EGN 4333 – Design of Integrated Production Systems  
Spring 2009

Instructor: Dr. Arda Vanli  
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Office Hours: Tuesday, Thursday 11:00am -12:00 noon, or by appointment

Teaching Assistant: Daniel Labrador (del03@fsu.edu)  
Office hours: Wednesday 12:00 noon – 3:00pm (COE B221)

Class Hours: Monday, Wednesday 9:40am -10:55 am, Room: COE – B0136

Course Objectives and Outcomes

In this course our main focus will be on manufacturing operations management. The objective of the course is to provide students with an understanding into (1) the traditional production management techniques including inventory control, materials requirements planning (MRP), and just-in-time (JIT) methods, (2) important production control concepts including cycle time, inventory and throughput, and (3) production systems design problems such as shop floor control, scheduling and long-range aggregate planning.

Additionally, the following departmental program outcomes are expected of each student on completion of the course:

1. Ability to design and conduct experiments, as well as to analyze and interpret data
2. Ability to design or redesign integrated systems, components, or processes to meet desired needs within realistic constraints, such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
3. Ability to use modern industrial engineering techniques, skills and tools necessary to design, develop, implement, and improve integrated systems that include people, materials, information, equipment and energy.
4. Ability to identify, formulate, and solve engineering problems

Textbook


Prerequisite

EGN 3613 (Principles of Engineering Economy), ESI 3312C (Operations Research I) and EGN 2123 (Computer Graphics for Engineers)

It is the policy of the Department of Industrial Engineering that a student must receive passing grades in all prerequisite courses prior to enrolling in an Industrial Engineering course. Concurrent registration in a course and its prerequisites is not allowed. All prerequisites to
prerequisites must also be completed. Failure to abide by this policy can result in the cancellation of your enrollment in the course at any time during the semester and with no refund of fees.

**Topics**

- Introduction (Chapter 0)
- Inventory Control (Chapter 2)
- Materials Requirements Planning (Chapter 3)
- Just-in-Time and Lean manufacturing (Chapter 4)
- Basic factory dynamics (Chapter 7)
- Variability basics (Chapter 8)
- Push and Pull Systems (Chapter 10)
- Shop Floor Control (Chapter 14)
- Production Scheduling (Chapter 15)
- Aggregate Planning (Chapter 16)

**Grading Policy:**
Your course grade is based on 2 midterm exams, a final exam and homework assignments. The weights of these components in your final grade will be as follows:

- Exam 1 : 25%
- Exam 2 : 25%
- Final : 25%
- Assignments : 25%

There will be no extra work available to enhance your grade, so put in the appropriate effort on the assigned homework.

**Examinations**
The exams will be in-class, closed-book and closed-notes. You may bring your calculator and a letter-sized formula sheet to the exams.

**Make-up Exam Policy:**
No make-up, late or early exams will be given unless prior approval has been granted by the course instructor. Approvals for make-up exams will only be granted for medical emergencies. If a make-up examination is not granted, you will receive a score of zero (0) for the exam that you missed.

**Grading Scale.**
The grades will be based on the following scale:

- 90 – 100 : A
- 80 – 89 : B
- 70 – 79 : C
- 60 – 69 : D
- 0 -59 : F
**Academic Honor Code:**

Students are expected to uphold the Academic Honor Code published in The Florida State University Bulletin and the Student Handbook. The Academic Honor System of The Florida State University is based on the premise that each student has the responsibility (1) to uphold the highest standards of academic integrity in the student's own work, (2) to refuse to tolerate violations of academic integrity in the university community, and (3) to foster a high sense of integrity and social responsibility on the part of the university community.

**Americans with Disabilities Act:**

Students with disabilities needing academic accommodation should:
1. Register with and provide documentation to the appropriate university office. For FAMU students, this is the Learning Development and Evaluation Center (LEDC). For FSU students this is the Student Disability Resource Center (SDRC); and
2. Bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class.

This syllabus and other class materials are available in alternative format upon request.

For more information about services available to students with disabilities:

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<tr>
<th>FAMU students should contact:</th>
<th>FSU students should contact:</th>
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<tr>
<td>Learning Development and Evaluation Center</td>
<td>Student Disability Resource Center</td>
</tr>
<tr>
<td>667 Ardelia Court</td>
<td>874 Traditions Way</td>
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<tr>
<td>Tallahassee, FL 32307</td>
<td>108 Student Services Building</td>
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<tr>
<td>(850) 599.3180</td>
<td>Tallahassee, FL 32306-4167</td>
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<td></td>
<td>(850) 644-9566 (Voice)</td>
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<td>(850) 644-8504 (TDD)</td>
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<td><a href="mailto:sdrc@admin.fsu.edu">sdrc@admin.fsu.edu</a></td>
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**Syllabus Change Policy:**

This syllabus is a guide for the course and is subject to change.