



جامعة الجميع الذكية  
EVERYONE'S SMART UNIVERSITY

## Everyone's Smart University

### Project (Spring 2021)

|              |                        |               |
|--------------|------------------------|---------------|
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Section

Master

Date

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Course Code

(PMG506)

## Advanced project Management

### Instructions:

- آخر موعد للتسليم هو يوم السبت 2021-05-08 في تمام الساعة ٩ مساءً.
- الإجابة متاحة باللغة الإنجليزية أو اللغة العربية مع مراعاة أن تكون المصطلحات العلمية باللغة الإنجليزية.
- 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 12.
- نوع الخط Arial.
- لون الخط أسود.
- المسافة بين الأسطر line spacing 1.5
- عدد صفحات البحث (لا يقل عن ثلاث صفحات ولا يزيد عن ست صفحات).

Instructor's Name: Eng. Dr. Akram M. S. Ali

The project aims at providing information on the development of a construction project. The proposed project is social in nature which will provide care and support for the neglected children. The project involved building a house for the street children, consisting of several team members interested in children and human rights advocacy. The project is an average project that will host one hundred children from the street or children who are homeless. Furthermore, the project is private and has very little government involvement, especially in funding, and provision of requirements such as certification and application of legislation. The main objective is to complete the construction process in three months and successfully children. The project also seeks to administer the project and select leaders that will control and organize the project for successful results and coordination.

The project members are provided with a project outline, which states the project's needs and what should be done to complete the project. The outline is comprised of the project scope and objectives that will assist the members in understanding the project in-depth and how the project will be completed. The outline will then be sent to the team members through email, which is the official form of communication, such as document sending, permission borrowing, and other official project activities. Maintaining regular and constant communication with the team members will require making it a priority, keeping things positive, keep updates concise and timely, and change communication channels to break the monotony.

A communication strategy is necessary in maintaining healthy and constant communication during the project. For instance, the need to be informed should be outlined, such as decision-making and the development of policies and methods to enhance communication (Demirkesen, and Ozorhon, 2017 p. 641). The type of communication required is highly significant as it is applicable in areas such as holding team management meetings, online conference calls, and project updates. The relayed information should be project-related. Therefore, only the necessary information concerning the project should be pursued. Another strategy involves the frequency of communication. Communication should be done on a weekly basis. This will assist in

tracking progress, avoiding piling up of issues, or leaving issues unsolved, leading to more issues. Another strategy is understanding the type of details that should be communicated. Some of the most critical details include the successes of the project, the problems encountered, significantly if the problem affects the overall project, the progress of the project, and lastly, discussing meeting notes.

The project management tools and techniques are essential in monitoring the goals, the project milestone, and the timeframes. The agile project management method is the most appropriate management tool to monitor the project milestone and time frame (Szymański, 2017, p. 178). Agile methodology promotes project planning and management of the construction process. Some of the significant benefits of the method involve a chance to make changes in between the project, although this affects other work dynamics, and the planning schedule, and timing. On the other side, the method can assist in fixing any upcoming issue and promote collaboration and strong communication. Since agile project methodology promotes flexibility, transparency, and interactivity, it helps to assist in tracking the milestone of the project and events that occur during the project.

The construction project milestone involves securing the funding process, the acquiring site stage, appointment co-consultants, completion of designs stages, client approval stages securing permission from an authority, tendering the construction, and appointment of a contractor. The project milestone by agile assists in evaluating points on a project schedule. However, the milestone is broken into four phases: The initiation phase, the planning phase, the implementation phase, and the closure phase (Demirkesen, and Ozorhon, 2017, p. 644). The milestone plays a vital role in tracking the project's progress, especially when dealing with stakeholders. Creating a budget for the project is a crucial milestone that is conducted after securing funding. The project budget consists of costs required to facilitate the team members such as the contractors, and architectures, the training fees, the material resources. The materials used in the project include bricks, and other materials, used to build the roof and make the flooring, for instance, terrazzo, concrete, rebars, and timber for framing. Furthermore, travel expenses are included in the project, contingency reserves, as well

as professional services. The cost estimation is conducted through a formula that includes materials, equipment, and labor.

| Description | Quantity<br>$Q_i$      | Material<br>unit cost<br>$M_i$ | Equipment<br>unit cost<br>$E_i$ | Wage<br>rate<br>$W_i$ | Labor<br>input<br>$L_i$ | Labor<br>unit cost<br>$W_i L_i$ | Direct<br>cost<br>$Y_i$ |
|-------------|------------------------|--------------------------------|---------------------------------|-----------------------|-------------------------|---------------------------------|-------------------------|
| Formwork    | 12,000 ft <sup>2</sup> | \$0.4/ft <sup>2</sup>          | \$0.8/ft <sup>2</sup>           | \$15/hr               | 0.2 hr/ft <sup>2</sup>  | \$3.0/ft <sup>2</sup>           | \$50,400                |
| Rebars      | 4,000 lb               | 0.2/lb                         | 0.3/lb                          | 15/hr                 | 0.04 hr/lb              | 0.6/lb                          | 4,440                   |
| Concrete    | 500 yd <sup>3</sup>    | 5.0/yd <sup>3</sup>            | 50/yd <sup>3</sup>              | 15/hr                 | 0.8 hr/yd <sup>3</sup>  | 12.0/yd <sup>3</sup>            | <u>33,500</u>           |
| Total       |                        |                                |                                 |                       |                         |                                 | \$88,300                |

Monitoring and control of project work, however, is the work of a project manager. The monitoring process involves other processes such as project management planning, record keeping, agreements, or contracts, work performances, and organization of project assets. Monitoring the project and record-keeping assist in promoting traceability and in the decision-making process. A Record Management System (RMS) is implemented to maintain the records and storage to avoid losing essential documents, such as the permission certificate. Record keeping in the project can be improved through f technology, and artificial intelligence, as the intelligent way of project management. The Artificial Intelligence (AI) methods assist in tracking the performance and re-planning the project.

The final procedure involves transferring deliverables to clients, confirming the project completion through visiting the site, and observing the work done. The other process is reviewing contracts and documents involved or used to seal an agreement at the beginning of the project. Release the resources, carry out a postmortem, archive documents, such as the property title and other essential documents, and lastly, celebrating the completion of the project. Several legislation is considered in a construction project and might affect the construction of the house for humanity. The legislation is also concerned with the health and safety of the site, especially the safety of constructors. Some of the legislation includes the Construction Act of 2009, the Building Act of 1984, Construction and Regulations of 2005, and The UK Health And Safety at Work Regulation of 1999. Another safety regulation is the Manual Handling Operation Regulation Of 1992 and Workplace Regulation of 1992.

## References

- Demirkesen, S. and Ozorhon, B., 2017. Impact of integration management on construction project management performance. *International Journal of Project Management*, 35(8), pp.1639-1654.
- Szymański, P., 2017. Risk management in construction projects. *Procedia Engineering*, 208, pp.174-182.