
JAPANESE PRODUCTION MANAGEMENT SYSTEMS

2 credits (Spring)

日本の生産管理システム 2単位(春学期)

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Course Description:

This course provides an introduction to production management and presents tools and techniques mostly used by Japanese companies to manage and control their production systems. It provides the students with the necessary concepts, tools and methods to understand the production management systems and the logic behind the various planning, scheduling, control and decision techniques used by Japanese companies today. Essential Japanese production management concepts such as Toyota's production systems, just-in-time, Kanban and Kaizen will be covered. It also covers traditional and modern Japanese production systems and those control systems being practiced in Toyota.

Textbooks:

Lecture handouts will be provided as the course proceeds.

Reference Books:

- Monden, Y. (2012) *Toyota production system: an integrated approach to just-in-time*, 4rd edition, Engineering & Management Press
- Khojasteh, Y. (2016) *Production Control Systems, A Guide to Enhance Performance of Pull Systems*, Springer
- Khojasteh, Y. (2018) *Production Management: Advanced Models, Tools, and Applications for Pull Systems*, CRC Press

Course Plan:

- 1 Course introduction
- 2 Toyota production system
- 3 Toyota's Just-in-Time (JIT) systems
- 4 Kaizen and continuous improvement techniques
- 5 Productivity improvement in production systems
- 6 Inventory management
- 7 Aggregate planning and scheduling
- 8 Material requirements planning (MRP)
- 9 Enterprise resource planning (ERP)
- 10 Planning and scheduling in production systems
- 11 Short-term scheduling in production systems
- 12 Managing production projects I
- 13 Managing production projects II
- 14 Course review

Other Review and exam

Method of Evaluation:

Attendance	10%
Assignments	60%
Final Exam	30%