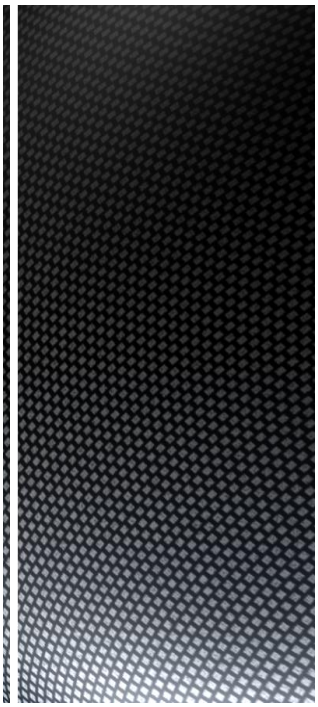


ERP (21-550)

Advanced Manufacturing Laboratory
Department of Industrial Engineering
Sharif University of Technology

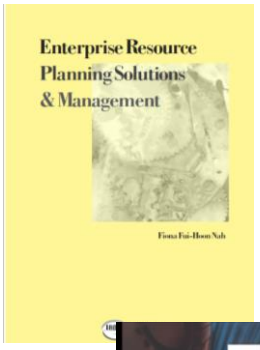
Session #5

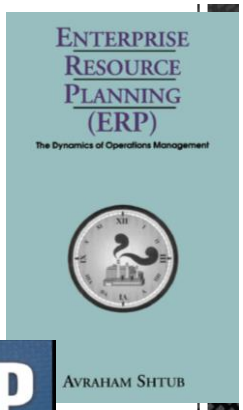
Course Description

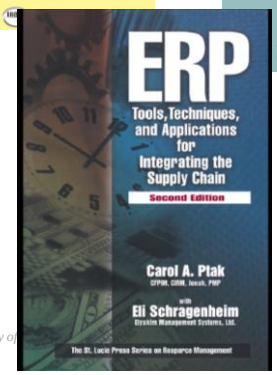
- *Instructor*
  - *Omid Fatahi Valilai, Ph.D. Industrial Engineering Department, Sharif University of Technology*
  - *Email: FValilai@sharif.edu , Tel: 6616-5706*
  - *Website: Sharif.edu/~fvalilai*
- *Class time*
  - *Sunday-Tuesday* *16:30-18:30*
  - *Wednesday* *09:00-12:00*
- *Course evaluation*
  - *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*

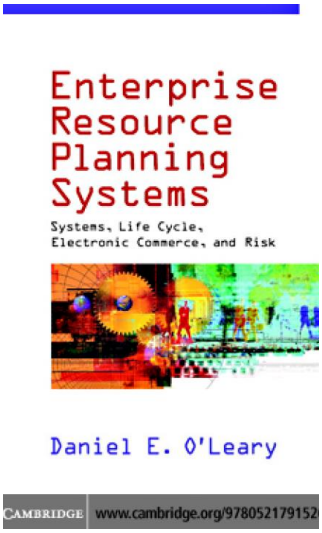






Course Description *(Continued …)*

- *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*



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

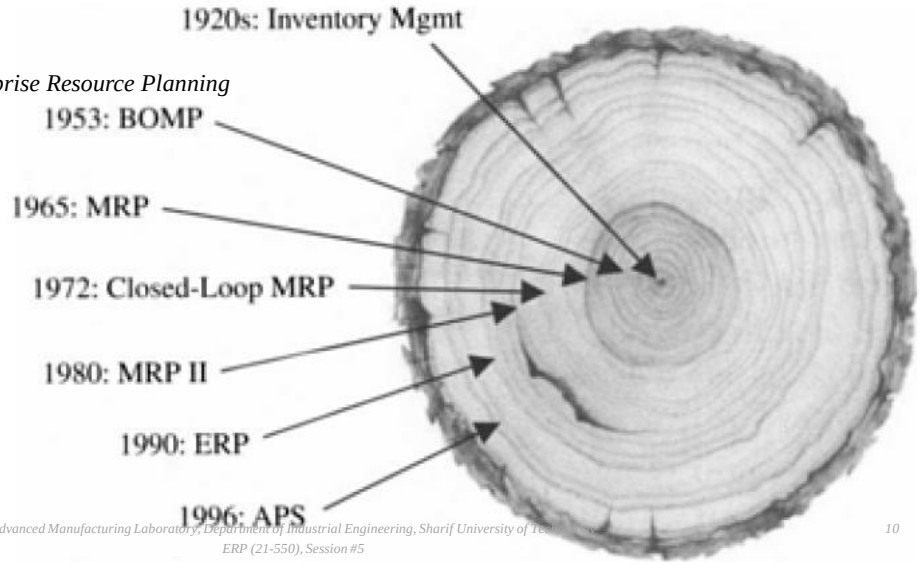
- *Contents:*
  - *History of Enterprise Resource Planning*
    - *Empowering employees was needed for providing the agility that was required to compete in the market.*
    - *The cost of technology continued to plummet and the advent of the personal computer revolutionized once again the face of business management systems.*
    - *It was now possible to run a fully integrated MRPII system on a small personal computer.*
    - *The cost of systems now made this integrated solution available to even the smallest companies.*

Enterprise Management

- *Contents:*
  - *History of Enterprise Resource Planning*
    - *Whole new breed of software companies came to the forefront to handle this next stage of evolution and ERP; Enterprise Resource Management (ERP) was now on the scene*
    - *ERP includes in its breadth all the resource planning for an enterprise; this includes*
      - *Product design,*
      - *Information warehousing,*
      - *Material planning,*
      - *Capacity planning, and*
      - *Communications system*

Enterprise Management

- *Contents:*
  - *History of Enterprise Resource Planning*



Enterprise Management

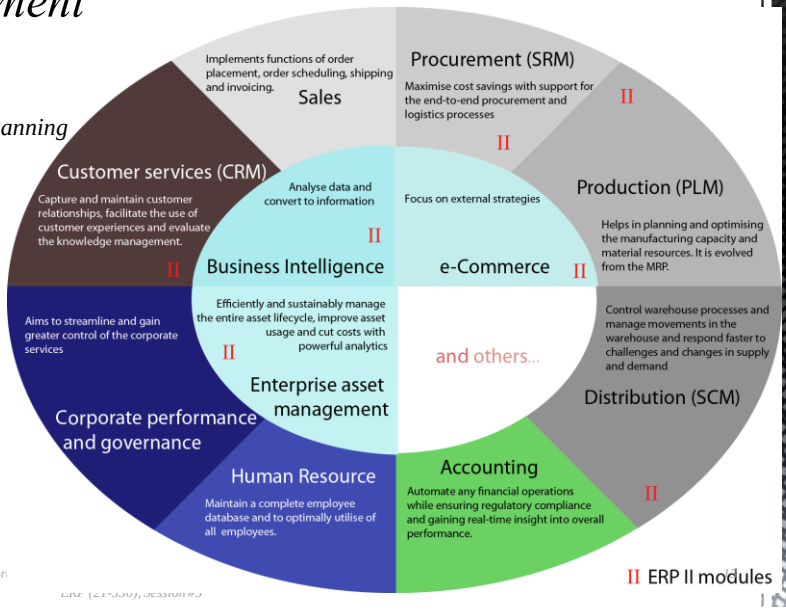
- *Contents:*
  - *History of Enterprise Resource Planning*
    - *This model of "what do I need, what do I have, what do I need to get, and when" is the backbone of the integrated supply chain.*
    - *The assumptions behind this inventory-centric model are:*
      - *All inventory goes into and out of stock.*
      - *All manufacturing orders are complete on their scheduled completion date.*
      - *Customer orders can be pulled from a pool of available inventory.*

Enterprise Management

- *Contents:*
  - *History of Enterprise Resource Planning*
    - *Customers expect that they can order something that they have never ordered before and get a real-time answer about when they can expect it.*
    - *With the recent pressure for increased product variety, each customer can have an absolutely unique configuration that must be tracked through the production process.*
    - *Care must be taken that technology does not totally replace an effective demand management process in context with an appropriate strategy. Without intelligent demand management, the risk of excess inventory is still very real.*

Enterprise Management

- *Contents:*
  - *History of Enterprise Resource Planning*



Enterprise Management

- *Contents:*
  - *History of Enterprise Resource Planning*

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Technical and industrial issues of Advanced Planning and Scheduling (APS) systems

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