Course:
**Project Management
Module 3:**
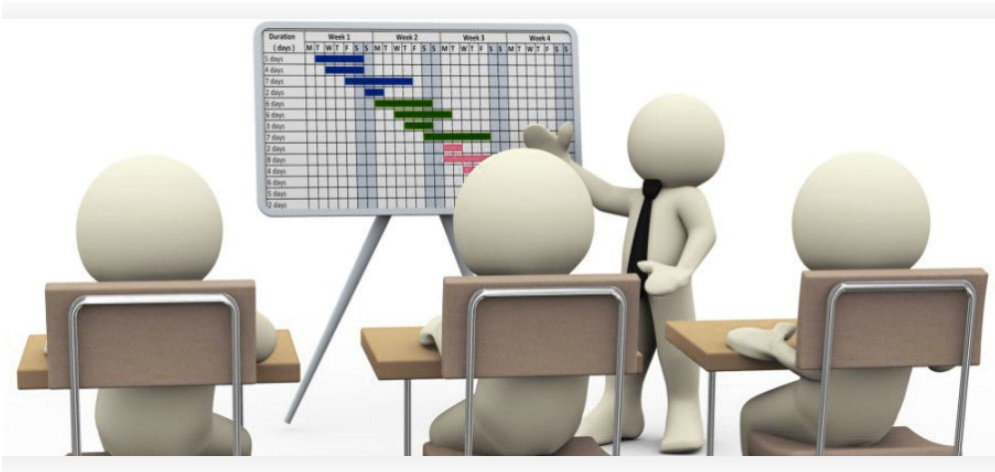
PI: Prof D. Stroumbakis, PE

Module 3: *Students should be able to:*

- Plan and set task dependencies

- Schedule tasks by durations

- Explain the different views in Project

- Assign resources to tasks

- Identify the critical path

- Importance of PM in Public Sector / Works

Module 3 : Planning

| Process Group	Responsibility
Initiating	Set a project goal; identify a project schedule; define a project budget
Planning	Enter project tasks; determine task relationships; assign project resources
Executing	Produce results; report results
Monitoring and Control	Update tasks as in progress or completed; manage resources
Closing	Analyze performance; prepare final reports

Module 3 Understand Microsoft Project Terminology(Cont)

- Project manager—responsible for overseeing the details of the project plan
- Task—activity that is completed to reach a project goal
- Task duration—time it will take to complete a task
- Predecessor task—task that must be completed before next task starts
- Successor task—task that has a predecessor
- Task dependency—relationship between two tasks
- Constraint—limitation set on a task
- Resource—work, material, or cost associated with a project task

Module 3: Understand Microsoft Project Terminology

- Scope of a project—what must be completed to deliver a specific product or service

- Milestone—task that is used to communicate project progress or mark a significant point in a project

Module 3: MS Project Window
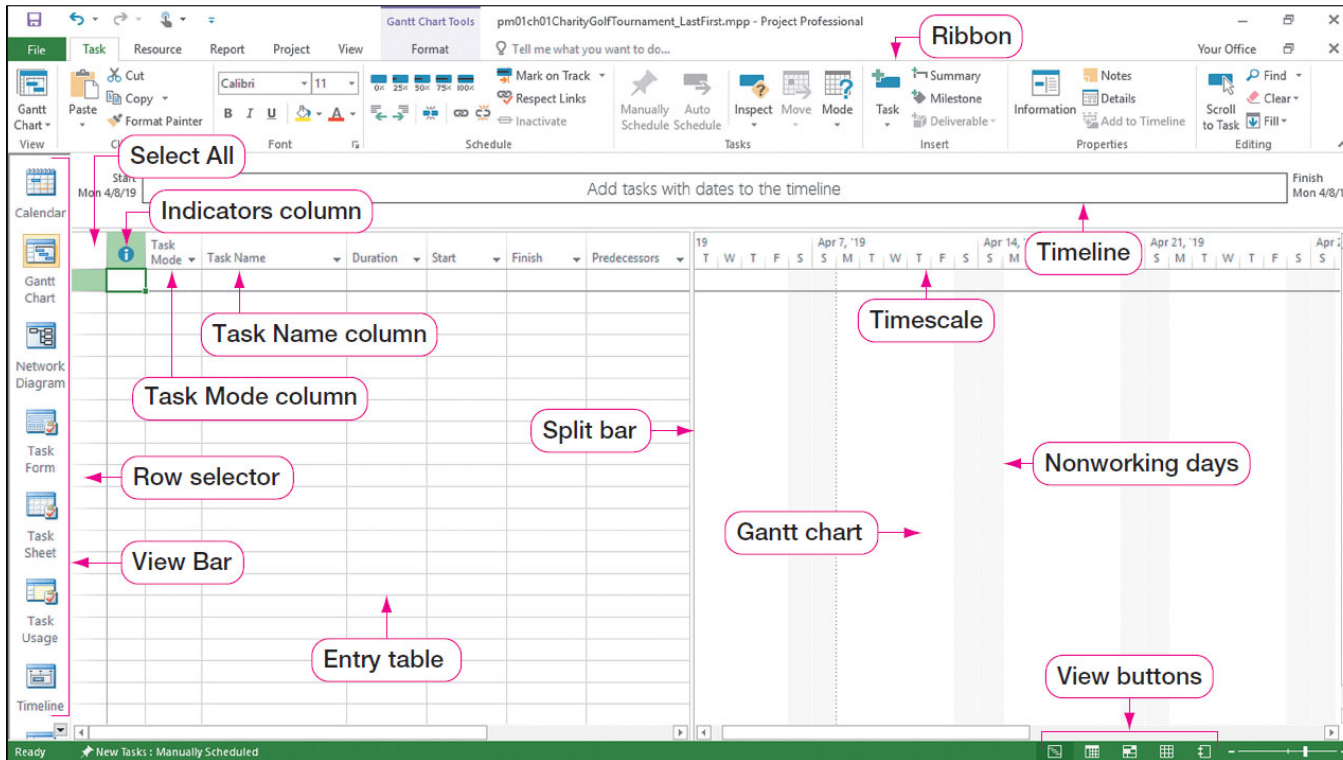
When you open a new Project file, the default view is the Gantt Chart view, as shown on the slide. Some of the major components of this view are:
- The Entry table on the left side of the window, which is used to enter task information. The Entry table is used to record project tasks, durations, predecessors, and resources.
- The Gantt chart on the right side of the window, which displays each task graphically.
- The Timeline is displayed above the Entry table and Gantt chart and below the Ribbon and is a visual representation of the project from start to finish.
- The View Bar is a vertical bar on the lefthand-side window and contains buttons for quick access to different views.
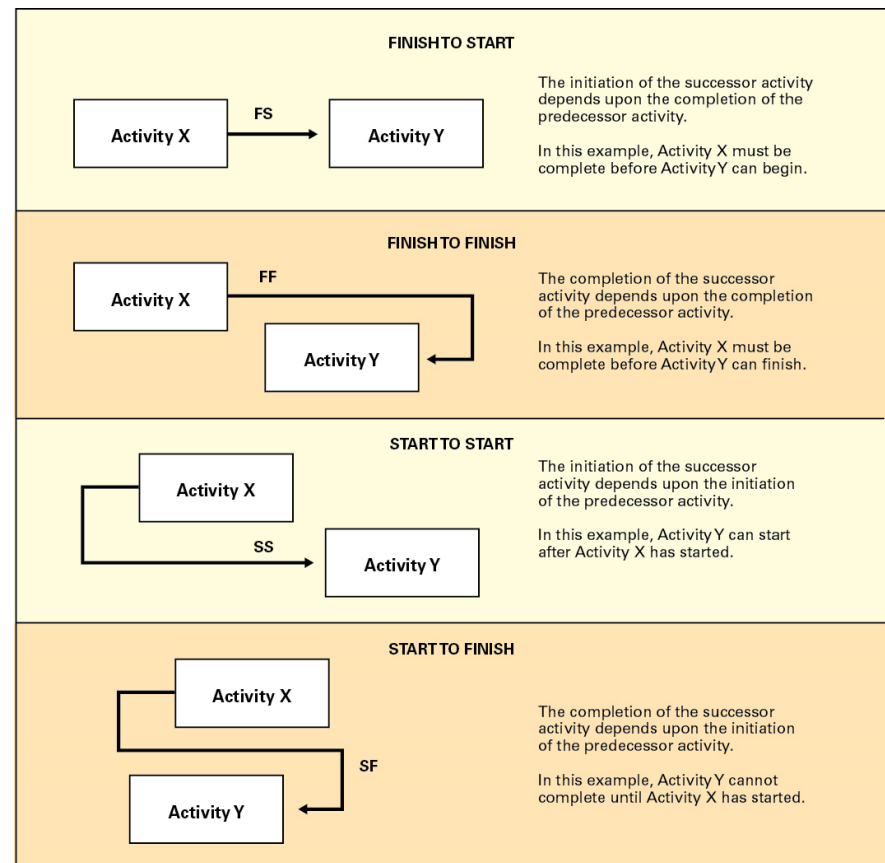
Module 3: Identifying and Entering Tasks

Always enter a task's duration, **never** its start and finish time

Module 3: Task Dependencies-Red most Common

| Type	Detail	Example
Finish-to-Start (FS)	Default. Task 1 must finish before Task 2 can start.	You must finish selecting the tournament date (Task 1) before beginning online registration (Task 2).
Start-to-Start (SS)	Task 1 must start before Task 2 can start.	As soon as the tournament website goes live (Task 1), you can start accepting online registrations (Task 2).
Start-to-Finish (SF)	Task 1 must start before Task 2 can finish.	You must start working on the tournament website (Task 1) before you can finish promotional materials (Task 2).
Finish-to-Finish (FF)	Task 1 must finish before Task 2 can finish.	You must finish accepting online registrations (Task 1) before you finalize the tournament supply list (Task 2).

FINISH TO START

Activity X — FS → Activity Y

The initiation of the successor activity depends upon the completion of the predecessor activity.

In this example, Activity X must be complete before Activity Y can begin.

FINISH TO FINISH

Activity X — FF

Activity Y

The completion of the successor activity depends upon the completion of the predecessor activity.

In this example, Activity X must be complete before Activity Y can finish.

START TO START

Activity X

SS

Activity Y

The initiation of the successor activity depends upon the initiation of the predecessor activity.

In this example, Activity Y can start after Activity X has started.

START TO FINISH

Activity X

SF

Activity Y

The completion of the successor activity depends upon the initiation of the predecessor activity.

In this example, Activity Y cannot complete until Activity X has started.

Module 3: Two Types of View Of Project Schedules

- Gantt: Bar graph shows Tasks / progress

ABC Technologies: Manufacturing Division

Welding and Machining Certification Update

ID	Test Name	Start/Finish	Days	July	August	September	October	November
					Quarter 3		Quarter 4	
1	Welding-GT-AL-01	7/1-7/30	21					
2	Welding-GT-AL-01	8/1-8/31	23					
3	Welding-GT-AL-01	9/1-9/30	22					
4	Machining-QT-01	8/11-9/21	30					
5	Machining-QT-01	9/22-10/31	35					
6	Machining-QT-01	10/6-11/10	26					

- Network (or PERT): Flow Chart of connected tasks.
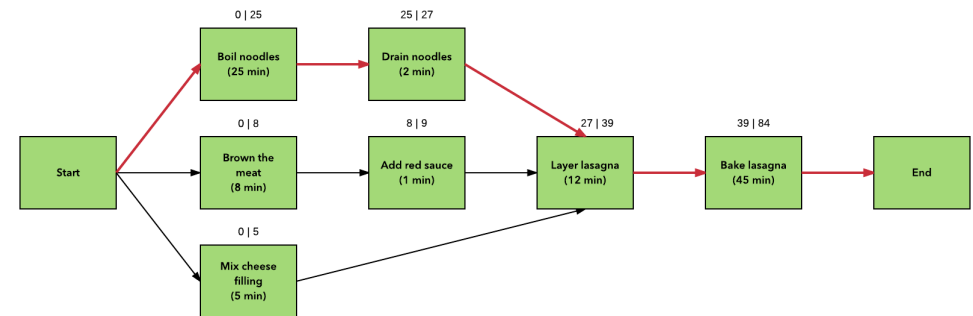
The RED path is the critical path and is defined as minimum time to complete the entire project. Any delay in the Critical Path translates to direct delay in the final project date!

Module 3: In Class Exercise 1

Hands-On Exercise 1: To Change the Project Information

To be sure the project information is correct for the needs of the charity event, you will want to set the project schedule to a Finish date of July 25, 2019.

a.   Click the **Project** tab, and then click **Project Information**.

b.   Click the **Schedule from** arrow, and then click **Project Finish Date** and change the project to finish by Finish date.

c.   Click the **Finish date** arrow. Scroll through the calendar and select **July 25, 2019**.

d.   Click the **Current date** arrow. Scroll through the calendar and select **July 1, 2019**.

e.   Verify that the **Standard Calendar** is the selected calendar.

f.   Click **OK**.

g.   Click **Save**. Do not close the project file.

Note: Instructor May Choose any date

Module 3: In Class Exercise 2

Hands-On Exercise 2: To Enter Project Tasks

You will enter all the project tasks here.

a. Click in the **Task Name** cell in row 1. Enter the task name **Set winetasting objectives**

b. Press **Tab**. Point out that the default value of 1 day? will appear in the Duration column.

c. Type **8h** in the Duration column. Press **Tab**. Point out that Project 2016 assigns a Start and Finish date because your project is set to Auto Scheduled.

d. With Set winetasting objectives (Task 1) selected, click the **Task** tab, and then in the Properties group, click **Information** to open the Task Information dialog box. Explore the various tabs that can contain information about **Set Wine Tasting objectives.** Click **Cancel.**

e. Enter the remaining tasks below in the Entry table. Remember that you can use abbreviations for the durations.

Task	Task Name	Task Duration
2	**Create volunteer list**	**4 hours**
3	**Set Wine Tasting date, time, and location**	**1 day**
4	**Secure location and sign agreement**	**1 hour**
5	**Prepare budget**	**6 hours**
6	**Create Wine Tasting website**	**2 weeks**
7	**Obtain sponsors and silent auction items**	**4 weeks**
8	**Obtain masters of ceremonies**	**2 weeks**
9	**Obtain entertainment**	**3 weeks**
10	**Print tickets and signage**	**3 weeks**
11	**Put together baskets for silent auction**	**2 weeks**
12	**Decorate hall**	**4 hours**

Click Save

Module 3: In Class Exercise 3

Hands-On Exercise 3: To Modify a Task List

The committee reviewed the tasks and realized that they omitted a critical task: obtaining the beer and wine vendors. You need to add that task to the project plan as well as make an adjustment to task durations.

a. Click any cell in task row 5, **Prepare budget**, and then click the **Task** tab, if necessary. In the Insert group, click the **Task** button to insert a new row. <New Task> appears as the task name.

b. Type the task name **Obtain beer and wine vendors** and then press **Tab**. Enter a duration of 2 weeks, and then press **Tab**. Point out that Obtain beer and wine vendors becomes the new Task 5.

c. Click in the Duration column of row 7, **Create winetasting website**, and then change the duration from 2 weeks to **3 weeks.**

d. Double-click **Obtain masters of ceremonies** (Task 9). Point out that this opens the Task Information dialog box.

e. If necessary, click the **General** tab. In the upper right-hand corner of the General tab, change the **Duration** from 2 weeks to **1 week**.

f. Click the **Notes** tab. Add the note **Contact local Chamber of Commerce for list of potential masters of ceremonies.**

g. Click **OK**. Point out the Note indicator in the Indicators column, and then click **Save**.

Module 3: Assigning Task Dependancies

In this example, a new task is added and then the Task Dependency dialog box is used to set the dependency for the new task to Start-to-Start.

Project allows you to modify task dependencies but also delete task dependencies. In this example, Advanced tab on the Task Information dialog box is used to select Unlink Tasks. As shown on the slide, the Mail volunteer contacts task is now unlinked.

Module 3: Assigning Tasks in Network Chart (PERT)

In this example, the Network Diagram view is used to link Tasks 1 and 6. Once again, notice the linking line joining the two tasks

Module 3: Network Chart in Public Sector

- Using **Critical Path Scheduling** can very useful to the Public Sector, because the local, municipal counties are often not familiar with project management, let alone with and this is VERY USEFUL tool which helps guide organizers to the successful completion of Project.

- For example: PM use has been increasing in public- sector organizations in order to focus the attention of the organization on short-term, achievable deliverables and objectives, make optimal use of scarce resources, reduce project risk in high-value, strategic projects, clearly assign responsibility for task performance, and identify the tradeoffs created by alternative decision paths.

End of Module 3

Please proceed to Module 3 Assessment for Students