

## *ERP (21-550)*

*Advanced Manufacturing Laboratory  
Department of Industrial Engineering  
Sharif University of Technology*

*Session #5*

## *Course Description*

### ▪ *Instructor*

- *Omid Fatahi Valilai, Ph.D. Industrial Engineering Department, Sharif University of Technology*
- *Email: [FValilai@sharif.edu](mailto:FValilai@sharif.edu) , Tel: 6616-5706*
- *Website: [Sharif.edu/~fvalilai](http://Sharif.edu/~fvalilai)*

### ▪ *Class time*

- *Sunday-Tuesday*                      *16:30-18:30*
- *Wednesday*                              *09:00-12:00*

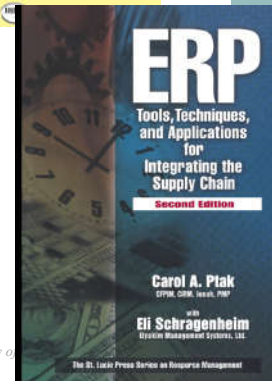
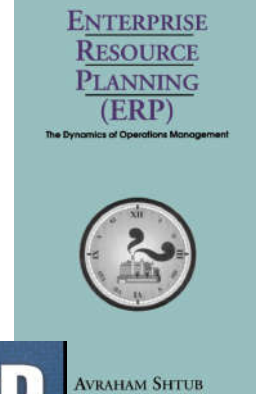
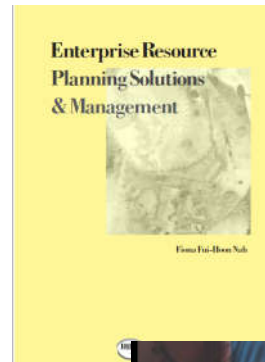
### ▪ *Course evaluation*

- *Mid-term*                                      *(30%)*
- *Final exam*                                      *(40%)*
- *Quiz*    *(5%)*
- *Exercise*                                        *(10%)*
- *ERP Lab*                                        *(15%)*

## Course Description (Continued ...)

- **Mid-term session:**
  - Sunday : 8<sup>th</sup> Azar 1394, 16:30 ~ 18:00
- **Final Exam:**
  - Sunday: 27<sup>th</sup> Dey 1394, 09:00 ~ 10:30
- **Reference:**
  - Shtub, A., "Enterprise Resource Planning (ERP)- The dynamics of operations management", 2002, Kluwer Academic Publishers
  - Ptak, Carol A., "ERP Tools, Techniques, and Applications for Integrating the Supply Chain", 2004, The CRC Press
  - Fui, F., Nah, H., "Enterprise Resource Planning", 2002, IRM Press

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## Course Description (Continued ...)

- **Mid-term session:**
  - Sunday : 8<sup>th</sup> Azar 1394, 16:30 ~ 18:00
- **Final Exam:**
  - Sunday: 27<sup>th</sup> Dey 1394, 09:00 ~ 10:30
- **Reference:**
  - Daniel E. O'leary, "Enterprise Resource Planning Systems Systems, Life Cycle, Electronic Commerce, and Risk", 2000, Cambridge University Press

### Enterprise Resource Planning Systems

Systems, Life Cycle, Electronic Commerce, and Risk



Daniel E. O'Leary

CAMBRIDGE [www.cambridge.org/978052179152](http://www.cambridge.org/978052179152)

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## Course Description (Continued..)

### Course Calendar:

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## Course Description (Continued..)

### Contents:

- Enterprise Management
- Operations Management
- The Evolution of ERP Systems: A Historical
- Organizations and organizational structures
- Scheduling
- Purchasing and inventory management
- Marketing considerations
- ERP selection and implementation

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## *Course Description (Continued..)*

- *Contents:*
  - *Enterprise Management*
    - *History of Enterprise Resource Planning*
    - *The Theory of Constraints and ERP*
    - *Sales and Operations Planning*
    - *Buffer Resource Strategy*
    - *Enterprise Resource Management*
    - *Integrating the Supply Chain to Reap the Rewards*
    - *Strategic Sourcing and Procurement*

## *Enterprise Management*

- *Contents:*
  - *History of Enterprise Resource Planning*
    - *The next major shift during the late 1980s and early 1990s was that the time to market was getting increasingly shorter.*
    - *Lead-times expected by the market continued to shorten and customers were no longer satisfied with the service level that was considered world class only a few years earlier.*
    - *Customers were demanding to have their products delivered when, where, and how they wanted them.*

## *Enterprise Management*

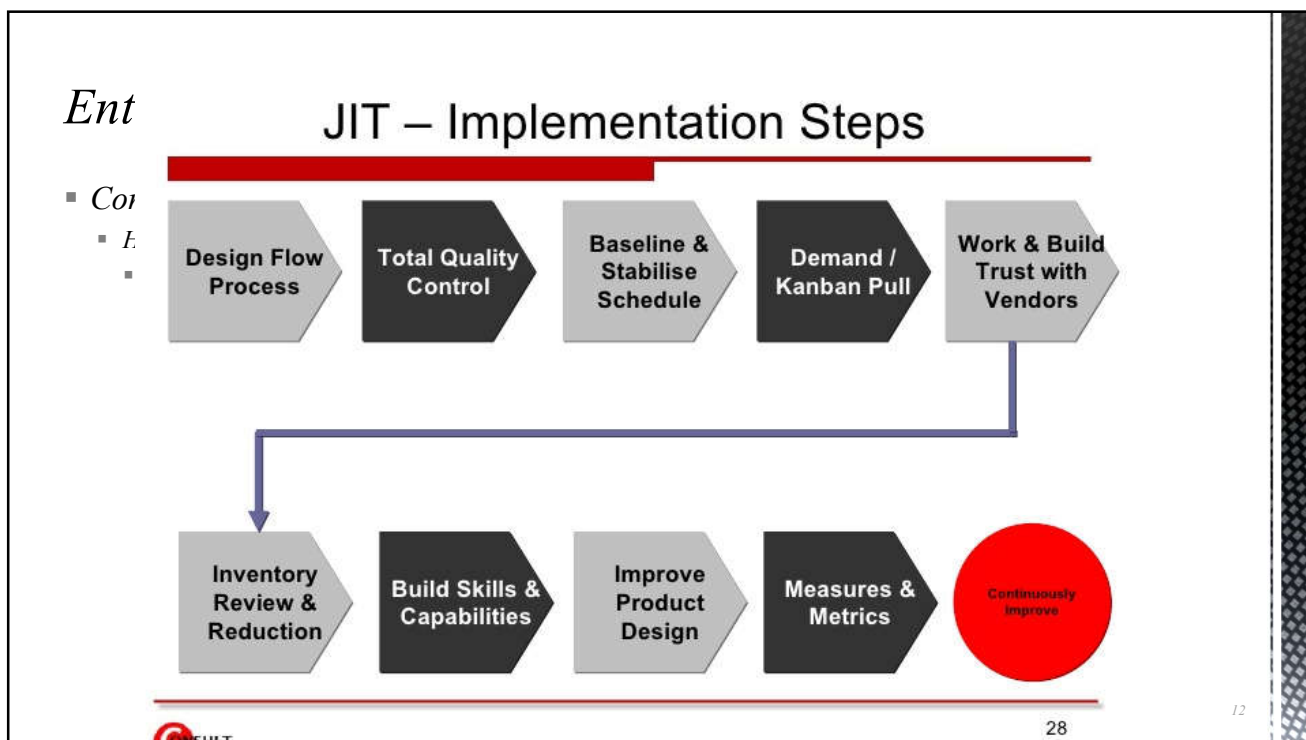
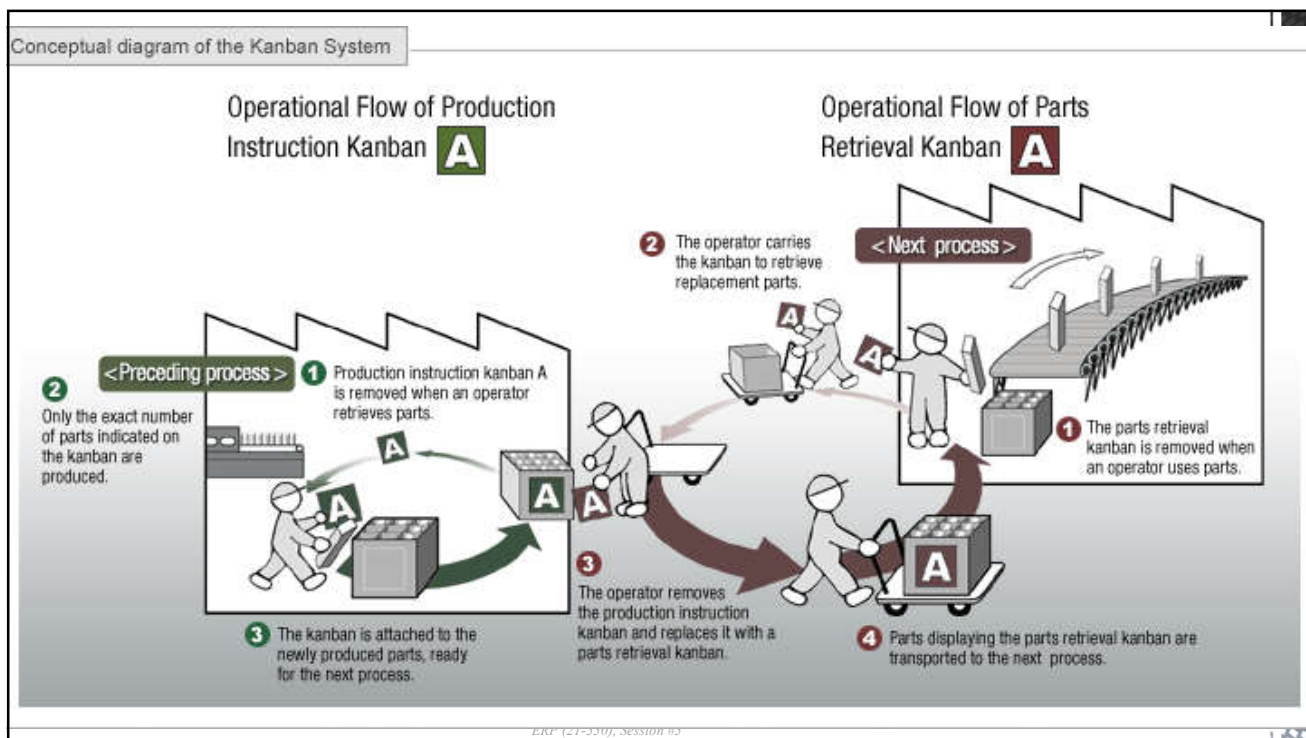
- *Contents:*

- *History of Enterprise Resource Planning*
  - *Companies began to develop and embrace the philosophies of Just in Time (JIT) and supplier partnerships as a way to remain competitive.*
  - *The JIT crusade brought the importance of reliable suppliers to focus.*
  - *During the same time frame the cost of goods sold was shifting drastically from labor to purchased materials.*
  - *Beginning in the 1990s the focus shifted to material becoming the driving force for profitability.*
    - *Many companies found that material had grown to 60 to 70% of their cost of goods sold while the labor cost declined to 10 to 20%.*
    - *Carrying extra inventory was no longer a competitive business practice.*

## *Enterprise Management*

- *Contents:*

- *History of Enterprise Resource Planning*
  - *Customers were making more demands on their ordered products.*
  - *Companies began to develop and embrace the JIT and supplier partnerships as a way to remain competitive.*
  - *JIT evolved to Lean Manufacturing and combined the concepts of JIT with quality concepts like*
    - *Total Quality Management,*
    - *Six Sigma, and*
    - *5S.*



## Enterprise Management

- *Contents:*
  - *History of Enterprise Resource Planning*
    - *Total X*
  - *TQM (Total Quality Management)*
  - *TPM( Total Preventive Management)*

## Enterprise Management



International Journal of Production Economics

Volume 115, Issue 2, October 2008, Pages 569-580



### TQM—A predecessor of ERP implementation

Ling Li  , Carol Markowski, Li Xu, Edward Markowski

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<https://doi.org/10.1016/j.ijpe.2008.07.004>

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