

# *MIS*

## *(Management Information System)*

### *(21-972)*

*Department of Industrial Engineering*  
*Sharif University of Technology*

*Session #7*

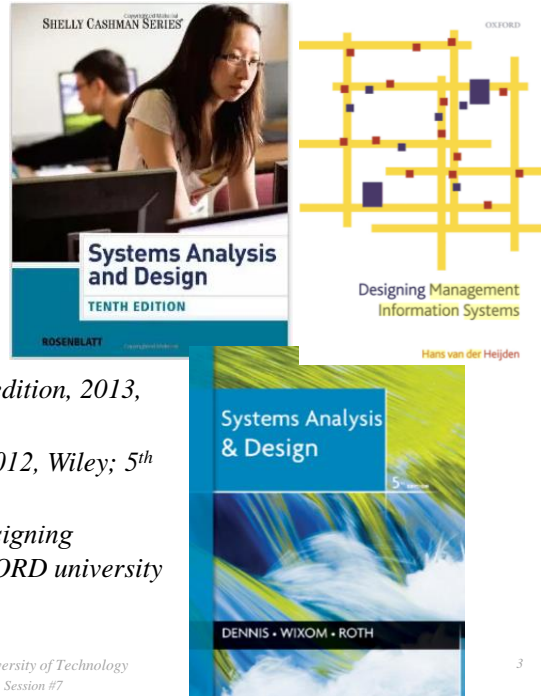


## *Course Description*

- *Instructor*
  - *Omid Fatahi Valilai, Ph.D. Industrial Engineering Department, Sharif University of Technology*
  - *Email: [Fvalilai@sharif.edu](mailto:Fvalilai@sharif.edu), Tel: 021-6616-5706*
  - *Website: <http://sharif.edu/~fvalilai>*
- *Class time*
  - *Saturday-Monday*                      *10:30~12:00*
- *Course evaluation*
  - *Mid-term*                                      *(20%)*
  - *Final exam*                                    *(20%)*
  - *Quiz*    *(10%)*
  - *Exercise-Projects*                          *(30%)*

## Course Description (Continued ...)

- **Mid-term session:**
  - Saturday, 7<sup>th</sup>, Azar 1394
- **Final session:**
  - Monday, 28<sup>th</sup>, Dey 1394
- **Reference:**
  - Rosenbalt, “System Analysis and Design”, 10<sup>th</sup> edition, 2013, Course Technology
  - Dennis, Lan; “Systems Analysis and Design”, 2012, Wiley; 5<sup>th</sup> edition
  - Johannes Govardus Maria van der Heijde; “Designing Management Information Systems”, 2009, OXFORD university press

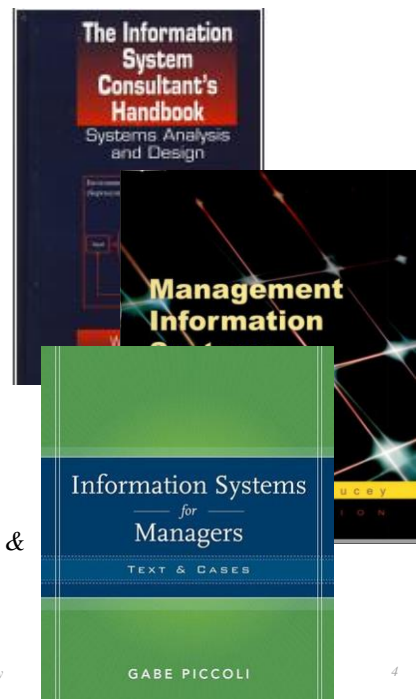


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## Course Description (Continued ...)

- **Reference:**
  - William S. Davis, David C. Yen, “The information system consultant’s handbook: system analysis and design”, 2010, Taylor and Francis
  - Terence Lucey; “Management Information Systems”, 2004, Cengage Learning EMEA
  - Gabriele Piccoli; “Information systems for managers: texts & cases”, 2007, John Wiley & Sons Inc



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## *Course Description (Continued..)*

- *Contents:*
  - *Introduction to Systems Analysis and Design*
  - *Analyzing the Business Case*
  - *Managing Systems Projects*
  - *Requirements Modeling*
  - *Data and Process Modeling*
  - *Object Modeling*
  - *Development Strategies*
  - *User Interface Design*
  - *Data Design*
  - *System Architecture*
  - *Managing Systems Implementation*

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## *Course Description (Continued..)*

- *Contents:*
  - *Analyzing the Business Case*
    - *A Framework for IT Systems Development*
    - *What Is a Business Case?*
    - *Information Systems Projects*
    - *Evaluation of Systems Requests*
    - *Overview of Feasibility*
    - *Preliminary Investigation Overview*

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## Analyzing the Business Case

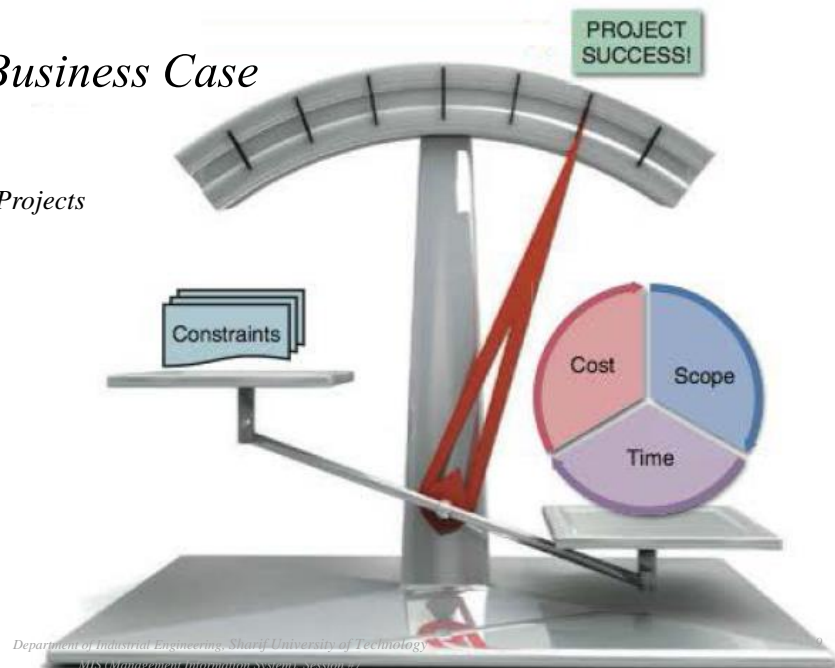
- *Contents:*
  - *Information Systems Projects*
    - *Project management for IT professionals includes planning, scheduling, monitoring and controlling, and reporting on information system development.*
    - *A successful project must be completed on time, within budget, and deliver a quality product that satisfies users and meets requirements.*
    - *Project management techniques can be used throughout the SDLC*

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## Analyzing the Business Case

- *Contents:*
  - *Information Systems Projects*



## Analyzing the Business Case

- *Contents:*
  - *Information Systems Projects*
    - *In a systems project, the project manager, or project leader, usually is a senior systems analyst or an IT department manager if the project is large.*
    - *An analyst or a programmer/analyst might manage smaller projects.*
      - *In addition to the project manager, most large projects have a project coordinator.*
    - *A project coordinator handles administrative responsibilities for the team and negotiates with users who might have conflicting requirements or want changes that would require additional time or expense.*

## Analyzing the Business Case

- *Contents:*
  - *Information Systems Projects*
    - *Project managers typically perform four activities, or functions: planning, scheduling, monitoring, and reporting:*
      - *Project planning includes identifying all project tasks and estimating the completion time and cost of each.*
      - *Project scheduling involves the creation of a specific timetable, usually in the form of charts that show tasks, task dependencies, and critical tasks that might delay the project. Scheduling also involves selecting and staffing the project team and assigning specific tasks to team members.*
        - *Project scheduling uses Gantt charts and PERT/CPM charts, which are explained in the following sections.*

## Analyzing the Business Case

- **Contents:**
  - *Information Systems Projects*
    - *Project managers typically perform four activities, or functions: planning, scheduling, monitoring, and reporting:*
      - *Project monitoring requires guiding, supervising, and coordinating the project team's workload.*
        - *The project manager must monitor the progress, evaluate the results, and take corrective action when necessary to control the project and stay on target.*
    - *Project reporting includes regular progress reports to management, users, and the project team itself.*
      - *Effective reporting requires strong communication skills and a sense of what others want and need to know about the project.*

## Analyzing the Business Case

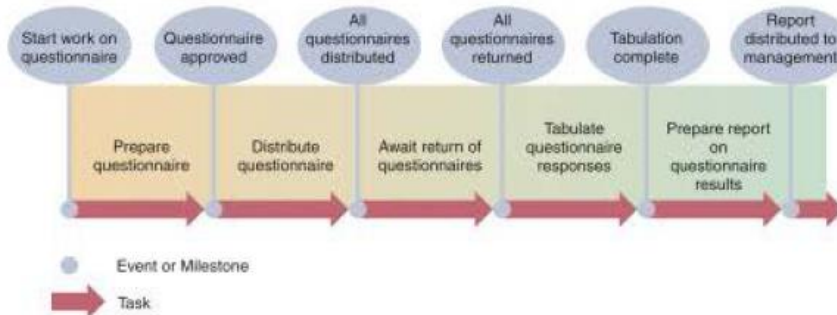
- **Contents:**
  - *Information Systems Projects*
    - *A work breakdown structure (WBS) involves breaking a project down into a series of smaller tasks.*
    - *There are two primary chart types: Gantt charts and PERT/CPM charts.*
      - *Although a Gantt chart offers a valuable snapshot view of the project, PERT charts are more useful for scheduling, monitoring, and controlling the actual work.*
    - *A work breakdown structure must clearly identify each task and include an estimated duration.*
      - *A task, or activity, is any work that has a beginning and an end and requires the use of company resources such as people, time, or money.*

## Analyzing the Business Case

- **Contents:**

- **Information Systems Projects**

- *In addition to tasks, every project has events, or milestones.*
    - *An event, or milestone, is a recognizable reference point that you can use to monitor progress. For example, an event might be the start of user training, the conversion of system data, or the completion of interviews.*



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## Analyzing the Business Case

- **Contents:**

- **Information Systems Projects**

- *The first task in creating a WBS is to list all the tasks.*
    - *The next step is to Estimate the task duration*
      - *A person-day represents the work that one person can complete in one day.*
      - *Project managers often use a weighted formula for estimating the duration of each task.*
      - *The project manager first makes three time estimates for each task:*
        - *An optimistic, or best-case estimate (B), a probable-case estimate (P), and a pessimistic, or worst-case estimate (W).*
        - *The manager then assigns a weight, which is an importance value, to each estimate.*

$$\frac{(B+4P+W)}{6}$$

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## Analyzing the Business Case

- *Contents:*
  - *Information Systems Projects*
    - *The last step is to define the precedence relationship*
  - *Identifying the task patterns*

Task Name	
Start Day/Date	Task ID
Finish Day/Date	Task Duration

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## Analyzing the Business Case

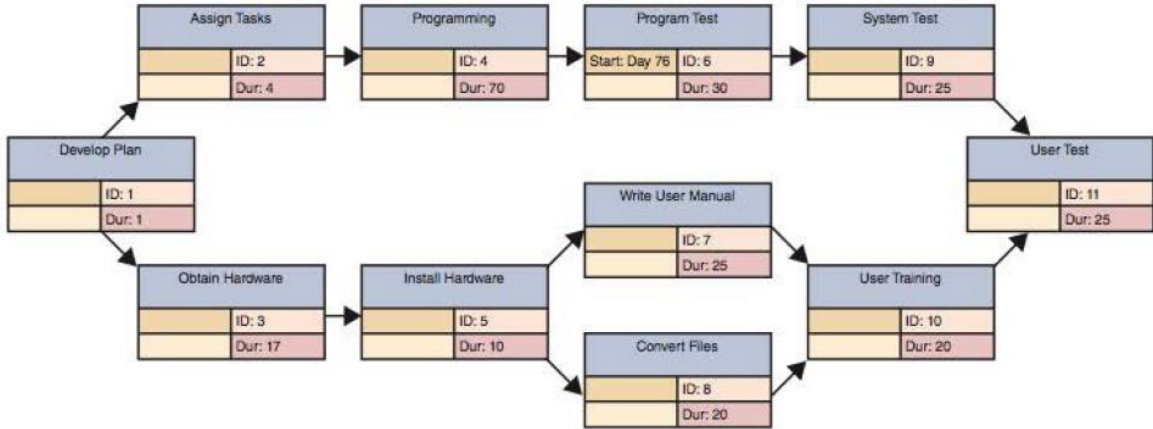
- *Contents:*
  - *Information Systems*

Task No.	Description	Duration (Days)	Predecessor Tasks
1	Develop Plan	1	-
2	Assign Tasks	4	1
3	Obtain Hardware	17	1
4	Programming	70	2
5	Install Hardware	10	3
6	Program Test	30	4
7	Write User Manual	25	5
8	Convert Files	20	5
9	System Test	25	6
10	User Training	20	7,8
11	User Test	25	9,10



## Analyzing the Business Case

- Contents:
  - Information Systems Projects



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## Analyzing the Business Case

- Contents:
  - Information Systems Projects

