

ERP (21-550)

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

Session #4



Course Description

▪ *Instructor*

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

▪ *Class time*

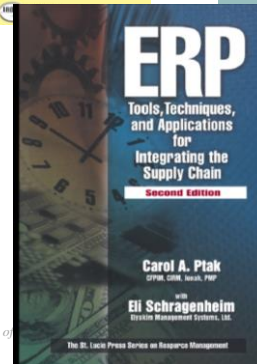
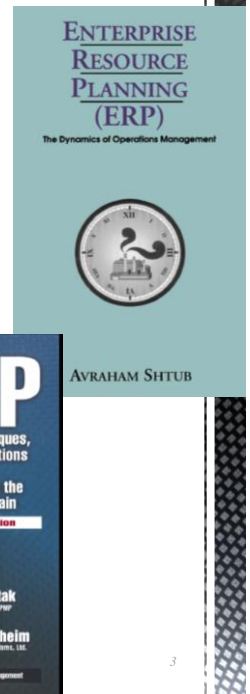
- *Sunday-Tuesday* *16:30-18:30*
- *Wednesday* *09:00-12:00*

▪ *Course evaluation*

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

Course Description (Continued ...)

- **Mid-term session:**
 - Sunday : 8th Azar 1394, 16:30 ~ 18:00
- **Final Exam:**
 - Sunday: 27th 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



Advanced Manufacturing Laboratory, Department of Industrial Engineering, Sharif University of Technology
ERP (21-550), Session #4

3

Course Description (Continued ...)

- **Mid-term session:**
 - Sunday : 8th Azar 1394, 16:30 ~ 18:00
- **Final Exam:**
 - Sunday: 27th 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

Advanced Manufacturing Laboratory, Department of Industrial Engineering, Sharif University of Technology
ERP (21-550), Session #4

4

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*

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:

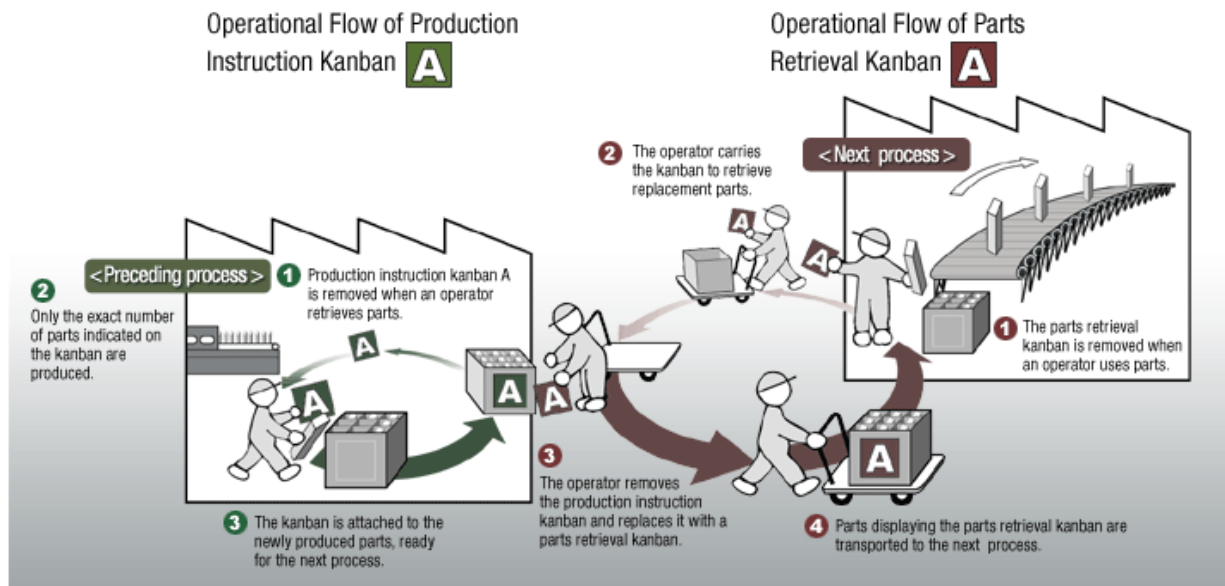
- *History of Enterprise Resource Planning*
 - *Customers were making more demands on their ordered products.*

- *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.*

Advanced Manufacturing Laboratory, Department of Industrial Engineering, Sharif University of Technology
ERP (21-550), Session #4

10

Conceptual diagram of the Kanban System



ERP (21-550), Session #4

Ent

JIT – Implementation Steps

- Cor
- E
-

