

COURSE APPROVAL DOCUMENT
Southeast Missouri State University

Department: Polytechnic Studies

Course No. IM405

Title of Course: Innovation for a Lean Enterprise

Date: 5/13/15

Please check: New
 Revision

I. Catalog Description (3 Credit Hours):

Modern operational strategies to achieve lean enterprise objectives are introduced. Pull system, cost reduction, and inventory management are included. (2 hours lecture, 2 hours lab)

II. Prerequisite(s): IM313 or IM302

III. Purposes or Objectives of the Course (optional):

This class will provide students with basic concepts of lean principles and how to apply them. Upon completion of the course students will be able to optimize operation processes by modeling the processes, incorporating advanced planning concepts, improving productivity and quality, eliminating bottlenecks and waste, incorporating advanced material and information flow concepts, and reducing work-in-process and lead time.

IV. Student Learning Outcomes (Minimum of 3):

1. Students will be able to design systems, components, or processes to meet desired technical, production, safety, or management criteria using creativity and critical thinking.
2. Students will be able to identify, analyze, and apply principles and tools of science, technology, engineering, and mathematics (STEM) to systematically solve discipline-related problems.
3. Students will be able to conduct experiments, analyze data, interpret data, and apply results to solve problems related to optimizing systems and processes.

V. Optional departmental/college requirements:

VI. Course Content or Outline (Indicate number of class hours per unit or section):

Topic	Hours
Introduction to Push/Pull System	4
5S	4
Kanban, JIT	4
Kanban, JIT	4
Value Stream Mapping and Cost Reduction	4
Value Stream Mapping and Cost Reduction	4
Flow Analysis	4
Flow Analysis/Mid-term	4
Logistics	4
Logistics	4
Area Allocation	4
Area Allocation	4
Inventory	4
Inventory	4
Lean Supply Chain	4

Please Attach copy of class syllabus and schedule as an example

Signature: _____
Chair

Date: _____

Signature: _____
Dean

Date: _____

Course Syllabus
Southeast Missouri State University
Department of Polytechnic Studies

Course Number: IM-405

Instructor:

Course Title: Innovation for a Lean Enterprise

Office: PB213D

Semester: Fall 2016

Office Hours: M: 1 pm ~ 2 pm, T: 2 pm ~ 4 pm

Time: 6:00 pm ~ 8:50 pm

Office Phone: 651-2650

Days: Tuesday

Email:

Location: PB204

Website: <https://learning.semo.edu>

I. Catalog Description and Credit Hours of Course:

Modern operational strategies to achieve lean enterprise objectives are introduced. Pull system, cost reduction, and inventory management are included. (3 credit hours, 2 hours lecture, 2 hours lab)

II. Prerequisites: IM313 or IM302

III. Purposes of the Course:

This class will provide students with basic concepts of lean principle and the way to apply them. Students will be able to: optimize the operation processes by modeling and advanced planning, improve the productivity and quality, eliminate bottleneck and waste, advance the material flow and information flow, and reduce work-in-process amount and lead time.

IV. Students Learning Outcomes:

1. Students will be able to demonstrate creativity and critical thinking in the design of systems, components, or processes to meet desired technical, production, safety, or management criteria.
2. Students will be able to identify, analyze, and apply principles and tools of science, technology, engineering, and mathematics (STEM) to systematically solve discipline related problems.
3. Students will be able to conduct experiments, analyze data, interpret and apply results to solve problems related to optimizing systems and processes.

V. Textbook:

Operations Management. By Jay Heizer and Barry Render, 10th Edition, Prentice Hall, 2011.
ISBN 10: 0-13-611941-7; ISBN 13: 978-0-13-611941-8.

VI. Evaluation Basis:

Homework/quiz	25%
Mid Term	30%
Project/Paper	20%
Final Exam	25%
Total	100%

Grading Policy:

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
< 70	F

VII. Method of Presentation:

This is lecture based class. However, instructor will use Moodle system to help delivering the class. In Moodle, students can find class reading materials, quiz (including video quiz)/lab/ homework/project assignments. The quiz (including video quiz)/lab/ homework/project assignments must be finished on time. No late work and make up are allowed in this class.

VIII. Course Content or Outline:

Week	Topics/Activity
1	Introduction to Push/Pull System
2	5S
3	Kanban, JIT
4	Kanban, JIT
5	Value Stream Mapping and Cost Reduction
6	Value Stream Mapping and Cost Reduction
7	Flow Analysis
8	Flow Analysis/Mid-term
9	Logistics
10	Logistics
11	Area Allocation
12	Area Allocation
13	Inventory
14	Inventory
15	Lean Supply Chain

Each week is 2 hours lecture and 2 hours lab.

IX. Student Expectations:

- A. Class attendance is strongly encouraged.
- B. Students are responsible for observing the class schedule and for completing all assignments on time.
- C. Students are responsible for knowing the information in the syllabus and for being noticed any changes announced by instructor.
- D. When emailing the instructor, please use SEMO student e-mail to communicate with instructor. Please identify yourself by **name** and the **class number with**

- section code** in subject line (for example, IM405 - 01).
- E. Be able to access the class web page to obtain class materials and necessary information, to watch video, and take online quiz and test, etc.
 - F. Turn off your cell phone. Keep the classroom clean. (This item may not apply to online class).

X. Academic Policy Statement:

Students will be expected to abide by the University Policy for Academic Honesty regarding plagiarism and academic honest. Refer to: <http://www.semo.edu/stuconduct> . Main quotation is as below: Academic dishonesty is an offense against Southeast Missouri State University. A student who has committed an act of dishonesty has failed to meet a basic requirement of satisfactory academic performance. This, academic dishonesty is **not** only a basis for disciplinary action, but is also relevant to the evaluation of the student's level of performance.

Academic honesty requires that students do not cheat, use another students work in the place of their own (Plagiarism), or knowingly assisting another to do so. Also, unauthorized access to or changing of grades on examination is unacceptable.

XI. Student with Disabilities Statement:

If a student has a special need addressed by the Americans with Disabilities Act (ADA) and requires materials in an alternative format; please notify the instructor at the beginning of the course. Reasonable efforts will be made to accommodate special needs.

XII. Civility and Harassment

The University strives to offer learning experiences and opportunities designed to help students think effectively, develop the capacity to communicate, discriminate among values, and make relevant judgments. A major determinant of a successful educational experience is a shared sense of respect among and between the students and their instructor. Mutual respect for all as well as a no tolerance policy on harassment of any kind is expected. Every student at Southeast is obligated at all times to assume responsibility for his/her actions, to respect constituted authority, to be truthful, and to respect the rights of others, as well as to respect private and public property.

XIII. Remarks

Please keep all materials and handouts in an organized folder. You are advised to finish assigned homework since it may be helpful in preparation for the tests. Copying other's lab reports or homework will be considered academic dishonesty and will be dealt with

accordingly.

Questions, comments or requests regarding this course or program should be taken to your instructor. Unanswered questions or unresolved issues involving this class may be taken to the department chair, Dr. Deken (651-2104).