Consequently, the project becomes a simplified network of progressive objectives with specific dates for implementing each interim goal, meaning that you have defined.

When should the concrete structure work be completed?

When can you start working on the finishes?

When can the electromechanical supplier deliver his duties to the site?

Thus, with this network, you will have completed the planning structure of the project that helps you a lot before the start of the detailed planning phase.

2.2.3 Detailed Planning

The process of defining the activities to be implemented in the project is one of the important steps in the planning. Because if you forget an activity, the final planning will surely be deficient because it did not include activities to be performed.

To define all project activities :

We divide the project into its basic components, and under each of them we begin to define its subcomponents and continue to

- Dismantling each component until we reach activities for which a period of time and a budget can be determined for each of them until they are completely finished.

The list that contains these activities is called "**Work Package** "

- After the process of defining the components of the project in its disassembly process, you must assign the task of completing the component. From the components of the project to a member of your company or to one of the supervisors or subcontractors, and this is called The organizational structure in assigning business

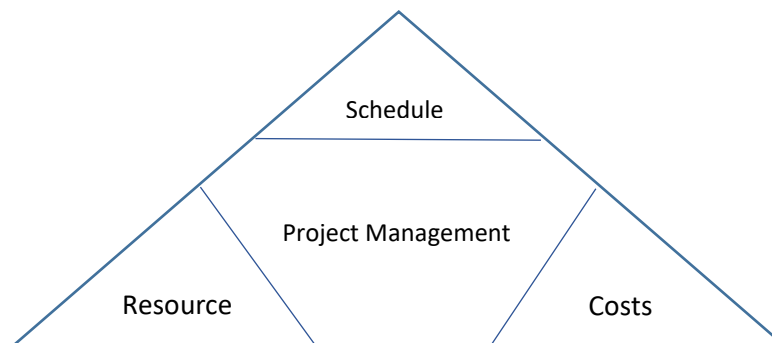
" **Organizational Breakdown Structure (OBS)** "

2.2.4 Definition of Activity

" It is an element or task of work that has a specific beginning and a certain time to be completed. It is considered the basic unit that constitutes the project, and the project is not completed until all activities are completed. Within it "

Concrete pouring work —————> **Is an activity.**

2.2.5 Overview Planning Project



2.2.6 Project planning methods

1- Gantt Bar Chart.

It can be used as follows :

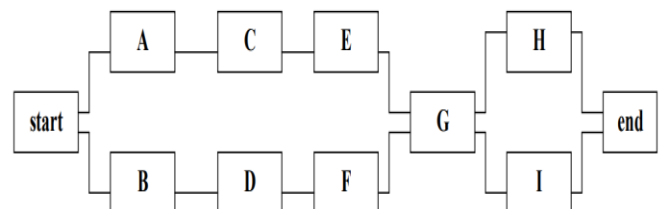
- The schedule of activities and their follow-up.
- Course schedule.
- Program of employment schedule.
- Program schedule of the equipment.
- Financial analysis of the project (workload - costs - expenditures - revenues - financing)

2- Network Analysis.

Using the Method Path Critical :

In this method the activity is represented inside a rectangle. Write inside a rectangle (or square, circle, hexagon or any other suitable shape) a brief description of the activity or The code number of its "symbol" and its period of time, and some other numbers may be written inside it

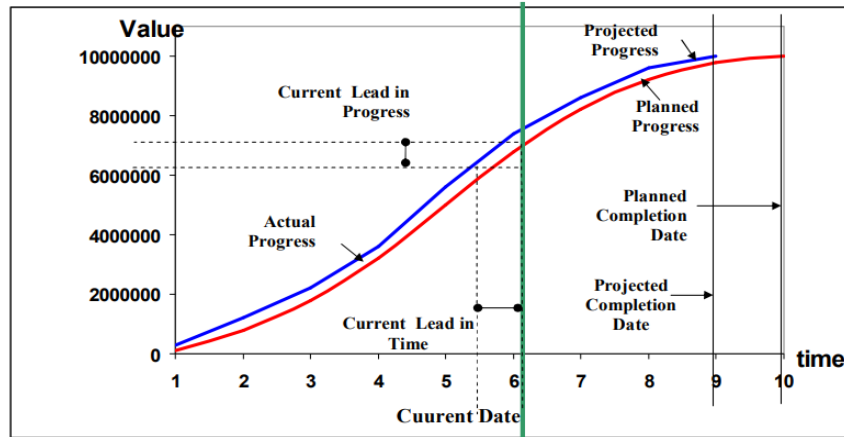
Early start	Duration of implementation	Early end
Description of the activity		
Late start	Cody number	Late end



3- Business progress curve – S.

Plotted by taking (cumulative) aggregate measurements of quantities of work versus time, and sometimes The quantities of work required to be executed are measured by a measure of their monetary value.

In the field of construction, there is a standard shape for the curve, which is an S-shape that shows the ideal relationship between business progress And time.



2.3 EXECUTION

This stage is considered one of the most important stages of the project, as it takes most of the time and is consuming Major part of the cost (about 85% of the total project cost). This stage is intended to transform what was designed in the planning stage of architectural drawings or Constructive or detailed to reality within the framework of the specifications and conditions that have been agreed upon in the contract Using the necessary resources such as materials, labor, equipment and money. This stage begins as soon as the main contractor is selected and the contract is signed between him and the owner or their representatives Then the project land is handed over to the contractor.

2.4 MONITORING

In it, the development of project scope implementation is monitored and controlled, schedule implementation is monitored and controlled, and costs are monitored Control, quality control, performance reporting, risk monitoring for control, and procurement monitoring.

2.5 CLOSURE

This means the final receipt of all works after the lapse of the warranty and maintenance period, and the contractor is considered as having By this, he performed all his duties and released him from all responsibilities, except for the responsibility to ensure the integrity of the origin From cracking or partial or total disintegration, which may extend to ten years unless agreed upon That.

Processes	INITATION	PLANNING	EXECUTION	MONITORING	CLOSURE
Integration management	-Project charter counter -Set up the initial scope -Division of major projects Into phases	Prepare the project management plan	Directing and managing project implementation	-Project monitoring and control -Integrated control over project changes	Close the project
Domain management		-Scope Planning -Define the scope -Establish a WBS		-Scope Verification -Monitor project progress	
time management		-Definition of activities -Relay activities -Estimation of resources for activities -Estimating activity durations -Development schedule -Definition of relative weight For activities -Setting progress curves		-Schedule control -Control project progress	
cost management		-Costing -Determine the budget		-Control costs	
Quality Management		Quality planning	Quality Assurance	Quality control	
Resource Management Humanity		Human resource planning	-Create a working group -Team development	-Managing the work team	Close the work team
Communications Department		-Communication planning	-Distribute information	-Performance reports -Stakeholder management	
Risk Management		-Risk management planning -Definition of risk -Analyze risks qualitatively -Quantitative risk analysis -Risk Response Plan		-Monitor and control risks	
purchase management		-Procurement Planning -Contract planning	Pricing requests and requests Offers	Relationship Management	Close purchases
Safety management		Safety planning	Safety assurance	Safety control	
Environmental management		Environmental planning	Implement environmental assurance	Environmental control	
Finance Department		Finance planning	Control of financing		Close financing records
Claims management		-Definition of claims -Estimating the value of the claims		Claims prevention	Decide on claims

Project management knowledge domains are the body of knowledge subsumed under the project management process groups, Implement them during the various project management phases. Some of these areas apply to construction projects and others Projects, but others are processes that are particularly unique to construction projects.

3.Methodology

This research aims at the importance of defining and describing the purpose, scope, and goals of construction projects that affect the progress of the project effectively, so we must know them scientifically because the increase in risk within any project turns into a problem due to the possibility of continuing the work as it is found within the construction and construction projects. To address the results of the remaining risks within the project, and the importance of defining the scope and objectives lies in the prevention of potential problems occurring and the correction and reduction of actual problems if they occur.

4.Results and Discussion

Building and construction projects are exposed to many risks due to their special nature and multiple stages Therefore, it is necessary to prepare a comprehensive and integrated study based on previous projects in the preparation stage the documents .

And after the research was prepared by presenting, discussing and analyzing the study, I reached the following conclusions:

- 1- The importance of technical, financial and administrative evaluation of construction companies.
- 2 - The occurrence of changes in the cost prepared for the implementation of the project were not taken into account.
- 3- Lack of interest by companies and establishments in analyzing risks to benefit from them in the future.

Through the research and the conclusions that were reached, a number of recommendations were made to overcome the problems that occur in the document preparation stage, namely:

- 1- Asking parties from outside the institution to review documents helps to come out with an integrated vision.
- 2- Building and construction companies in general should pay attention to studying risks and assign a work team It studies and identifies the various risks to which each project is exposed and manages them.
- 3- Supporting engineers 'skills and stimulating their ability to deal with and manage field work through rehabilitation Scientific and practical so that they can take appropriate decisions.

- 4- Holding periodic meetings with institutions and companies operating in the field of construction to discuss objectives The project and the extent of success in the business.
 - 5- Checking the contract document before approval and working to achieve harmony between the various documents of the project.
 - 6- A good estimate of the project cost, depending on the design prepared for that.
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References

- 1- Dr. Ibrahim Abdel Rashid Nassir, Construction Projects Department, University Press, 2007
- 2- Dr. Fadwa Ahmed Abbas, Construction Project Risks Associated with the Document Preparation Stage, 2017
- 3- Mohamed Ebrahim Omar, project planning and management, 2018
- 4- PMBOK GUIDE