Maria Morphy-Enebeli

18/ENG04/051

ELECT/ELECT

ENG 284

Engineer in society

ENGINEERING CONSULTANCY ASSIGNMENT

1. SCOPE OF WORK

.Project objectives: The problem statement is space. Alfa Belgorie is Afe Babalola University’s general gathering hall and with the school’s population (both students and staff and on special occasions parents) space is to be put into reconsideration. The aim of the project is to create more space.

. Schedule/ Milestone: The project will commence officially by the 4th of February 2020 and finished by January 2021. The first major milestone would be the successful removal of the roof and side walls the rest that will be achieved along the progress of the project will be recorded that way we will be able to track and measure progress.

. Individual tasks: The roof need to be completely removed in order to go to progress to a finished project successfully.

. Payment Outcomes: This information will be given payment schedule.

. Expected outcomes: The expected outcome would be the successful development of space.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Project Planner** | | | | | | | |  | | | |  | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
|  | *Select a period to highlight at right. A legend describing the charting follows.* | | | | | | | | | | | | **Period Highlight:** | | | 1 | |  | |  | | Plan Duration | | | | | | | | | | | |  | | Actual Start | | | | | | | |  | | % Complete | | | | | | | |  | | Actual (beyond plan) | | | | | | | | | | | | | |  | | % Complete (beyond plan) | | | | | | | | | | | | | | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
|  | **ACTIVITY** | | **PLAN START** | | **PLAN DURATION** | | **ACTUAL START** | | | **ACTUAL DURATION** | | **PERCENT COMPLETE** | | | **PERIODS** | | | | | | | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  | |  | |  | |  | |  | | |  | | |  | | | **1** | | **2** | | **3** | | **4** | | | **5** | | | **6** | | **7** | | **8** | | **9** | | **10** | | **11** | | **12** | | **13** | | **14** | | **15** | | **16** | | **17** | | **18** | | **19** | | **20** | | **21** | | **22** | | **23** | | **24** | | **25** | | **26** | | **27** | | **28** | | **29** | | **30** | | **31** | | **32** | | **33** | | **34** | | **35** | | **36** | | **37** | | **38** | | **39** | | **40** | | **41** | | **42** | | **43** | | **44** | | **45** | | **46** | | **47** | | **48** | | **49** | | **50** | | **51** | | **52** | | **53** | | **54** | | **55** | | **56**57 58 59 60 |
|  | | **Planning** | | 1 | | 5 | | 1 | | | 4 | | | **25%** | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  | | **Design** | | 1 | | 6 | | 1 | | | 6 | | | **100%** | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  | | **Implementation** | | 2 | | 4 | | 2 | | | 5 | | | **35%** | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  | | **Follow up** | | 4 | | 8 | | 4 | | | 6 | | | **10%** | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  | | **Activies** | | 4 | | 2 | | 4 | | | 8 | | | **85%** | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  | | **Activity 01** | | 4 | | 3 | | 4 | | | 6 | | | **85%** | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  | | **Activity 02** | | 5 | | 4 | | 5 | | | 3 | | | **50%** | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  | | **Activity 03** | | 5 | | 2 | | 5 | | | 5 | | | **60%** | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  | | **Activity 04** | | 5 | | 2 | | 5 | | | 6 | | | **75%** | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  | | **Activity 05** | | 6 | | 5 | | 6 | | | 7 | | | **100%** | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  | | **Activity 06** | | 6 | | 1 | | 5 | | | 8 | | | **60%** | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  | | **Activity 07** | | 9 | | 3 | | 9 | | | 3 | | | **0%** | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  | | **Activity 08** | | 9 | | 6 | | 9 | | | 7 | | | **50%** | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  | | **Activity 09** | | 9 | | 3 | | 9 | | | 1 | | | **0%** | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |
|  | | **Activity 10** | | 16 | | 28 | | 16 | | | 30 | | | **50%** | | |  | |  | |  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |

3.Human resources needed

. Skilled labour: Architect, structural engineers, project managers

. Unskilled labour: Plumbers, tilers, masons, carpenters, etc

The Architect is the lead consultant or in some cases the project manager.

4.The site was secured because of safety. it controls the unauthorized going out and coming in of staff, students and animals, safety of the project managers and to protects against vandalism.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| BILL OF ENGINEERING MEAURMENTS AND EVALUATION FOR THE REHABILITATION OF ALFA BELGORE BUILDING | | | | | | | | | | |
| S/NO | ITEM DESCRIPTION | |  |  |  | UNIT | QUANTITY | RATE |  | AMOUNT |
| 1 | Provisional sum for chairs | | |  |  |  |  | ps |  | 30,000,000.00 |
| 2 | Provisional sum for tiles | | |  |  |  |  | ps |  | 15,000,000.00 |
| 3 | Provisional sum for screeding painting | | | |  |  |  | ps |  | 1,000,000.00 |
|  | sub total |  |  |  |  |  |  |  |  | 46,000,000.00 |
|  | Miscellaneous 10~~%~~ | |  |  |  |  |  |  |  | 4,600,000.00 |
|  | Consultancy fee 15% | | |  |  |  |  |  |  | 6,900,000.00 |
|  | Site preparation and clearing 5% | | | |  |  |  |  |  | 2,300,000.00 |
|  | Transportation 12% | |  |  |  |  |  |  |  | 5,520,000.00 |
|  | Profit 20% | |  |  |  |  |  |  |  | 9,200,000.00 |
|  | Grand Total | |  |  |  |  |  |  |  | 74,520,000.00 |
|  |  | |  |  |  |  |  |  |  |  |
|  |  | |  |  |  |  |  |  |  |  |

7. BEME: Which is known as a bill of engineering measurement and evaluation, it is used to evaluate cost of construction works

. Defect Liability Period is like guarantee for construction the time you use to check if there is defect from construction so the people that did it would come and correct. It is the period retainership money is been held.

. Environment impact assessment is an assessment carried out before any construction is been started to check for the negative effect of the project on the environment.