WKU©

School of Engineering and Applied Sciences
AMS 394 Lean Systems
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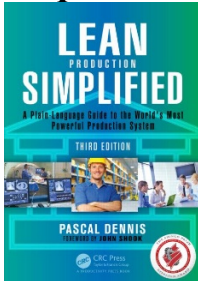## On-Demand Course Syllabus

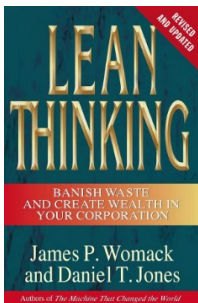## Office Hours
By appointment

Catalog Description
Applications of lean systems across disciplines. Lean is the enhancement of customer value and the elimination and reduction of all forms of waste. Prerequisite(s): Math 116 with a grade of "C" or better, or Math 117 or higher.

Required Textbooks

Dennis, P. (2015). *Lean Production Simplified*. (3rd Ed.) Boca Raton, FL: CRC Press. ISBN 9781498708876

Womack, J.P. & Jones, D. T., (2003). *Lean Thinking: Banish Waste and Create Wealth in Your Corporation*. (Revised and Updated) New York: Free Press. ISBN 0-7432-4927-5 (ebook is acceptable)

Other readings are assigned as supplemental.

Course Objectives
By the end of the course module, the student will be able to:
- Describe origins and principles of the lean production system in a variety of industrial environments

- Identify and describe the tools of lean
- Solve practical problems of lean
- Identify the goals and measures of lean
- Develop lean strategies
- Apply the principles and tools of lean to a system
- Design lean facilities and processes for a system

Course Topics
This is an introductory course to lean systems and is designed to increase your process, analytical, business, and technical management skills. Topics include lean principles, lean foundations, and some of the basic tools of lean such as standard work, labor standards, total productive maintenance, value streams, and 5S in the workplace. Also covered are the pillars of lean such as jidoka and just-in-time, set-up reduction, facilities layouts, kaizen, hoshin kanri and concepts in lean culture, employee involvement, and action planning. In addition, the course will cover include lean strategies, product operations, manufacturing process design, and the approaches for creating organizational structures, facilities layouts, production control, process flows, inventory management, materials handling, and quality/production measures.

Course Structure and Design
The course module will consist of readings from the assigned text and other supplemental materials, chapter quizzes, essays, assignments and assessments.

Activity Assignments. Various activity exercises, essays, and questions will be assigned over the duration of the course. These assignments are designed to help you keep up with the readings, give you material that might be helpful for the project paper, and prepare you for the examinations.

Quizzes. Quizzes will be given on the content of the assigned readings and provided material. Quizzes will cover the assigned content for each module unit. They are for you to use as a self-check on your knowledge of the course material.

Examinations. There are three exams that cover the content material of the course and they must be taken in a proctored setting.

Comprehensive Lean Systems Project Plan. Each student will create a lean systems project plan for a selected process. The selected process should be one that you are very familiar with and that you have control over.

Grading
The grading for the course is as follows:

Activity Assignments	15%
Case Study Essays	15%
Exams (8/7/15)	30%
Comprehensive Lean Systems Project Plan (10/25)	40%

Total	100%

Thirty percent of the grade is based on multiple activity assignments and case studies. Thirty percent of the grade is based upon the exams. Forty percent is based on the comprehensive lean systems project plan. Grades are earned based on the General Grading Info and Criteria (see the Grading and Assignment Info section of the course).

This course module uses a web-based delivery method. The course module will consist of reading assignments, activity assignments, essays, and self-assessment quizzes. You are expected to spend the appropriate amount of time preparing for the assessments
.
You will know in advance the standards for each assignment. You are responsible for:
- Asking for help or clarification when needed
- Completing all course module deliverables
- Committing to a high level of professional development and learning

The grade for this course is based upon performance to a standard. Students are expected to put forth effort congruent with the highest standard. The grade is based upon your performance to a standard. The earned final grade is based on Overall Grading Criteria listed above. The final grade is per my discretion.

You are ultimately responsible for your learning. Those who take responsibility for their learning are generally more successful in the course module. Successful students are active learners who read the text, complete the assigned work, ask questions as needed, and participate fully in the course module.

Grading Criteria
There are five grade levels possible:

Mastery, A+, A, 100% – ≥ 90%
Demonstrates superior work performance and mastery of the subject content. The work/performance is commendable and demonstrates exceptional thinking and/or performance. The work or research exceeds expected requirements with substantial depth and efficiency. The work is highly organized, formatted correctly, and communicates effectively.

Competency, B+, B, <90% – ≥ 80%
Demonstrates a clear understanding of the subject content with no flaws. The work or research accomplishes the purpose of the task and identifies the most important ideas. The work is over and beyond the minimum requirements with depth. The work is organized, formatted correctly, and communicates effectively.

Minimal Competency, C+, C, < 80% – ≥ 70%
Performance at minimum standard. Work displays some understanding of major concepts. Main points of content are covered and required elements included, but the

work lacks competent professionalism.

Deficient, D, < 70% – ≥ 60%
Shows an incomplete understanding of the task/project. The purpose of the task or research was not accomplished. The work/performance is ineffectual or inappropriate. One or more important elements are omitted. The work is vague, incomplete, and incorrectly formatted. The presentation is so flawed that it obscures the meaning.

Unacceptable; Standard not yet met, F, < 60% – 0%
Significantly incomplete and/or deficient. Significant parts omitted or plagiarized. Work shows no understanding of the subject content. Important purpose of the task or research was not achieved. Work did not meet the minimum requirements. Work suggests incompetence.

Course Policies General

General communication and expectations. Students should work independently on assignments unless the instructor gives prior permission for collaboration. Students will communicate with the instructor using the learning management system Blackboard or other communication media such as e-mail, voicemail, or Skype. Access to a late-model computer with standard business software and an Internet connection is required.

This is a paperless course module. This course module and all associated communication within or as part of should adhere to the WKU Information Technology Acceptable Use Policy. All assignments and related documents will be submitted on-line via Blackboard. Students must make prior arrangements before submitting hard copy reports or papers. If you have problems transmitting information, telephone or e-mail immediately, and we'll get the problem solved.

Ground rules for communication
1. Use e-mail for private or personal messages to the instructor and questions regarding grades.
2. Please submit papers as text/word files (e.g., DOC, RTF, TXT, HTML, or PDF), PowerPoint files (e.g., PPT), or spreadsheet files (e.g., .XLS, WKS) uploaded to the Blackboard. Use other file formats at your own risk. If I can't read them, I can't grade them!
3. For **all** assignments that are uploaded to Blackboard, include your name at the top of the document AND as part of the **file name** (e.g., Doggett_Homework.doc). With NetID, your name is no longer associated with documents uploaded to Blackboard. Thus, when I download your file, I am no longer able see your name associated with the file. If you do not put your name at the top of the document, then go back to BB to locate it. This is time-consuming. It is much easier for you to simply put your name on the document and as part of the file name.

Important: Blackboard has a difficult time processing file sizes over 10 MB. If your file

does not upload correctly, you may need to change to a different file format that uses less memory!

Instructor availability. My availability during the week is from 8:00 AM to 5:00 PM CT M-F with limited availability on the weekends. Students may reasonably expect a response from me within 24 hours during the week, but not necessarily on the weekends.

Extra Credit. There is no extra credit work available. Additional work beyond what is assigned will not be considered.

Academic Honesty. All Western Kentucky University policies are in effect. All work must reflect APA citation standards. All your work must be your own, unless I authorize collaboration. Presenting the words, ideas, or expressions of another person in any form and claiming them as one's own is plagiarism and will not be tolerated. The claim of ignorance is no excuse. (See academic offenses in the WKU student handbook.) The University Catalog states, "Students who commit any act of academic dishonesty may receive from the instructor a failing grade in that portion of the coursework in which the act is detected or a failing grade in the course module without possibility of withdrawal."

Student Accessibility Resource Center. In compliance with university policy, students with disabilities who require academic and/or auxiliary accommodations for this course module must contact the Student Accessibility Resource Center at Downing Student Union, 1074. The phone number is 270.745.5004. Please do not request accommodations directly from the instructor without a letter of accommodation. This course module is complaint with the WKU standards for web accessibility.

Title IX Statement. Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholding WKU's Title IX Sexual Misconduct/Assault Policy (#0.2070) at
https://wku.edu/eoo/documents/titleix/wkutitleixpolicyandgrievanceprocedure.pdf and
 Discrimination and Harassment Policy (#0.2040) at
https://wku.edu/policies/hr_policies/2040_discrimination_harassment_policy.pdf

Add/Drop Policy. Students who have trouble working independently are encouraged to drop the course module. Please check On Demand's policy to drop a course as there are deadlines in place based on the day you registered for the course.