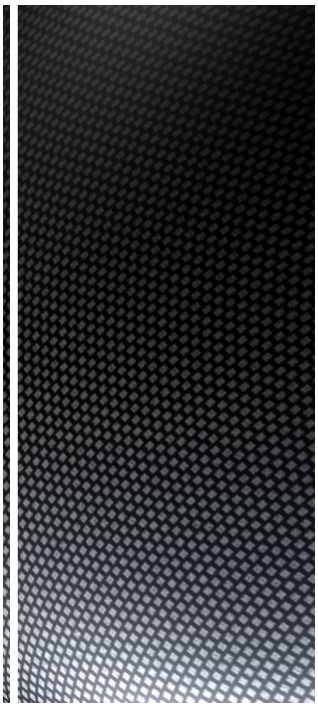


ERP (21-550)

Advanced Manufacturing Laboratory
Department of Industrial Engineering
Sharif University of Technology

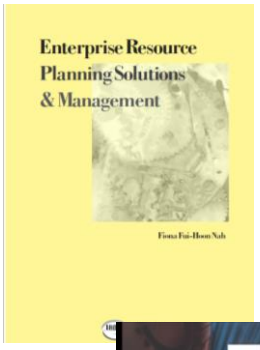
Session #18

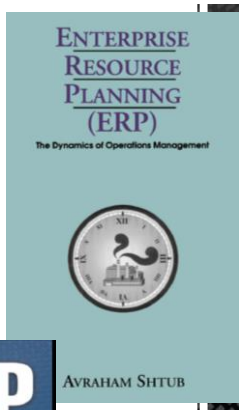
Course Description

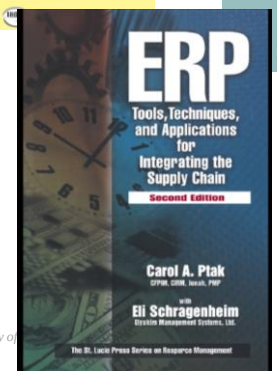
- *Instructor*
  - *Omid Fatahi Valilai, Ph.D. Industrial Engineering Department, Sharif University of Technology*
  - *Email: FValilai@sharif.edu , Tel: 6616-5706*
  - *Website: Sharif.edu/~fvalilai*
- *Class time*
  - *Sunday-Tuesday* *16:30-18:30*
  - *Wednesday* *09:00-12:00*
- *Course evaluation*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

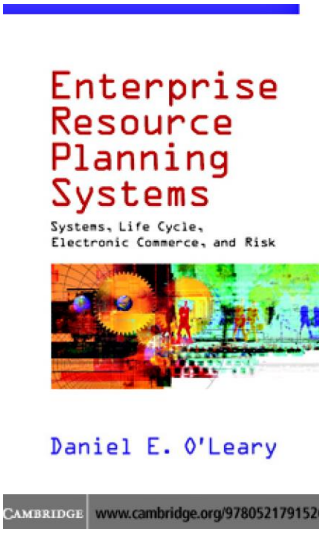






Course Description *(Continued …)*

- *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*

Course Description (Continued..)

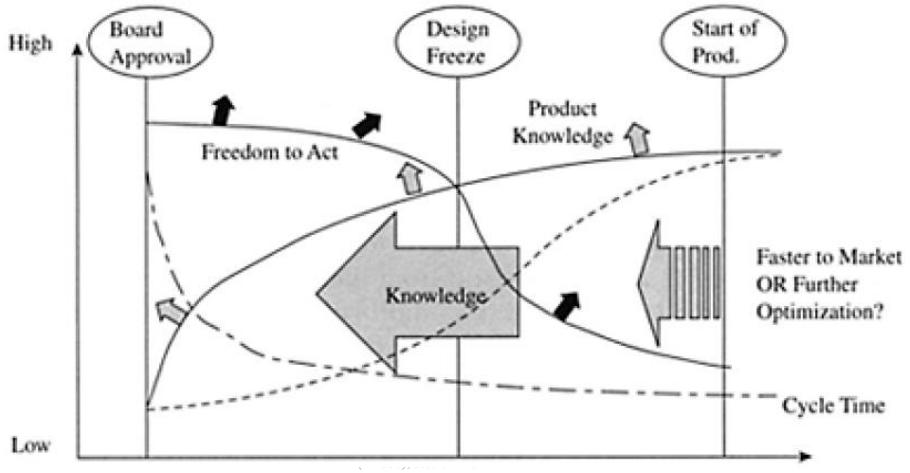
- *Contents:*
  - *Operations Management*
    - *Operations Planning (Material and Capacity Requirements Planning)*
    - *Product Life Cycle Management*
    - *Manufacturing Execution System*
    - *Distribution*

Operations Management

- *Product Lifecycle Management (PLM)*
  - *The PLM process is really the process of learning from prior projects and designs. PLM provides the resources to explore design alternatives and define innovative options for release in the next product.*
  - *PLM manages the linkages from the early design phase to the final release plan including required tool paths. This integrated process allows the development of the manufacturing information currently with the product design before final design release.*
  - *The early availability of product and process knowledge offers the option to further optimize the design or push the design to market to capture critical market share.*
  - *The design engineer can see how the product will be built and can quickly determine the tools that may be affected if a design change is made.*

Operations Management

- *Product Lifecycle Management (PLM)*



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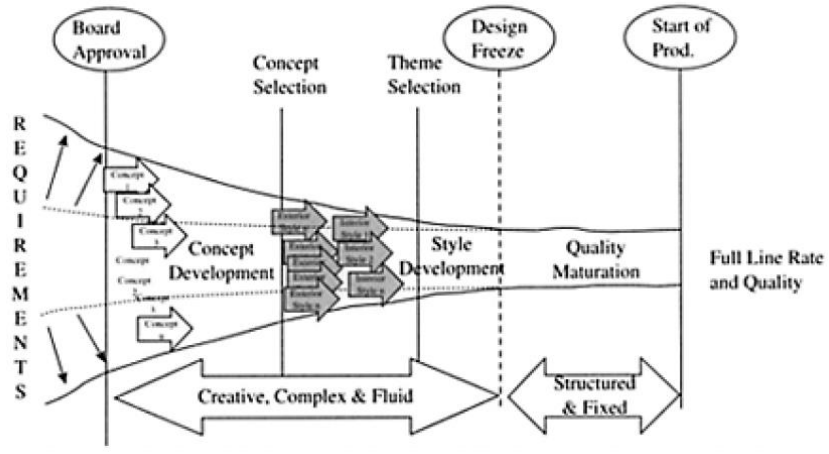
Operations Management

- *Product Lifecycle Management (PLM)*



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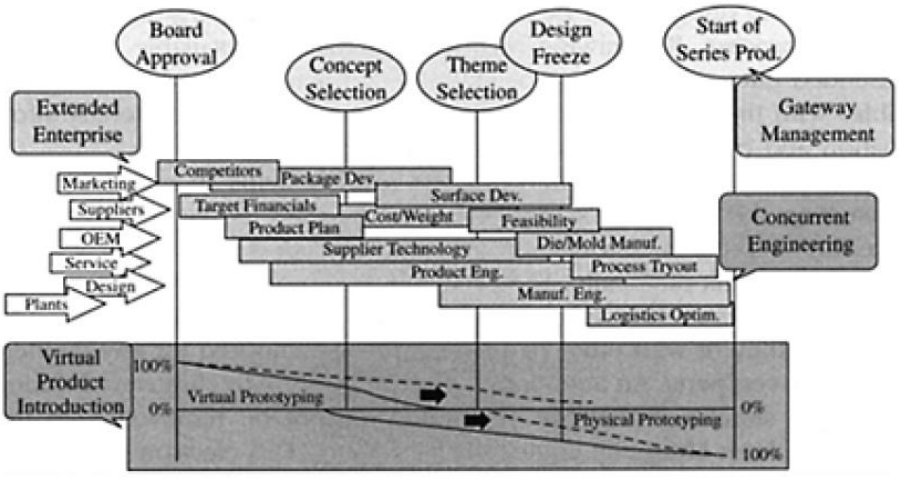
Operations Management

- *Product Lifecycle Management (PLM)*



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Operations Management

- *Product Lifecycle Management (PLM)*
  - *Implementation*
  - *An effective PLM implementation is the unique combination of people, processes, and products, including technology that fits the needs of the enterprise.*
  - *At the very least, the issues that must be addressed include:*
    - *A clearly articulated vision of how this technology will address the limitations of the business so that a positive return on investment is possible*
    - *Teamwork*
    - *An enterprise culture that embraces concurrent participative design*
    - *Sufficient skills for the people who must use the tools*
    - *Education to provide the understanding of what is to be achieved and why*
    - *Effective communication to share this information throughout the extended enterprise*

Operations M

- *Product Lifecycle M*