PROJECT DELIVERABLE

1. GENERAL OBJECTIVE:

The general objective of this deliverable is to gradually (on a weekly basis) create the time and cost management plan of an actual project according to the good practices established on chapter 6 and 7 of the PMBOK, as well as to simulate actual project execution data to apply the earned value management technique.

2. SPECIFIC OBJECTIVES:

1. During the first week of the course and as a group assignment: To create the time management plan for an actual project proposed by the students, where the corresponding knowledge, tools and techniques can be applied by the students.
2. During the second week of the course and as a group assignment: To create the cost management plan for an actual project proposed by the students, where the corresponding knowledge, tools and techniques can be applied by the students.
3. During the third week of the course and as a group assignment: To apply the earned value management technique to an actual project proposed by the students, under three different progress scenarios, where the corresponding knowledge, tools and techniques can be applied by the students.

3. GENERAL INSTRUCTIONS:

This is a group deliverable to be done in the teams chosen on the Let's team up activity. The idea is that each team choses a project where the time and cost management plans can be created (see detailed instructions on Detailed Instruction section below). Also, simulations will be done in order to apply the earned value management technique to three progress scenarios.

Applying the course concepts as well as the PMBOK good practices, the deliverable will be done gradually during weeks 1, 2 and 3 of the course. At the end of each week, according to the course deliverables chart, the progress corresponding to that week will be uploaded to the campus by one of the team members. The course facilitator will review and will assign a grade to the deliverable.

American Psychological Association (APA) rules for bibliographic references and bibliography must be applied to create each week deliverable.

4. DETAILED INSTRUCTIONS:

Special attention should be put to the project selection, since all three week assignments should be done on the same project. Also, there is a minimal amount of information that will need to be available for the students to do their weekly deliveries. The project can be of personnel nature or it can belong to one of the student's organization, in which case confidentiality should be taken into consideration, if applicable.

The project must comply with the following requirements in order to be chosen:

a. The project should have no less than 40 elements between deliverables, control accounts and work packages on its WBS. It is recommended not to exceed 70 items to avoid extra complexity because of the volume of information.
b. All work packages should be clearly defined so that resources of any type can be assigned.
c. Sequencing should NOT be only End-Start (meaning that some other dependencies such as Start-Start, End-End or even Start-End should be used to create the project schedule).
d. At least 2 milestones should be defined (although it is recommended to use one milestone for each project deliverable completion).
e. At least one team member must have experience in the project type (for example: Information technology, Construction, social, etc), and he/she will be appointed as the Project Manager. The project manager role will be to provide the expert judgement that will be needed for each one of the three weekly deliveries.
f. According to the best practices as established in the PMBOK, a project charter as well as a Work Breakdown Structure (WBS) must be created. The project charter and WBS will be the basis and input information to create the time and cost management plans.
g. For the third week assignment, the time and cost management plans develop during the previous weeks will be the basis and input information to create three different progress scenarios in order to apply the earned value management technique.

In order for the students to assess if a given project can be chosen, the detailed list of each of the three weekly deliveries is described below. Besides, the list establishes the components and percentage of total delivery grade corresponding to each component.

It is each group responsibility to choose a project were all needed information is available as to prevent any issues with the delivery date and quality of the deliverable.

5. SECTION 1 (TIME MANAGEMENT) PROJECT DELIVERABLE FOR WEEK 1:

The first week deliverable should include the following:

1. Deliverable introduction (1%)
2. Project description
   - 2.1. Narrative project description (1%)
   - 2.2. Project Charter (3%)
   - 2.3. Project Work Breakdown Structure (WBS) (4%)
3. Project time management
   - 3.1. Time management plan
     - 3.1.1. Process description and importance (2%)
     - 3.1.2. Main stakeholders involved (2%)
     - 3.1.3. Tools and techniques to be used on the time management plan (5%)
   - 3.2. Activity list, sequencing and required resources
     - 3.2.1. Process description and importance (5%)
     - 3.2.2. Activity list chart including: coding, activity name, predecessors/successors list, activities duration (15%)
   - 3.3. Duration estimates
     - 3.3.1. Process description and importance (5%)
     - 3.3.2. Activity list chart including: coding, activity name, milestones, brief activity description, predecessors/successors list, required resources per activity. (10%)
     - 3.3.3. Reserve analysis including justification (5%)
   - 3.4. Project schedule and critical path
     - 3.4.1. Process description and importance (5%)
     - 3.4.2. Project schedule in MSProject or any other scheduling software (10%)
     - 3.4.3. Critical path (showed on the project schedule) (5%)
   - 3.5. Schedule control procedure
     - 3.5.1. Process description and importance (5%)
     - 3.5.2. Detailed description of how the project schedule is to be controlled (10%)
     - 3.5.3. Schedule change management process description (5%)
4. Deliverable conclusions (1%)
5. Bibliography (1%)

6. SECTION 2 (COST MANAGEMENT) PROJECT DELIVERABLE FOR WEEK 2:

The second week deliverable should include the following (in addition to what was included on the week 1 deliverable):

1. Deliverable introduction (add what corresponds to week 2 deliverable) (2%)
2. Project cost management
   - 2.1. Cost management plan
     - 2.1.1. Process description and importance (5%)
     - 2.1.2. Main stakeholders involved (5%)
     - 2.1.3. Tools and techniques to be used on the cost management plan (5%)
   - 2.2. Activity cost estimates
     - 2.2.1. Process description and importance (5%)
     - 2.2.2. Activity cost estimates for each activity including back up information (25%)
   - 2.3. Project budget
     - 2.3.1. Process description and importance (5%)
     - 2.3.2. Project budget chart including: coding, activity name, cost, total project cost, reserves (contingency reserve and management reserve including the justification for both). (15%)
     - 2.3.3. Graph representing the project "S" curve (10%)
   - 2.4. Cost control procedure
     - 2.4.1. Process description and importance (5%)
     - 2.4.2. Detailed description of how the project budget is to be controlled (10%)
     - 2.4.3. Cost change management process description (5%)
3. Deliverable conclusions (2%)
4. Bibliography (1%)

7. SECTION 3 (EARNED VALUE MANAGEMENT) PROJECT DELIVERABLE FOR WEEK 3:

On the third week deliverable, the earned value management analysis should be done for three different scenarios. Each scenario should be cumulative and should happen at approximately 30%, 50% and 70% of the total project duration. For example, if the project duration is of 100 days, then the first scenario will happen at the thirtieth day, the second at the fiftieth and so forth.

For each one of the three scenarios you will already have the planned value - PV (based on the "S" curve and project budget created on the second week deliverable). Then you should assign an actual cost - AC to each activity. Finally, you should assign the progress for each activity and using its planned value, calculate the earned value – EV for each activity.

For each one of the three scenarios a chart should be presented indicating for each activity: planned value (PV), actual cost (AC), progress (%) and earned value (EV). Also the total project PV, AC and EV should be presented.

For each scenario an assessment using earned value management should be done, presenting: a. the time/schedule status (SV), b. cost status (CV), c. time and d. cost performance indexes (SPI, CPI), and e. schedule/time duration and f. project cost forecasts.

The third week deliverable should include the following (in addition to what was included on the weeks 1 and 2 deliverables):

1. Deliverable introduction (add what corresponds to week 3 deliverable) (4%)
2. Earned value management
    - 2.1. First scenario
        - 2.1.1. Scenario description in terms of schedule, progress and cost status (2%)
        - 2.1.2. Schedule variance status – SV calculation (4%)
        - 2.1.3. Cost variance status – CV calculation (4%)
        - 2.1.4. Schedule Performance Index (SPI) calculation (4%)
        - 2.1.5. Cost Performance Index (CPI) calculation (4%)
        - 2.1.6. Project duration forecast calculation (4%)
        - 2.1.7. Total cost forecast calculation (4%)
        - 2.1.8. Integral analysis of scenario situation considering previous earned value calculations (4%)
    - 2.2. Second scenario
        - 2.2.1. Scenario description in terms of schedule, progress and cost status (2%)
        - 2.2.2. Schedule variance status – SV calculation (4%)
        - 2.2.3. Cost variance status – CV calculation (4%)
        - 2.2.4. Schedule Performance Index (SPI) calculation (4%)
        - 2.2.5. Cost Performance Index (CPI) calculation (4%)

2.2.6. Project duration forecast calculation (4%)
2.2.7. Total cost forecast calculation (4%)
2.2.8. Integral analysis of scenario situation considering previous earned value calculations (4%)

2.3. Third scenario
2.3.1. Scenario description in terms of schedule, progress and cost status (2%)
2.3.2. Schedule variance status – SV calculation (4%)
2.3.3. Cost variance status – CV calculation (4%)
2.3.4. Schedule Performance Index (SPI) calculation (4%)
2.3.5. Cost Performance Index (CPI) calculation (4%)
2.3.6. Project duration forecast calculation (4%)
2.3.7. Total cost forecast calculation (4%)
2.3.8. Integral analysis of scenario situation considering previous earned value calculations (4%)

3. Deliverable conclusions (4%)
4. Bibliography (2%)