This material replaces:

> Lec 15- 15 to 15-26 (the second half)
> Lec 16 - 1 to 16-18 (the entire section)
> These replaced sections will not be included in the final exam.

The following charts, tables, diagram are common not only in IT but also in business and industry.
They are used as instructions and/or documentation.

Your goal is to be able to read and understand these methods of communication.
On the exam you will not be required to draw any of them, but you may be given examples and asked
questions about them.
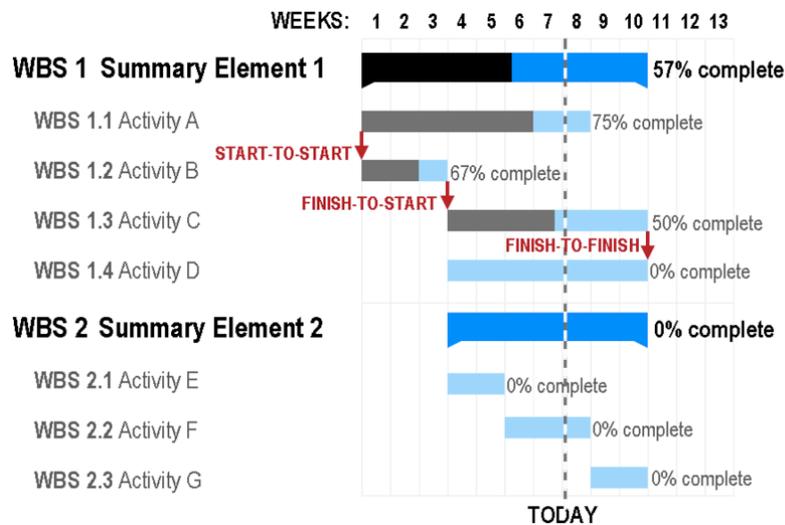
A.   Project Management

To manage a project you must first plan the following for each work item (**task**):
      what needs to be done (what is the **deliverable**)?
      who can do it?
      how many **man-days** (or man-months or man-years) of effort is involved?
      how long will it take (**duration** = elapsed time)?
      (e.g. a team of 3 people, each working for 4 days = 12 man-days of effort, but the duration = 4
      days if they work at the same time)
      what other resources are needed?   (equipment, materials, etc.)
      what tasks must be completed before this task can start? (**dependencies**)
      what tasks must wait until this task is finished?
      how much **float** is there for the task? (if the task duration is 4 days, but you have 6 days to
      complete the task, the float = 2 days)

As a project is in progress, you need to know the following for each active or future task:
      when did it start and was it started on time? (**delay**)
      when did it finish and did it complete in time?
      what was/is the **actual** man-days needed? (when a task is started, you may find that it takes longer
      and needs more resources)
      what was/is the **actual** resources needed?
      if the task is in progress, how near completion is it (**percentage complete**)?
      what is the impact on other tasks?

generic Gantt chart (http://en.wikipedia.org/wiki/Gantt_chart)

Microsoft Project Gantt chart (http://en.wikipedia.org/wiki/Program_Evaluation_and_Review_Technique)

ID	Task Name	Predecessors	Duration
1	Start		0 days
2	a	1	4 days
3	b	1	5.33 days
4	c	2	5.17 days
5	d	2	6.33 days
6	e	3,4	5.17 days
7	f	5	4.5 days
8	g	6	5.17 days
9	Finish	7,8	0 days

generic PERT chart   (http://en.wikipedia.org/wiki/Program_Evaluation_and_Review_Technique)

PERT network chart for a seven-month project with five milestones (10 through 50) and six activities (A through F).

Microsoft Project PERT chart   (http://faculty.bus.olemiss.edu/breithel/m495s02/computerpert.jpg)

Gantt chart using Excel for a project that can finish in 63 days if there are no delays in any of the tasks on the **critical path**. All the tasks on a critical path have zero float.

task	resources	duration man-days	man-days	1	2	3	4	5	6	etc.
project planning	project manager	3	3							
analysis	3 analysts	26	10							
design	2 designers	18	10							
programming	3 programmers	29	10							
test code	3 programmers	14	5							etc.
test system	2 QA staff 2 programmers	55	20							
convert data	2 programmers	5	3							
buy hardware	project manager	1	1							
install hardware	1 tech services	2	2							
write manual	1 technical writer	7	7							etc.
training	2 QA staff 5 users	20	3							
user testing	5 users 2 analysts	27	5							

Program Evaluation and Review Technique (PERT) chart -style one

Program Evaluation and Review Technique (PERT) chart -style two

B. Decision Tables

All possible conditions are listed, and all combinations of the decisions are identified.
All possible actions are listed and associated with all the combinations.

Y = yes   **N** = no   **X** = action is taken

conditions								
charge is part of the health benefits plan?	Y	Y	Y	Y	N	N	N	N
health care provider is part of the plan?	Y	Y	N	N	Y	Y	N	N
service provided in hospital?	Y	N	Y	N	Y	N	Y	N
actions								
reimburse 90% of charges	X							
reimburse 80% of charges			X					
reimburse 60% of charges		X						
reimburse 50% of charges				X				
no reimbursement					X	X	X	X

same decision table, summarized

conditions					
charge is part of the health benefits plan?	Y	Y	Y	Y	N
health care provider is part of the plan?	Y	Y	N	N	-
service provided in hospital?	Y	N	Y	N	-
actions					
reimburse 90% of charges	X				
reimburse 80% of charges			X		
reimburse 60% of charges		X			
reimburse 50% of charges				X	
no reimbursement					X