



مجموعة جامعة
الجميع الذكية
للتعليم القابضة

MIDOCEAN
UNIVERSITY

Project Time Management

Lecture 7

PMG 212

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Lecture 7



- Scheduling
- Who is the Scheduler
- Attributes of Planner/Scheduler
- Importance of the Schedule
- Scheduling Tools
- Critical Path Method
- Scheduling Terminology
- Relationships (Logic) – 4 Types

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Scheduling

If **PLANNING** is an Art form based on Experience and Knowledge, then **SCHEDULING** is a Systematic exercise in using applied Logic.

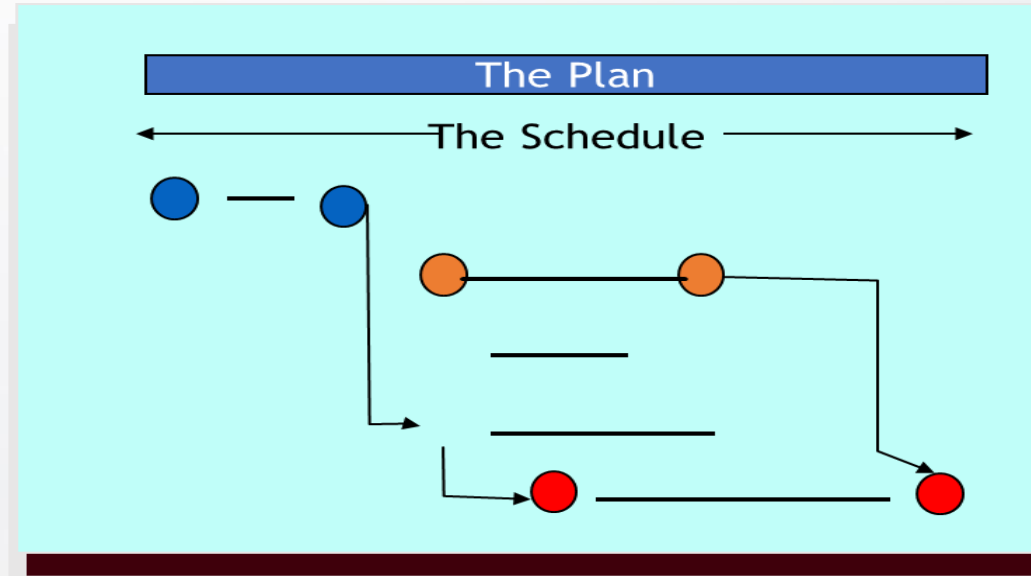
Scheduling



A *GUIDE* TO A WISE PERSON..... Not AN *INSTRUCTION*

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Who is the Scheduler



The **scheduler** translates the **PLAN** into **schedules**

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Attributes of Planner/Scheduler

- Possess **PEOPLE** skills!
 - Exercise humility and salesmanship
 - Exercise care when recommending various approaches
 - Do not alienate the managing parties
 - Ease off when needed
 - Emphasize his/her role is to **coordinate** and **integrate** ideas and **plans** into a coherent project schedule.
- امتلاك المهارات الشخصية (عدم الاعتماد على البرامج الحاسوبية)
 - التحلي بمهارات التواصل بين أقسام المشروع
 - العناية الشديدة عند التوصية باستخدام أساليب مختلفة
 - العمل على عدم نفور الأطراف ذات الصلة
 - الحد من المشكلات عند الحاجة
 - تنسيق ودمج الأفكار والخطط في جدول زمني متماسك

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Importance of the Schedule

- Depicts **الصور** the **Scope of work**
- **Improves** the probability for the project team to **meet its goals**
- Establishes overall **schedule parameters**
- Aids in determining **staffing requirements**

Importance of the Schedule

- **Resource loading** basis
- Identifies **long lead** items
- Identifies the **phases** in the project

Importance of the Schedule

Standardized scheduling techniques motivates the project team to:

- Think through the **entire project**
- **Predict** a realistic project **completion**
- Recognize **impacts** of **unexpected** events

Importance of the Schedule

Standardized scheduling techniques motivates the project team to:

- Identify **claims** or time extensions
- Coordinate **interfaces** and **reduce conflicts**
- Plan **resource requirements** and cash flow
- Serve as a **record** of the project's **progress**
- **Communication Tool**

Importance of the Schedule

1. Tells you **where you've been**.
2. Tells you **where you are**.
3. But most importantly, it tells you **where are you going!**

Must have **sufficient detail** to control the project

- Too much detail is cumbersome to maintain.
- Not enough detail and the analysis of the schedule is difficult.

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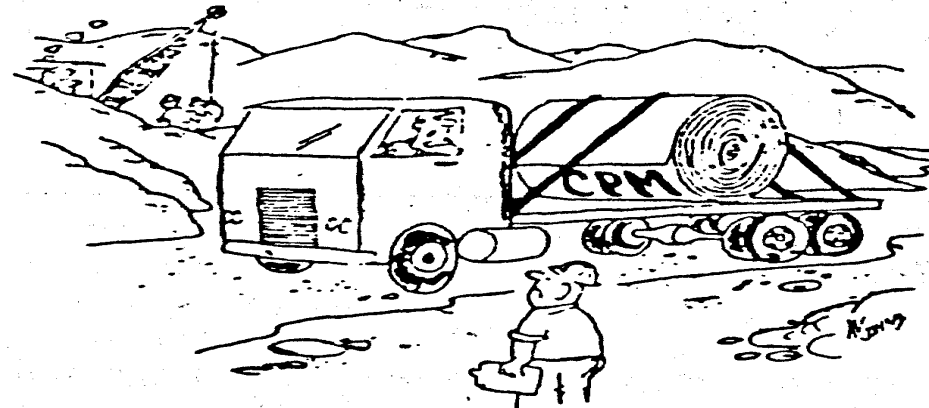
Scheduling Tools

- P6 (Primavera)
- Microsoft Project Planner (MSP)
- Suretrak (Primavera)
- Milestones, etc.. - Bar Chart
- TILOS- Linear Scheduling

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Scheduling Methodology



"Where do you want this CPM chart?"

Critical Path Method

The calculation of the earliest and latest start and finish dates of activities based on their duration's and relationships to other activities

a resource-utilization algorithm for scheduling a set of project activities

Item	Price
A	100
B	100
C	100
D	100
E	100
F	100
Sum	600

Activities

- The Basic element into which a project is subdivided for scheduling a network (CPM)
 - Has a definable start and finish
 - Consumes resources
 - Is assignable
 - Is measurable
 - Is defined by a **Work Package**
 - Is a Physical Task for Construction

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Scheduling Terminology: Work Package

- A group or number of Engineering/Construction Deliverables that will enable Procurement or Construction to accomplish a meaningful task. WP is the lowest level of a WBS.
 - All of the **Data Sheets & Specifications** required for a Purchase Order.
 - All of the **Drawings & Details** necessary to Locate, Excavate, Form and Pour a Foundation
 - Earthwork
 - Foundation
 - Cabling

Scheduling Terminology: Work Package Template

CONSTRUCTION WORK PACKAGE																	
Project Name:												Company Logo					
Project CWP WBS No:																	
CWP				Plant				Area					Discipline				Sequence No
C	W	P	-					-					-				
Description:																	

Section No.	Section Description	# of Sheets
1.0	Scope of Work	
2.0	CWP Reference List	
3.0	Engineering Information	
4.0	Craft / Manpower	
5.0	Direct Field Equipment and Materials	
6.0	Safety	
7.0	Quality	
8.0	Regulatory Approvals and Permits	
9.0	Sub-contracts (Construction Contractor)	
10.0	Vendor Support	
11.0	Rigging Studies	
12.0	Scaffolding	
13.0	Special Equipment, tools and consumables	
14.0	Waste Management	
15.0	Risk Register	
16.0	WorkFace Planning	
17.0	Project Controls	
18.0	Turnover Documents	
19.0	3D Model Shots of CWP	
20.0	Submittals	
21.0	Contact List	

Scheduling Terminology: Milestone

- Is a **GOAL** to be achieved.
 - Can be either a Start or Finish Achievement
 - Is a single point in Time
 - Has no duration
 - Has no resources
 - Has a specific and unique Definition
 - It is either YES or NO

Scheduling Terminology

- **Predecessor** = An activity that must occur before another activity. A predecessor activity controls the start or finish date of its successor(s). An activity can have multiple **predecessors**, each with a different relationship to it.
- **Successor** = An activity that must occur after another activity. An activity can have multiple successors, each with a different relationship to it.

Scheduling Terminology

Predecessor and Successor Synonyms مرادفات



Dependencies

Prerequisites

Interface requirements

Links

Logic relationships "To" and "From"

التابعين (الاعتماديين)

المتطلبات المسبقة

متطلبات الواجهة/الربط

الروابط

العلاقات المنطقية "إلى" و "من"

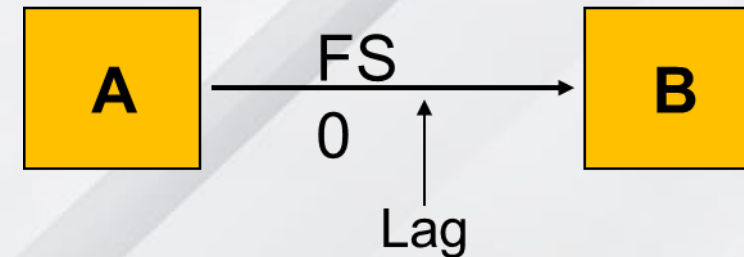
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Relationships (Logic) – 4 Types

Finish to Start - FS - A

relationship in which the predecessor activity must **Finish** before its successor activity can **Start**.



Relationships (Logic) – 4 Types

Finish to Finish - FF - A

relationship in which the **Finish** of a successor activity depends on the **Finish** of its predecessor activity.



Relationships (Logic) – 4 Types

Start to Finish - SF - A

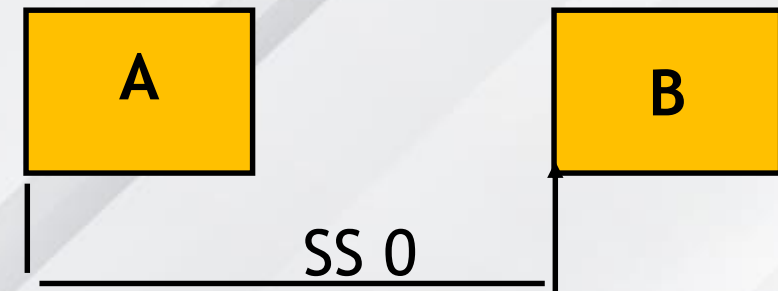
relationship in which the **Start** of the predecessor activity controls the **Finish** of a successor activity. **Not used**



Relationships (Logic) – 4 Types

Start to Start - SS - A

relationship in which the **Start** of the predecessor activity controls the **Start** of a successor activity .



Thank You