1. **Assignment for the ITP-2 Project Deliverable - Part 1 - WBS**

Review your project charter and the overview of the ITP posted in the Syllabus and in the previous project assignment.

Then, individually, develop and **submit a project work breakdown structure (WBS)** as described in the textbook and LEO *Conferences* (and other valid sources, such as [www.pmi.org](http://www.pmi.org))and submit in **MS Project .mpp** format. If it is more convenient for you, then you may also start it in **MS Word** (e.g., as an outline) or some other software packages and copy or port it to MS Project.

**The discussions in the Lectures in our weekly Content will help with our assignments, including this assignment.**

To use MS Project, you may now load the Microsoft Project demo onto your computer. Note that subsequent ITP deliverables will be in MS Project, so if you have not yet loaded Microsoft Project, please do so now. The software is somewhat similar to Excel, but it would still be a good idea to be familiar with MS Project features. You will find that there are MANY ways to add information to your MS Project project. If you find yourself struggling with the software, please consider:

* Using MS Project's Help feature
* Using the tutorials at Microsoft.com
* Checking out online tutorials on YouTube
* Looking for other on-line help
* Considering using the library or a bookstore for supplemental texts
* Asking me for help

**The WBS should list all tasks necessary to complete the project**, in the approximate estimated order in which you think they will probably be done.  At this stage, this deliverable **should not** yet include predecessor-successor linkages, time or duration, dates, or resource (cost, staff, etc.) data. ONLY include the durations. This is because Microsoft Project performs a complex algorithm with each project element that is added. To SEE the impact of each project element, we need to add them one at a time. For this assignment, after the WBS is completed, we will add ONLY durations in this assignment.

* + These project tasks should include **all** work necessary to complete the scope of the project, specifically including the technical IT work of the project, but also including the project management work as well. Some suggested tasks might include those listed here:
* Tasks regarding design of the IT System
* Tasks regarding ordering, delivering, and receiving hardware
* Tasks regarding ordering, delivering, and receiving software
* Tasks regarding ordering, delivering, and receiving networking
* Tasks regarding installing hardware
* Tasks regarding installing software
* Tasks regarding installing networking
* Tasks regarding managing, controlling, and monitoring the project and the team
* Project meetings
* Defined end of the project

To reiterate, there is a lot more to the WBS than this.

Don't spend too much time getting "down into the weeds".  A good size for this class would be at least 10 major tasks and between 30-60 total tasks, including subordinate subtasks and sub-subtasks.  Similarly, don't break it down more than 3 or 4 levels deep (not counting the project header / project name task itself).

***Remember, please, that all tasks should begin with a verb and an object and should be enough of a description that both team members and stakeholders will know exactly what will be accomplished when that task is done.  The task itself should be concise enough to be able to determine how much time it takes to accomplish the task and what resources (people, places and things) will be needed to accomplish the task. Task names should not be duplicated.***

You MAY work with your teammates to determine the **major** tasks.  BUT, ***each team member should provide his/her own major tasks that may be different, plus sub-tasks and sub-sub tasks him/herself based on his/her own knowledge of the project, the project scope and what you know about IT systems***.

**Example**

For example, if your project were to paint a bathroom, the major tasks might be:

1.      Prepare bathroom

2.      Buy paint

3.      Apply paint

4.      Clean up

Please note that these are each SINGLE verb statements. Please do not merge tasks, such as “research and buy the paint.” Each task should be ONE verb!

This is the beginning of your WORK BREAKDOWN STRUCTURE.  So your first draft WBS should look like this (*example only shows first two major tasks – your WBS should look like this for ALL major tasks)*:

 1)     Prepare bathroom

a)      Scrub walls

i)       Fill holes

ii)     Sand holes

b)     Tape edges

c)      Cover floor

2)     Buy paint

a)      Measure bathroom

b)     Select color

i)       Select texture

ii)     Purchase paint

iii)   Purchase painting supplies

Notice how each major tasks moves into lower and lower tasks.  This is called “decomposition” as something big becomes broken into smaller and smaller pieces.

Your WBS deliverable for grading would be even more specific and concise.

As you finish, please move to Part 2 of the assignment and include this effort with your WBS in Microsoft Project.

1. **Assignment for the ITP-2 Project Deliverable - Part 2 - Durations**

* Add project task **durations** **to the lowest level task** (sub-sub tasks) to build to the project schedule. Do not add durations to the higher level (sub and major tasks) levels. (MS Project will eventually roll-up the durations to the higher level tasks, and calculate them automatically for summary roll-up groups. Therefore, ***do not*** enter hard-coded durations or dates in the lower-level tasks or in the higher-level summary groups.) Durations should include hours, days, and weeks of time posted in the Gantt view. If you are using Excel, provide the durations in the lowest level tasks ONLY, as you will do in Project. For example:

2) Buy paint

a) Measure bathroom

b) Select color

i) Select texture – 3 days

ii) Purchase paint – 2 hours

iii) Purchase painting supplies - 2 hours

* ***In MS Project do*** ***not*** enter hard-coded dates – in other words, **do not enter dates at all**. Just enter durations as measures of time and let MS Project calculate the dates.
* In MS Project, **do not use "manually scheduled" tasks**. Rather, use "automatically scheduled" tasks. Auto-Schedule is on the tool bar at the top and includes push-pins and blue arrows. When manually scheduled, the dates are essentially hard-coded (set to a defined date) and not allowed to automatically adjust when the task durations and critical paths change
* In MS project, the higher level tasks are "roll up" tasks and should have no work themselves. **Don't enter a duration for these tasks**. Their timespan will be automatically calculated by MS Project as the sum of the timespans of their component sub-tasks as part of the algorithm that Project uses to calculate the schedule.
* Try to avoid overly small (micromanaged) or overlay large durations (which bite off more than you can chew). Rather, try to keep them reasonable, perhaps a week or two, each.

Submit Parts 1 and 2 as a single Project (.mpp) file. Include your name in the file name and post in the Assignment area for ITP-2. Be careful to post in the right place.

It should look like this in Project:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Task Name | Duration | Start | Finish | Predecessors |
|  |  |  |  |  |
| 1) Prepare bathroom | **1 day** | **Fri 5/23/14** | **Fri 5/23/14** |  |
| a) Scrub walls | **1 day** | **Fri 5/23/14** | **Fri 5/23/14** |  |
| i) Fill holes | **1 day** | **Fri 5/23/14** | **Fri 5/23/14** |  |
| ii) Sand holes |  |  |  |  |
| b) Tape edges |  |  |  |  |
| c) Cover floor |  |  |  |  |
| 2) Buy paint | **1 day** | **Fri 5/23/14** | **Fri 5/23/14** |  |
| a) Measure bathroom |  |  |  |  |
| b) Select color | **1 day** | **Fri 5/23/14** | **Fri 5/23/14** |  |
| i) Select texture |  |  |  |  |
| ii) Purchase paint |  |  |  |  |
| iii) Purchase painting supplies |  |  |  |  |

1. **Assignment for the ITP-2 Project Deliverable - Part 3 - Questions**

Read and think through the options and alternatives suggested by these questions ***before you build your WBS***. Then finally, ***when your WBS is completed, answer the following questions and submit them as a Word doc in addition to your WBS file (above***

1. Does your WBS include everything in your team's charter and all deliverables (promised deliverables to the client organization customer)? Does your WBS address tasks that were not discussed in the Project Charter? If so, what are they and how did you decide you needed the additional tasks?
2. Does your WBS include project management tasks necessary to manage the project, as well?
3. Did you develop your WBS top-down or bottom up approach?  Why? To answer this question, please define the terms first. This is an opportunity to include additional research to answer the question completely.
4. Did you use a product-oriented WBS, or a process-oriented (e.g., SDLC phases) WBS, or something else?  What are the definitions and how did those definitions affect your decision? Why?
5. It is often a good idea to prepare the WBS in an OUTLINE in Word instead of Excel, or Excel instead of Project. This helps team members visualize the order of the tasks and how the tasks might decompose into lower levels. Did you do this (use Word or Excel first) or did you only use Excel or Project? If you only used Project, did you find yourself rearranging the order of the tasks as you were inputting them or as you were finishing the WBS?
6. Did you initially approach it graphically (e.g., like an organization chart) or tabularly (like a list or table), or something else?  Why?
7. Did you work with your teammates to determine the major tasks or did you do it all on your own? How well did it work?

As you prepare for the next assignment, please discuss with your teammates how you will manage the WBS.  One possibility is to divide up the major tasks among teammates.  Each teammate would have responsibility for that “area” and all areas will be consolidated into a single Microsoft Project document.  However, all the team members' submissions taken together should cover the entire project WBS. You may use any other approach that works well for your team.  Any approach other than each team member doing the entire project WBS must be explained in each submission.

Please post the Word document AND the .mpp (MS Project document) in the Assignment area. Please include your name in the file name and be sure to post in the right place (ITP-2).

Afterward, each team member should post his/her WBSes in the LEO Group area for merging and for consolidation into a single team WBS for the next ITP assignment.

Does it seem as though perhaps there is not enough information to complete the project and the WBS? If so, please ask the client/customer (your instructor).

*Grading approximate* breakdown by areas include:

* General: Structure, Format, Mechanics, Style (~5%)
* WBS accomplishes the project (~20%)
* WBS, technical (~30%)
* Schedule (durations) (~35%)
* Questions (~10%)