Instructor
• Name: David Loflin
• Phone: 228-313-0931
• Email: david.loflin@usm.edu

Office Hours
• Adjunct instructor, no office, can arrange meetings as needed.

Drop Date
The last day to drop the class without Academic/Financial Penalty is Jan 20.

Prerequisites
• Senior standing or department permission

Credit Hours
• 3 hours

Course Description
The basic principles and concepts of Lean manufacturing and the strategic and tactical elements of lean production systems
Course Overview

It is designed to provide students with an understanding of the strategic and tactical elements of lean production systems. This course will address the basic principles and concepts of Lean Manufacturing. Instructor will lead participants through a basic factory simulation that will demonstrate how Lean can be used to dramatically improve productivity. The focus of this class is on both theoretical and practical issues. At the end of the class it is expected that the student will have a clearer understanding of how to create a lean system.

Course Objectives

At the end of the course, you will be able to:

- Analyze current production system and build a current state Value Stream Map
- Standardize Work Flow concepts
- Document and sustain standard work practices
- Implement techniques for Standardized Work
- Apply error proofing to products and processes
- Use Poka Yoke devices in production systems
- Implement 5 step approach to house keeping
- Realize the impact of SMED, JIT, TPM, Six Sigma, Kanban, etc on production systems
- Identify, reduce, or eliminate wastes in production systems

Course Communication

The main mode of communication will be through Eagle Learning Online and private email. A chat session can be established on E-Learning if necessary.

Required Text (s) and Readings

Students will be provided with the lecture materials and additional handouts which are not available in the text and reference books.


Class Procedures and Requirements

From the schedule, each week has an associated chapter that you are required to review. You should read the chapter in your textbook, review the power-point presentations and the recorded video/audio lecture file. All quizzes and exams must be submitted through E-learning/ email. I will try to have them graded before the following class day. Each quiz will be graded with review comments that will show you anything that would need to be done to improve your knowledge on any part of the assignment that is not satisfactory. The quizzes and exams will be done online. (Using someone else's knowledge is considered cheating.) Please be aware that the grade provided by automated grading may be lower than the actual grade you will receive on the test, after I have had the opportunity to review the grading.

Evaluation Criteria

The following table displays the percentage breakdown of the required assessments for IET 413:
Homework 20%
Quizzes 20%
Mid Term Exam 30%
Final Exam 30%
Total 100%

The following table displays the percentage breakdown of the required assessments for IET 513:
Quizzes/ Home works 10%
Mid Term Exam 30%
Final Exam 35%
Research Paper 25%
Total 100%

Grading Scale: The final grade is based on the following scale:
A  90-100
B  80-89
C  70-79
D  60-69
F    0-59

Graduate Research Paper:
You are required to submit your progress report and final report on time. Progress report is very helpful to guide you to finish with a very good final report. All graded reports will be returned to students promptly to improve their writing skills. This assignment will be judged on the basis of four criteria. They are content, organization, style, and format. Among all criteria, content of the report will be heavily weighted. Grammatical and spelling errors will be considered to be major errors. Please be sure your paper is free of typographical errors and omissions before submitting it. You are encouraged to self assess your assignment before final submission. Attached “Grading Rubric for Technical Writing Assignments” will be used to grade the writing assignment.

Exams
• Mid-term and final exams will be submitted through blackboard.

Late Assignments or Projects
• Late assignments are not acceptable and may be penalized 5 points per day delinquent.

Academic Honesty
The following is from the USM Undergraduate Bulletin:

“When cheating is discovered, the faculty member may give you an F on the work involved or in the course. If further disciplinary action is deemed appropriate, you should be reported to the Dean of Students. In addition to being a violation of academic honesty, cheating violates the Code of Student Conduct and may be grounds for probation, suspension, and/or expulsion. Students on disciplinary suspension may not enroll in any courses offered by The University of
Southern Mississippi.”

**ADA Policy**
If a student has a disability that qualifies under the Americans with Disabilities Act and requires accommodations, he/she should contact the Office for Disability Accommodations (ODA) for information on appropriate policies and procedures. Disabilities covered by the ADA may include learning, psychiatric, physical disabilities, or chronic health disorders. Students can contact ODA if they are not certain whether a medical condition/disability qualifies. Mailing address:

**Gulf Coast:**
Office of Disability Accommodations, 730 E. Beach Blvd., Long Beach, MS 39560; Voice telephone or TTY: (228) 214-3232

**Hattiesburg:**
118 College Drive #8586, Hattiesburg, MS 39406-0001; Telephone: (601) 266-5024; TTY: (601) 266-6837; Fax: (601) 266-6035.

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<thead>
<tr>
<th>Week</th>
<th>Starting</th>
<th>Topics Covered</th>
<th>Chapters</th>
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<tr>
<td>1</td>
<td>12-Jan</td>
<td>Syllabus</td>
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<tr>
<td>2</td>
<td>19-Jan</td>
<td>Continuous Improvement Tools</td>
<td>Ch 1</td>
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<td>3</td>
<td>26-Jan</td>
<td>Overall Equipment Efficiency (OEE) Problems</td>
<td>Ch 1</td>
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<tr>
<td>4</td>
<td>02-Feb</td>
<td>Materials Flow and Facilities Layout</td>
<td>Ch 2</td>
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<td>5</td>
<td>09-Feb</td>
<td>Material Flow and the Design of Cellular Layouts</td>
<td>Ch 3 (Cell Layout)</td>
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<tr>
<td>6</td>
<td>16-Feb</td>
<td>Material Flow and the Design of Cellular Layouts</td>
<td>Ch 3 (M &amp; Time Study)</td>
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<td>7</td>
<td>23-Feb</td>
<td>Chapter 3 Problems, Equipment Efficiency: Quality and the Poke-Yoke</td>
<td>Ch 3 (math Review), Ch 4</td>
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<tr>
<td>8</td>
<td>02-Mar</td>
<td>Midterm Exam</td>
<td>Ch 1-4</td>
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<td>9</td>
<td>09-Mar</td>
<td><strong>No Class (Spring Break)</strong></td>
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<td>10</td>
<td>16-Mar</td>
<td>Equipment Efficiency: Performance and Motion Study</td>
<td>Ch 5</td>
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<td>11</td>
<td>23-Mar</td>
<td>Equipment Efficiency: Availability, Performance, and Maintenance</td>
<td>Ch 6</td>
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<td>Date</td>
<td>Chapter Date</td>
<td>Topic</td>
<td>Reference</td>
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<td>12</td>
<td>30-Mar</td>
<td>Value Stream Mapping</td>
<td>Other reference</td>
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<td>13</td>
<td>6-Apr</td>
<td>Equipment Efficiency: Availability, Quality, and SMED</td>
<td>Ch 7</td>
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<td>14</td>
<td>13-Apr</td>
<td>Environmental Improvements and the 5S Methodology</td>
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<td>20-Apr</td>
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<tr>
<td>16</td>
<td>27-Apr</td>
<td>Other Improvement Keys</td>
<td>Ch 9</td>
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<td>04-May</td>
<td><strong>Final Examination</strong></td>
<td><strong>Ch 5-9</strong></td>
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**Note:** Instructor reserves the right to change the schedule of this course as appropriate to course productivity.