

ERP (21-550)

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

Session #13



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*

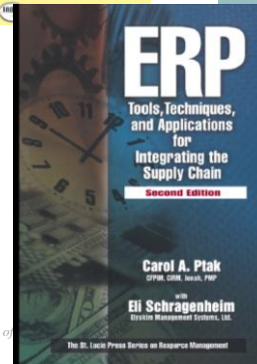
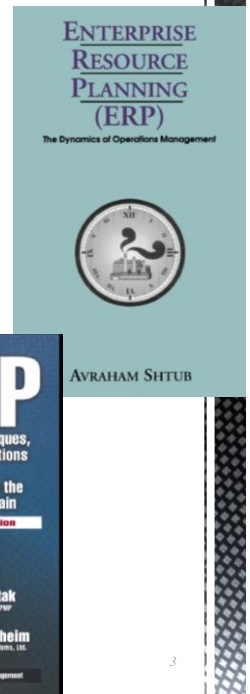
▪ *Course evaluation*

- *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 #13

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

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ERP (21-550), Session #13

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..)

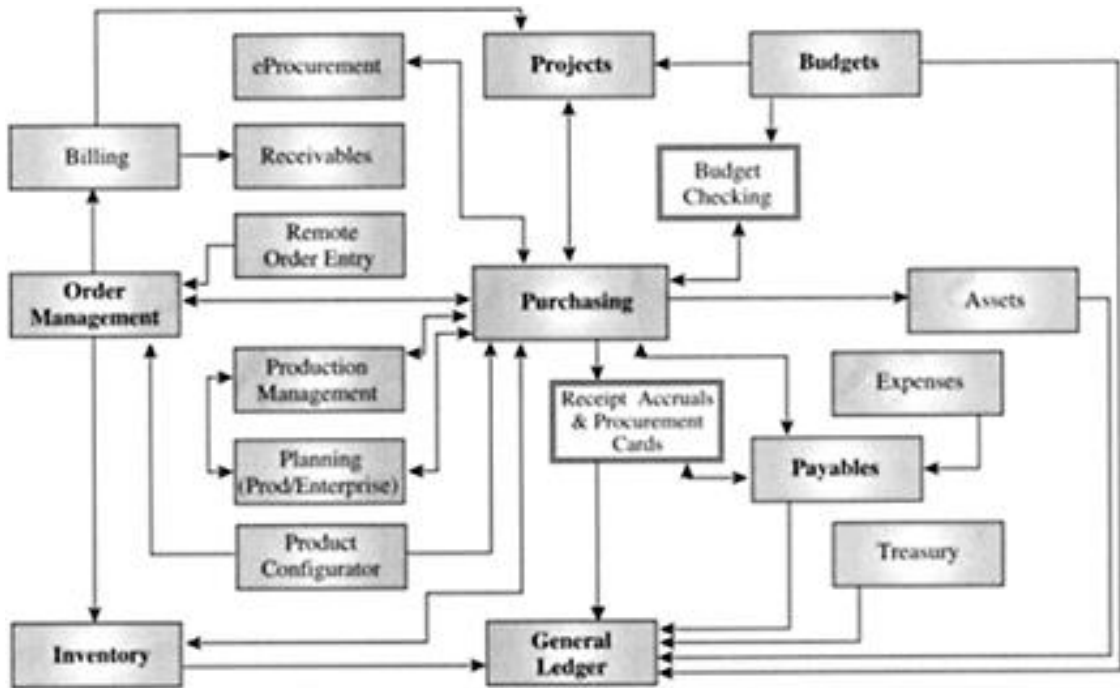
- *Contents:*
 - *Enterprise Management*
 - *History of Enterprise Resource Planning*
 - *The Theory of Constraints and ERP*
 - *Sales and Operations Planning*
 - *Buffer Resource Strategy*
 - *Enterprise Resource Management*
 - *Integrating the Supply Chain to Reap the Rewards*
 - *Strategic Sourcing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

Enterprise Management

- *Contents:*
 - *Strategic Sourcing and Procurement*
 - *During the 1940s and 1950s, the largest component of the cost of goods sold was labor.*
 - *In some companies this cost was around 50%.*
 - *This led to the Taylor labor movement and the focus on labor productivity.*
 - *The labor focus gave rise to our cost accounting methods where overhead is typically spread based on the production labor hours.*
 - *For almost 50 years, management has focused on the shop floor and how labor efficiencies can be improved.*
 - *North American managers continue to search for inexpensive offshore labor even though labor is now less than 10% of the current cost of goods sold.*
 - *Asian and European managers have begun to develop strategic sourcing agreements that move production closer to the market.*

Enterprise Management

- *Contents:*
 - *Strategic Sourcing and Procurement*
 - *In the 1990s, the cost landscape changed drastically.*
 - *For most companies labor is an increasingly small part of costs.*
 - *On average the cost of material for an enterprise comprises about 60 to 80% of total cost.*
 - *Hal Mather at the World Symposium in 1997 claimed that the cost of logistics had exceeded the cost of labor for most manufacturing companies worldwide.*



Enterprise Management

- *Contents:*
 - *Strategic Sourcing and Procurement*
 - *Supplier partnership characteristics*
 - *As the company moves to effective Supply Chain Management, supplier partnerships are formed to provide a win-win relationship between customer and supplier.*
 - *Supplier partnerships are characterized by:*
 - *Longer contracts*
 - *More exclusivity in agreements*
 - *Fewer (but better) suppliers*
 - *Higher volume between buyer and supplier*
 - *Lower prices*
 - *Quality at the (supplier) source*

Enterprise Management

- *Contents:*
 - *Strategic Sourcing and Procurement*
 - *Supplier partnership characteristics*
 - *As the company moves to effective Supply Chain Management, supplier partnerships are formed to provide a win-win relationship between customer and supplier.*
 - *Supplier partnerships are characterized by:*
 - *Supplier centered design*
 - *Frequent delivery of small lots*
 - *Less burdensome order conveyance.*
 - *Delivery to point of consumption*
 - *Mutual openness*

Enterprise Management

- *Contents:*
 - *Strategic Sourcing and Procurement*
 - *A big key to successful supplier partnerships is mutual trust and openness.*
 - *Successful strategic sourcing is dependent on a number of different factors. These include:*
 - *Financial stability*
 - *Management commitment to excellence*
 - *Design and technology strength*
 - *Quality capabilities*
 - *Cost leadership*
 - *Service and flexibility*
 - *Manufacturing skills*
 - *Just in Time (JIT) development*
 - *Employee Participation*

Enterprise Management

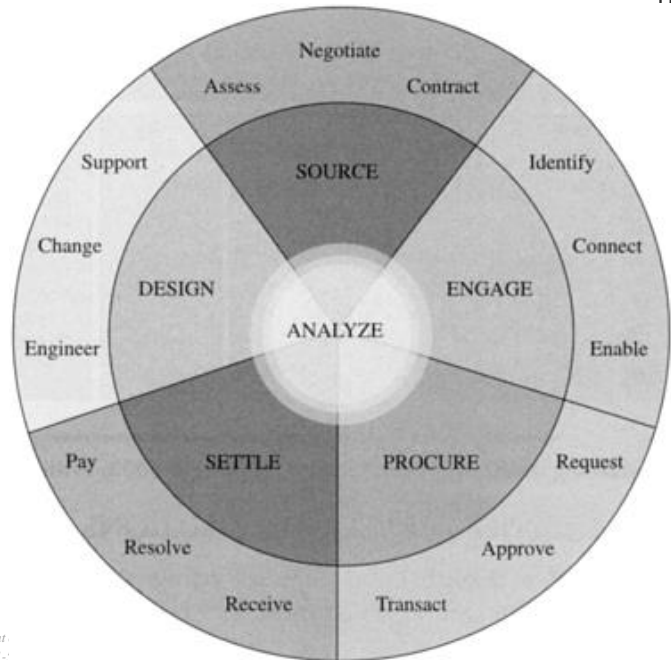
- **Contents:**
 - *Strategic Sourcing and Procurement*
 - *Supplier Relationship Management*
 - *Enabling supplier relationship management has been one of the hottest growth areas in technology.*
 - *The big issues in supplier relations management are:*
 - *Lack of visibility and control over all categories of spending*
 - *Silo supply solutions and processes*
 - *Inefficient communication with suppliers*
 - *Manual, labor-intensive processes*
 - *Not leveraging complete supply base*
 - *No single integrated insight into activity, performance, or spend*

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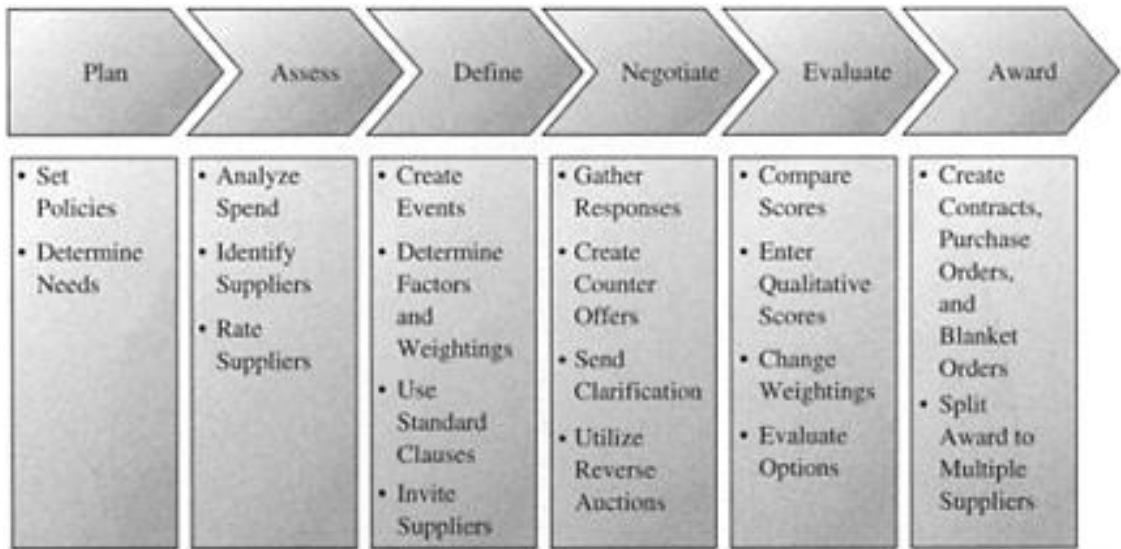
14

Enterprise Management

- **Contents:**
 - *Strategic Sourcing and Procurement*
 - *Supplier Relationship Management*



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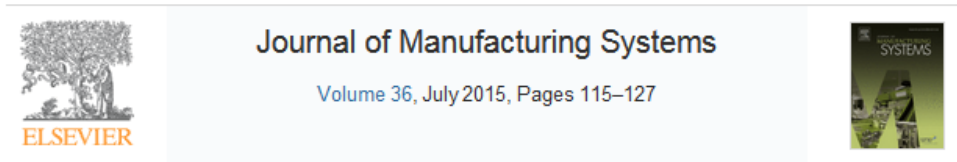
Sourcing detail. (From PeopleSoft, copyright 2003.)

Enterprise Management

- *Contents:*
 - *Strategic Sourcing and Procurement*
 - *Supplier partnership cautions*
 - *Be careful not to overload one supplier.*
 - *Ensure a philosophic fit.*
 - *Complete contingency planning.*

Enterprise Management

- *Contents:*
 - *Strategic Sourcing and Procurement*



A hybrid approach to select the best sourcing policy using stochastic programming

M. Keyvanloo , A.M. Kimiagari  ·  · , A. Esfahanipour

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ERP (21-550), Session #13

18

Course Description (Continued..)

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

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ERP (21-550), Session #13

19