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OFFICE OF THE SENATE COUNCIL

Course Information

Date Submitted: 8/28/2014

Current Prefix and Number: MFS - Mfg Systems Engineering , MFS 526 OPERATIONS MGMT IN LEAN MANUFACTURING

Other Course:

Proposed Prefix and Number: MFS 526

What type of change is being proposed?

Major Change

Should this course be a UK Core Course? No

1. General Information

a. Submitted by the College of: ENGINEERING

b. Department/Division: MECHANICAL ENGINEERING

c. Is there a change in 'ownership' of the course? No

If YES, what college/department will offer the course instead: Select...

e. Contact Person

Name: M Abbot Maginnis

Email: amaginnis@uky.edu

Phone: 257-4943

Responsible Faculty ID (if different from Contact)

Name:

Email:

Phone:

f. Requested Effective Date

Semester Following Approval: Yes OR Effective Semester:

2. Designation and Description of Proposed Course

a. Current Distance Learning (DL) Status: N/A

b. Full Title: OPERATIONS MANAGEMENT IN LEAN MANUFACTURING

Proposed Title: LEAN OPERATIONS MANAGEMENT

c. Current Transcript Title: OPERATIONS MGMT IN LEAN MANUFACTURING

Proposed Transcript Title: LEAN OPERATIONS MANAGEMENT

d. Current Cross-listing: none

Proposed – ADD Cross-listing : ME 526, EE 526

Proposed – REMOVE Cross-listing:

e. Current Meeting Patterns

LECTURE: 3

Proposed Meeting Patterns

LECTURE: 3

f. Current Grading System: ABC Letter Grade Scale

Proposed Grading System: *Letter (A, B, C, etc.)*

g. Current number of credit hours: 3

Proposed number of credit hours: 3

h. Currently, is this course repeatable for additional credit? No

Proposed to be repeatable for additional credit? No

If Yes: Maximum number of credit hours:

If Yes: Will this course allow multiple registrations during the same semester? No

2i. Current Course Description for Bulletin: Principles and practices of lean manufacturing operations management. The focus is on manufacturing as a sociotechnical system and how to limit variability through various methods of control of basic processes. Emphasis is on managing an effective and efficient technical system.

Proposed Course Description for Bulletin: This course will cover topics in basic lean system operations as well as the management system to support the attainment of highest customer satisfaction with respect to Safety, Quality, Cost, Productivity, Delivery and Human Resource Development. The instructional method employs discovery learning techniques and consists of in-class presentations with a focus on hands-on activities, and selected outside assignments to teach and demonstrate the development of a lean operations environment and the management system to support it. Working in teams, students apply fundamental lean tools and concepts to develop a lean operations environment capable of driving continuous improvement in a simulated factory. As the operational environment evolves, key management principles and tools are explored using the teachings of Taiichi Ohno and others considered to be the pillars of the Toyota Production System.

2j. Current Prerequisites, if any: Prereq: Enrollment restricted to junior-level or above students.

Proposed Prerequisites, if any: Prereq: Enrollment restricted to junior-level or above students.

2k. Current Supplementary Teaching Component:

Proposed Supplementary Teaching Component:

3. Currently, is this course taught off campus? No

Proposed to be taught off campus? No

If YES, enter the off campus address:

4. Are significant changes in content/student learning outcomes of the course being proposed? Yes

If YES, explain and offer brief rational: The content of the course has been updated from a theoretical basis to an operational one. Focus is on the development of a lean system in a hands-on simulated factory setting then developing the operational management system to control and improve processes. The majority of the course content has been developed as part of the Lean Systems Program public and private certification and dedicated courses, and associated research and faculty experience.

5a. Are there other depts. and/or pgms that could be affected by the proposed change? No

If YES, identify the depts. and/or pgms:

5b. Will modifying this course result in a new requirement of ANY program? No

If YES, list the program(s) here:

6. Check box if changed to 400G or 500: No

Distance Learning Form

Instructor Name:

Instructor Email:

Internet/Web-based: No

Interactive Video: No

Hybrid: No

1.How does this course provide for timely and appropriate interaction between students and faculty and among students? Does the course syllabus conform to University Senate Syllabus Guidelines, specifically the Distance Learning Considerations?

2.How do you ensure that the experience for a DL student is comparable to that of a classroom-based student's experience? Aspects to explore: textbooks, course goals, assessment of student learning outcomes, etc.

3.How is the integrity of student work ensured? Please speak to aspects such as password-protected course portals, proctors for exams at interactive video sites; academic offense policy; etc.

4.Will offering this course via DL result in at least 25% or at least 50% (based on total credit hours required for completion) of a degree program being offered via any form of DL, as defined above?

If yes, which percentage, and which program(s)?

5.How are students taking the course via DL assured of equivalent access to student services, similar to that of a student taking the class in a traditional classroom setting?

6.How do course requirements ensure that students make appropriate use of learning resources?

7.Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program.

8.How are students informed of procedures for resolving technical complaints? Does the syllabus list the entities available to offer technical help with the delivery and/or receipt of the course, such as the Information Technology Customer Service Center (http://www.uky.edu/UKIT/)?

9.Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)? NO

If no, explain how student enrolled in DL courses are able to use the technology employed, as well as how students will be provided with assistance in using said technology.

10.Does the syllabus contain all the required components? NO

11.I, the instructor of record, have read and understood all of the university-level statements regarding DL.

Instructor Name:

SIGNATURE|BJSTOK0|Barbara J Brandenburg|MFS 526 CHANGE College Review|20140505

SIGNATURE|BJSTOK0|Barbara J Brandenburg|MFS 526 CHANGE College Review|20141202

SIGNATURE|JMETT2|Joanie Ett-Mims|MFS 526 CHANGE Undergrad Council Review|20150501

SIGNATURE|BJSTOK0|Barbara J Brandenburg|MFS 526 ZCOURSE_CHANGE Approval Returned to College|20150505

SIGNATURE|JMETT2|Joanie Ett-Mims|MFS 526 CHANGE Undergrad Council Review|20150505

SIGNATURE|ZNNIKO0|Roshan Nikou|MFS 526 CHANGE Graduate Council Review|20150922

Course Change Form

https://myuk.uky.edu/sap/bc/soap/rfc?services=

Generate R

Open in full window to print or save

Attachments:

Browse... Upload File

	ID	Attachment
Delete	4215	MFS 526 UGC Review Checklist.docx
Delete	4979	2015-0504 rev 526 syllabus.docx

First 1 Last

NOTE: Start form entry by choosing the Current Prefix and Number
(*denotes required fields)

	Current Prefix and Number:	MFS - Mfg Systems Engineering / MFS 526 OPERATIONS MGMT IN LEAN MANUFACTURING	*Proposed Prefix & Number:* (example: PHY 401G) ☑ Check if **same** as current	MFS 526

*	What type of change is being proposed?	☑ Major Change ☐ Major – Add Distance Learning ☐ Minor - change in number within the same hundred series, ex 799 is the same "hundred series" ☐ Minor - editorial change in course title or description which do change in content or emphasis ☐ Minor - a change in prerequisite(s) which does not imply a ch course content or emphasis, or which is made necessary by the significant alteration of the prerequisite(s) ☐ Minor - a cross listing of a course as described above

Should this course be a UK Core Course? ○ Yes ◉ No

If YES, check the areas that apply:

☐ Inquiry - Arts & Creativity	☐ Composition & Communications - II
☐ Inquiry - Humanities	☐ Quantitative Foundations
☐ Inquiry - Nat/Math/Phys Sci	☐ Statistical Inferential Reasoning
☐ Inquiry - Social Sciences	☐ U.S. Citizenship, Community, Diversity
☐ Composition & Communications - I	☐ Global Dynamics

1. General Information

a.	Submitted by the College of:	ENGINEERING	Submission Date:	8/28/2014
b.	Department/Division:	MECHANICAL ENGINEERING		

c.* Is there a change in "ownership" of the course?

○ Yes ◉ No If YES, what college/department will offer the course instead? Select...

e.*	* Contact Person Name:	M Abbot Maginnis	Email: amaginnis@uky.edu	Phone: 257-4943
	* Responsible Faculty ID (if different from Contact)		Email:	Phone:

f.*	Requested Effective Date:	☑ Semester Following Approval	OR	Specific Term:

2. Designation and Description of Proposed Course.

a.	Current Distance Learning(DL) Status:	◉ N/A ○ Already approved for DL* ○ Please Add ○ Please Drop

*If already approved for DL, the Distance Learning Form must also be submitted unless the department affirms (by checking this box) that the proposed chang affect DL delivery.

b.	Full Title:	OPERATIONS MANAGEMENT IN LEAN MANUFACTURING	*Proposed Title*: *	LEAN OPERATIONS MANAGEMEI
c.	Current Transcript Title (if full title is more than 40 characters):		OPERATIONS MGMT IN LEAN MANUFACTURING	
c.	*Proposed Transcript Title (if full title is more than 40 characters)*:		LEAN OPERATIONS MANAGEMENT	
d.	Current Cross-listing:		OR	

	☐ N/A		Currently[3] Cross-listed with (Prefix & Number):	none	
	Proposed – ADD[3] Cross-listing (Prefix & Number):			ME 526, EE 526	
	Proposed – REMOVE [3,4] Cross-listing (Prefix & Number):				
e.	**Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours [5] for each meeting patterr**				
Current:	Lecture 3	Laboratory[5]	Recitation	Discussion	Indep. St
	Clinical	Colloquium	Practicum	Research	Residenc
	Seminar	Studio	Other	Please explain:	
*Proposed: **	Lecture 3	Laboratory[5]	Recitation	Discussion	Indep. St
	Clinical	Colloquium	Practicum	Research	Residenc
	Seminar	Studio	Other	Please explain:	
f.	**Current Grading System:**	ABC Letter Grade Scale			
	*Proposed Grading System:**	◉ *Letter (A, B, C, etc.)* ○ *Pass/Fail* ○ *Medicine Numeric Grade (Non-medical students will receive a letter grade)* ○ *Graduate School Grade Scale*			
g.	**Current number of credit hours:**	3		*Proposed number of credit hours:**	3
h.*	**Currently, is this course repeatable for additional credit?**				○ Yes ◉
*	*Proposed to be repeatable for additional credit?*				○ Yes ◉
	If YES:	*Maximum number of credit hours:*			
	If YES:	*Will this course allow multiple registrations during the same semester?*			○ Yes ○

i. **Current Course Description for Bulletin:**

Principles and practices of lean manufacturing operations management. The focus is on manufacturing as a sociotechnical system and how to limit variability through various methods of control of basic processes. Emphasis i on managing an effective and efficient technical system.

* *Proposed Course Description for Bulletin:*

This course will cover topics in basic lean system operations as well as the management system to support the attainment of highest customer satisfaction with respect to Safety, Quality, Cost, Productivity, Delivery and Human Resource Development. The instructional method employs discovery learning techniques and consists of in-class presentations with a focus on hands-on activities, and selected outside assignments to teach and demonstrate the development of a lean operations environment and the management system to support it. Working in teams, students apply fundamental lean tools and concepts to develop a lean operations environment capable of driving continuous improvement in a simulated factory. As the operational environment evolves, key management principles and tools ar explored using the teachings of Taiichi Ohno and others considered to be the pillars of the Toyota Production System.

j. **Current Prerequisites, if any:**

Prereq: Enrollment restricted to junior-level or above students.

* *Proposed Prerequisites, if any:*

Prereq: Enrollment restricted to junior-level or above students.

*

k. **Current Supplementary Teaching Component, if any:** ○ Community-Based Experience

		○ Service Learning ○ Both
	Proposed Supplementary Teaching Component:	○ Community-Based Experience ○ Service Learning ○ Both ○ No Change
3.	**Currently, is this course taught off campus?**	○ Yes ◉
*	*Proposed to be taught off campus?*	○ Yes ◉
	If YES, enter the off campus address:	
4.*	**Are significant changes in content/student learning outcomes of the course being proposed?**	◉ Yes ○
	If YES, explain and offer brief rationale:	
	The content of the course has been updated from a theoretical basis to an operational one. Focus is on the development of a lean system in a hands-on simulated factory setting then developing the operational management syst to control and improve processes. The majority of the course content has been developed as part of the Lean Systems Program public and private certification and dedicated courses, and associated research and faculty experience.	
5.	**Course Relationship to Program(s).**	
a.*	**Are there other depts and/or pgms that could be affected by the proposed change?**	○ Yes ◉
	If YES, identify the depts. and/or pgms:	
b.*	**Will modifying this course result in a new requirement[Z] for ANY program?**	○ Yes ◉
	If YES[Z], list the program(s) here:	
6.	**Information to be Placed on Syllabus.**	
a.	☐ Check box if changed to 400G or 500.	If changed to 400G- or 500-level course you must send in a syllabus and *you must include the differentiation* between undei graduate students by: (i) requiring additional assignments by the graduate students; and/or (ii) establishing different grading course for graduate students. (See *SR 3.1.4.*)

[11]See comment description regarding minor course change. *Minor changes are sent directly from dean's office to Senate Council Chair.* If Chair deems the change as "not minor," the form will b appropriate academic Council for normal processing and contact person is informed.
[12]Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.
[13] Signature of the chair of the cross-listing department is required on the Signature Routing Log.
[14] Removing a cross-listing does not drop the other course – it merely unlinks the two courses.
[15] Generally, undergrad courses are developed such that one semester hr of credit represents 1 hr of classroom meeting per wk for a semester, exclusive of any lab meeting. Lab meeting gene least two hrs per wk for a semester for 1 credit hour. (See *SR 5.2.1.*)
[16] You must *also* submit the Distance Learning Form in order for the course to be considered for DL delivery.
[17]In order to change a program, a program change form must also be submitted.

Course: MFS 526 **University Senate Syllabi Guidelines Review Checklist**

General Course Information

- ☒ **Full and accurate title of the course**
- ☐ Departmental and college prefix
- ☒ **Course prefix, number and section number**
- ☐ **Scheduled meeting day(s), time and place**

Instructor Contact Information (if specific details are unknown, "TBA" is acceptable for one or more fields)

- ☒ **Instructor name**
- ☐ Contact information for teaching/graduate assistant, etc.
- ☐ Preferred method for reaching instructor
- ☒ Office phone number
- ☒ **Office address**
- ☒ **UK email address**
- ☒ **Times of regularly scheduled office hours and if prior appointment is required**

Course Description

- ☒ **Reasonably detailed overview of the course (course description should match on syllabus and eCATS form)**
- ☒ **Prerequisites, if any (should match on syllabus and eCATS form)**
- ☒ **Student learning outcomes**
- ☐ Course goals/objectives
- ☒ Required materials (textbook, lab materials, etc.)
- ☒ Outline of the content, which must conform to the Bulletin description
- ☒ **Summary description of the components that contribute to the determination of course grade**
- ☒ **Tentative course schedule that clarifies topics, specifies assignment due dates, examination date(s)**
- ☒ **Final examination information: date, time, duration and location**
- ☒ **For 100-, 200-, 300-, 400-, 400G- and 500-level courses, numerical grading scale and relationship to letter grades for undergraduate students**
- ☒ **For 400G-, 500-, 600- and 700-level courses, numerical grading scale and relationship to letter grades for graduate students. (Graduate students cannot receive a "D" grade.)**
- ☒ **Relative value given to each activity in the calculation of course grades (Midterm=30%; Term Project=20%, etc.)**
- ☒ **Note that undergraduate students will be provided with a Midterm Evaluation (by the midterm date) of course performance based on criteria in syllabus**
- ☒ **Policy on academic accommodations due to disability. Standard language is below:**

  If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

Course Policies

- ☒ **Attendance**
- ☒ **Excused absences**
- ☐ **Make-up opportunities**
- ☒ Verification of absences
- ☒ Submission of assignments
- ☒ **Academic integrity, cheating & plagiarism**
- ☒ Classroom behavior, decorum and civility
- ☐ Professional preparations
- ☐ Group work & student collaboration

UGE Review ( )

Add make-up policy for missed work with an excused absence (may want to clarify under Submission of Assignments policy)

Did he mean to include Bloom's Taxonomy at the end of the syllabus?

Committee Review ( )

Comments

MFS 526
Lean Operations Management

Instructor: Dr. M. A, Maginnis
Office Address: 210B CRMS Bldg
Email: amaginnis@uky.edu
Office Phone: 257-4943

Office hours: Open door policy or by appt

Course Description:

This course will cover topics in basic lean system operations as well as the management system to support the attainment of highest customer satisfaction with respect to Safety, Quality, Cost, Productivity, Delivery and Human Resource Development. The instructional method employs discovery learning techniques and consists of in-class presentations with a focus on hands-on activities, and selected outside assignments to teach and demonstrate the development of a lean operations environment and the management system to support it. Working in teams, students apply fundamental lean tools and concepts to develop a lean operations environment capable of driving continuous improvement in a simulated factory. As the operational environment evolves, key management principles and tools are explored using the teachings of Taiichi Ohno and others considered to be the pillars of the Toyota Production System.

Prerequisites:

Enrollment restricted to junior-level or above students.

Student Learning Outcomes:

Upon completion of this course, you will:

1. Apply fundamental elements of a lean system to a simulated production system.
2. Demonstrate the use of operational roles capable of supporting a true Lean system.
3. Explain the use of the Key Performance Indicator (KPI) structure to support lean operations.
4. Create the management system needed to support a continuous improvement and learning rich operational environment.

Required Materials:

Text: *Seeds of Collaboration; Seeking the Essence of the Toyota Production System*, edited by Akinori Saito and Kozo Saito, University of Kentucky & Larkspur Press, 2011. Other reading material provided as needed.

Description of Course Activities and Assignments

Lean operations management requires a production system consisting of basic lean components such as 5S and standard work as well as the capability to perform systematic problem solving. Therefore the class will cover the development of a unique production system and the management system to effectively operate it. This will be done using a team approach in which teams of approximately 6-10 students will develop their unique paper-based (made from index cards) products as well their own initial production system as the baseline condition. During the semester selected lean tools will be introduced and applied to the system. Once the basic components and tools for a lean production system are in place the management system will be evolved and systematic problem solving will be conducted to help demonstrate the model of continuous learning and improvement which are hallmarks of a true lean system.

Student activities will include customizing three standard products and creating the initial production system to produce it. Over the course of the semester students will be assigned to write a series of short reflections (3 page minimum) of selected concepts and components introduced and explored during class. This will be followed by a brief review and discussion at the beginning of the next class before proceeding to a new topic. Hands-on weekly participation in the development of their production system and mid-term and final exam are also expected. Graduate students will be assigned team leader roles and expected to create a final 10-12 page report on the development and performance of their respective teams' production systems.

Course Assignments

All students

-Thirteen 3- page minimum Reflection & Reports (R&Rs), 12 pt font, 1.5 spaced, w/ references (ADA style) ---20 points each (260 pts)
- Complete M&I & P/S case studies (50 pts/each=100 pts)
-One take home mid-term exam (100 pts)
-One take home final exam (100 pts)
-Pass mid & final semester peer assessments (50 pts/each=100 pts)
-Attendance; 10 pts/class (150 pts)
-Team Production System (15'ppt) (50 pts)

Maximum pts = 860

Grad students only

- Three 5'- 10' minute power points covering selected topics (see schedule) (50 pts/each=150 pts)
- One 10-15 page (1.5 spaced) report describing the development and performance of their team's final production system (100 pts)
- Each team leader is responsible for their team's successful execution of their weekly production development goals & Production ppt (25/week = 300 pts)

Maximum pts = 1410

Summary Description of Course Assignments

- All R&Rs are due the following week. They will be a minimum of three pages (not including reference page) and consist of 1.5 spaced, 12 pt Times New Roman or Cambria font. Each R&R should also include any references made using the ADA style. The R&R topics will be selected based on the material covered in class and from the text *(Seeds of Collaboration; Seeking the Essence of the Toyota Production System).*

- The final team Production System power point will the result of collaborative work within their teams and describe their production system including but not limited to; the layout(s) , M&I(s), KPIs, Yamazumi, run charts and other performance data from each run as the system developed. Include a conclusion section outlining the learning points their team experienced during their system's development.

- Graduate students are responsible for ensuring the weekly in-class activities are performed and are good quality

Grading scale for undergraduates:

90 – 100% = A
80-89% = B
70-79% = C
60-69% = D
<60% = E

Grading scale for graduate students (no D for Grad Students):

90-100% = A
82 – 89% = B
74-81% = C
<74% = E

Final Exam Information

The mid-term and final exams are take homes for this class

Mid-term Grade

Mid-term grades will be posted in myUK by the deadline established in the Academic Calendar (http://www.uky.edu/Registrar/AcademicCalendar.htm)

Course Policies:

Submission of Assignments:

Assignments are due on the announced due date unless excused by the instructor.

Make-up Policy:

Students have one week from the date of an excused absence to contact the instructor for specific instructions.

Attendance Policy.
Regular attendance is expected. Unexcused absences will impact final grade

Excused Absences
Students need to notify the professor of absences prior to class when possible. S.R. 5.2.4.2 defines the following as acceptable reasons for excused absences: (a) serious illness, (b) illness or death of family member, (c) University-related trips, (d) major religious holidays, and (e) other circumstances found to fit "reasonable cause for nonattendance" by the professor.

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. Jake Karnes (859-257-2754).

Students are expected to withdraw from the class if more than 20% of the classes scheduled for the semester are missed (excused or unexcused) per university policy.

Verification of Absences
Students may be asked to verify their absences in order for them to be considered excused. Senate Rule 5.2.4.2 states that faculty have the right to request "appropriate verification" when students claim an excused absence because of illness or death in the family. Appropriate notification of absences due to university-related trips is required prior to the absence.

Academic Integrity
Per university policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the university may be imposed.

Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following website: http://www.uky.edu/Ombud. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited.

Part II of *Student Rights and Responsibilities* (available online http://www.uky.edu/StudentAffairs/Code/part2.html) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about the question of plagiarism involving their own work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgement of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be a published article, chapter of a book, a paper from a friend or some file, or something similar to this. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be.

Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources of information, the student must carefully acknowledge exactly what, where and how he/she employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain (Section 6.3.1).

Please note: Any assignment you turn in may be submitted to an electronic database to check for plagiarism.

Accommodations due to disability

If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address: jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

Classroom Behavior Policies

During class all cell phones will be turned off , treat your team mates and fellow classmates respectfully, and participate in a positive manner to team activities

Tentative Course Schedule

Lean Operations Management	
ME/EE/MFS 599-699	
Class #	**Topic & Activities**
1	Intro to class, Intro to True Lean, expectations
2	Introduce products (R,G,B), demand, factory and SOPs,
	Practice making products (Run 1)
3	Review/Summarize 5S, Waste and VM in factory--Implement
	R2 w/yamazumi chart
4	Quality & KPIs
	Process vs Result KPIs--Create KPI chart
5	Standardized work -- Create STW each process
	Roles to support STW, R3 w/ yamazumi & TL tracking
6	M&I--Teams create M&I and report out, Demo PULL
	HW: M&I case study
7	Set-up PULL in factories & Run (R4)
	Update 5S, VM & STW
8	Small Lot Production & Production Leveling (Heijunka)--
	R5--prep for P/S **Hand out Mid-Term Exam**
9	Problem Solving for Continuous Improvement
	Requirements for effective P/S **Mid-Term Exam Due**
Spring Break	
10	People Side of Lean
11	Systematic Problem Solving Exercise (P/S Steps 1-3)
12	Systematic Problem Solving Exercise (P/S Steps 4 & 5)
13	Systematic Problem Solving Exercise (P/S Steps 6-8)
14	Managing Kaizen (Y-chart & KPIs), Wrap-up & Reflections
15	Grad Student/Team ppt Presentations / **Handout Final Exam**
16	**Final Exam Due**