

Course Information*Revised
10/7/15*

Date Submitted: 12/8/2014

Current Prefix and Number: MFS - Mfg Systems Engineering , MFS 505 MODELING MANUFACTRNG PROCESSES &MACHINES

Other Course:

Proposed Prefix and Number: MFS 505

What type of change is being proposed?

Major – Add Distance Learning

Should this course be a UK Core Course? No

1. General Information

a. Submitted by the College of: ENGINEERING

b. Department/Division: 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: Fazleena Badurdeen

Email: badurdeen@engr.uky.edu

Phone: 323-3252

Responsible Faculty ID (if different from Contact)

Name:

Email:

Phone:

f. Requested Effective Date

Semester Following Approval: No OR Effective Semester: Spring 2015

2. Designation and Description of Proposed Course

a. Current Distance Learning (DL) Status: Please Add

b. Full Title: MODELING OF MANUFACTURING PROCESSES AND MACHINES

Proposed Title: MODELING OF MANUFACTURING PROCESSES AND MACHINES

c. Current Transcript Title: MODELING MANUFACTRNG PROCESSES &MACHINES

Proposed Transcript Title: MODELING MANUFACTRNG PROCESSES &MACHINES

d. Current Cross-listing: Same as ME 505

Proposed – ADD Cross-listing :

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: A study of the major manufacturing processes and equipment. Emphasis on mathematical and computer models of these processes, as used in automated manufacturing and control of these processes. Lecture, two hours; laboratory, two hours.

Proposed Course Description for Bulletin: This course is aimed at providing the undergraduate and graduate students in mechanical and manufacturing engineering basic knowledge and understanding of the major manufacturing processes for modeling, monitoring and control of these processes through a series of analytical and experimental techniques and tools, including group work for assignments and experiments.

2j. Current Prerequisites, if any: Prereq: EM 302, EM 313, and engineering standing; or graduate standing with instructor consent.

Proposed Prerequisites, if any:

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? No

If YES, explain and offer brief rationale:

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: Fazleena Badurdeen

Instructor Email: badurdeen@engr.uky.edu

Internet/Web-based: Yes

Interactive Video: Yes

Hybrid: Yes

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? The course syllabus conforms to University Senate Syllabus Guidelines, specifically the Distance Learning Considerations. The use of Blackboard, email, and web-conferencing provides for timely and appropriate interaction between students and faculty.

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. Student learning outcomes are assessed for all sections of the course, along with the usual TCE evaluations.

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. Standard university policy will be followed in all academic aspects, and all quizzes and exams will be proctored on-site.

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? Yes.

If yes, which percentage, and which program(s)? 100%; Manufacturing Systems Engineering MS Program

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? Access to student services will be the same as for other web-based courses in the University.

6. How do course requirements ensure that students make appropriate use of learning resources? Students will be required to access resources on-line using venues such as Blackboard

7. Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program. Activities will be designed as web-based interactive games/simulations and posted on Blackboard for student access. A residency requirement is included where students will come to the central campus, from Wednesday through Saturday once during the semester, to complete capstone simulation. This will be scheduled to fall towards the end of the course.

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/>)? Syllabus provides this access information.

9. Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)? YES

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. N/A

10. Does the syllabus contain all the required components? YES

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

Instructor Name: Fazleena Badurdeen

SIGNATURE|STEPHEN|L S Stephens|MFS 505 CHANGE Cross-List Chair Review|20141211

SIGNATURE|BJSTOK0|Barbara J Brandenburg|MFS 505 CHANGE College Review|20150313

SIGNATURE|JMETT2|Joanie Ett-Mims|MFS 505 CHANGE Undergrad Council Review|20150707

SIGNATURE|ZNNIKO0|Roshan Nikou|MFS 505 CHANGE Graduate Council Review|20150922

SIGNATURE|JEL224|Janie S Ellis|MFS 505 CHANGE Senate Council Review|20150928

SIGNATURE|BJSTOK0|Barbara J Brandenburg|MFS 505 CHANGE Approval Returned to College|20151007

Course Change Form

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

Open in full window to print or save

Generate R

Attachments:

Browse...

Upload File

ID	Attachment
Delete:4174	Change Justification.docx
Delete:4791	MFS 505 UGC Review Checklist.docx
Delete:5499	ME-MFS 505 Revised Syllabus 10_5_15.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 505 MODELING MANUFACTRNG PROCESSES &MACHINES	Proposed Prefix & Number: (example: PHY 401G) <input type="checkbox"/> Check if same as current	MFS 505
* What type of change is being proposed?		<input type="checkbox"/> Major Change <input checked="" type="checkbox"/> Major - Add Distance Learning <input type="checkbox"/> Minor - change in number within the same hundred series, exceptio the same "hundred series" <input type="checkbox"/> Minor - editorial change in course title or description which does not in content or emphasis <input type="checkbox"/> Minor - a change in prerequisite(s) which does not imply a change i content or emphasis, or which is made necessary by the elimination or alteration of the prerequisite(s) <input type="checkbox"/> Minor - a cross listing of a course as described above		
Should this course be a UK Core Course? <input type="radio"/> Yes <input checked="" type="radio"/> No				
If YES, check the areas that apply:				
<input type="checkbox"/> Inquiry - Arts & Creativity <input type="checkbox"/> Composition & Communications - II <input type="checkbox"/> Inquiry - Humanities <input type="checkbox"/> Quantitative Foundations <input type="checkbox"/> Inquiry - Nat/Math/Phys Sci <input type="checkbox"/> Statistical Inferential Reasoning <input type="checkbox"/> Inquiry - Social Sciences <input type="checkbox"/> U.S. Citizenship, Community, Diversity <input type="checkbox"/> Composition & Communications - I <input type="checkbox"/> Global Dynamics				
1. General Information				
a. Submitted by the College of:		ENGINEERING	Submission Date: 12/8/2014	
b. Department/Division:		Engineering		
c.* Is there a change in "ownership" of the course?				
<input type="radio"/> Yes <input checked="" type="radio"/> No If YES, what college/department will offer the course instead? Select...				
e.* Contact Person Name:		Fazleena Badurdeen	Email: badurdeen@enr.uky.ed	Phone: 323-3252
* Responsible Faculty ID (if different from Contact)			Email:	Phone:
f.* Requested Effective Date:		<input type="checkbox"/> Semester Following Approval	OR	Specific Term: ² Spring 2015
2. Designation and Description of Proposed Course.				
a. Current Distance Learning(DL) Status:		<input type="radio"/> N/A <input type="radio"/> Already approved for DL* <input checked="" type="radio"/> Please Add <input type="radio"/> Please Drop		
*If already approved for DL, the Distance Learning Form must also be submitted unless the department affirms (by checking this box) that proposed changes do not affect DL delivery.				
b. Full Title:		MODELING OF MANUFACTURING PROCESSES AND MACHINES	Proposed Title: *	MODELING OF MANUFACTURING PROCESSES AND MACHINES
c. Current Transcript Title (if full title is more than 40 characters):			MODELING MANUFACTRNG PROCESSES &MACHINES	
c. Proposed Transcript Title (if full title is more than 40 characters):			MODELING MANUFACTRNG PROCESSES &MACHINES	

d.	Current Cross-listing: <input type="checkbox"/> N/A	OR	Currently ² Cross-listed with (Prefix & Number):	Same as	
	Proposed – ADD ² Cross-listing (Prefix & Number):				
	Proposed – REMOVE ^{2,4} Cross-listing (Prefix & Number):				
e.	Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours ² for each meeting pattern type.				
Current:	Lecture 3	Laboratory ²	Recitation	Discussion	Indep. Stu
	Clinical	Colloquium	Practicum	Research	Residency
	Seminar	Studio	Other Please explain:		
Proposed: *	Lecture 3	Laboratory ²	Recitation	Discussion	Indep. Stu
	Clinical	Colloquium	Practicum	Research	Residency
	Seminar	Studio	Other Please explain:		
f.	Current Grading System:	ABC Letter Grade Scale			
	Proposed Grading System:*	<input checked="" type="radio"/> Letter (A, B, C, etc.) <input type="radio"/> Pass/Fail <input type="radio"/> Medicine Numeric Grade (Non-medical students will receive a letter grade) <input type="radio"/> 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?			<input checked="" type="radio"/> Yes <input type="radio"/> No	
*	Proposed to be repeatable for additional credit?			<input type="radio"/> Yes <input checked="" type="radio"/> No	
	If YES:	Maximum number of credit hours:			
	If YES:	Will this course allow multiple registrations during the same semester?		<input type="radio"/> Yes <input checked="" type="radio"/> No	
i.	Current Course Description for Bulletin:				
	A study of the major manufacturing processes and equipment. Emphasis on mathematical and computer models of these processes, as used in automated manufacturing and control of these processes. Lecture, two hours; laboratory, two hou				
*	Proposed Course Description for Bulletin:				
	This course is aimed at providing the undergraduate and graduate students in mechanical and manufacturing engineering basic knowledge and understanding of the major manufacturing processes for modeling, monitoring and control of these processes through a series of analytical and experimental techniques and tools, including group work for assignments and experiments.				
j.	Current Prerequisites, if any:				
	Prereq: EM 302, EM 313, and engineering standing; or graduate standing with instructor consent.				
*	Proposed Prerequisites, if any:				
*					
k.	Current Supplementary Teaching Component, if any:			<input type="radio"/> Community-Based Experience <input type="radio"/> Service Learning	

	<input type="radio"/> Both <input type="radio"/> Community-Based Experience <input type="radio"/> Service Learning <input type="radio"/> Both <input type="radio"/> No Change
Proposed Supplementary Teaching Component:	
3. Currently, is this course taught off campus?	<input type="radio"/> Yes <input checked="" type="radio"/>
* Proposed to be taught off campus?	<input type="radio"/> Yes <input checked="" type="radio"/>
If YES, enter the off campus address:	
4.* Are significant changes in content/student learning outcomes of the course being proposed?	<input type="radio"/> Yes <input checked="" type="radio"/>
If YES, explain and offer brief rationale:	
5. Course Relationship to Program(s).	
a.* Are there other depts and/or pgms that could be affected by the proposed change?	<input type="radio"/> Yes <input checked="" type="radio"/>
If YES, identify the depts. and/or pgms:	
b.* Will modifying this course result in a new requirement ² for ANY program?	<input type="radio"/> Yes <input checked="" type="radio"/>
If YES ² , list the program(s) here:	
6. Information to be Placed on Syllabus.	
a. <input type="checkbox"/> 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 undergraduate and graduate students by: (i) requiring additional assignments by the graduate students; and establishing different grading criteria in the course for graduate students. (See SR 3.1.4.)

Distance Learning Form

This form must accompany every submission of a new/change course form that requests distance learning delivery. This form may be required when changing a course already approved for fields are required!

Introduction/Definition: For the purposes of the Commission on Colleges Southern Association of Colleges and Schools accreditation review, *distance learning* is defined as educational process in which the majority of the instruction (interaction between students and instructors and among students) in a course occurs when students and instructor are not in the same place. Instruction may be synchronous or asynchronous. A distance learning (DL) course may employ correspondence study, or audio, video, or computer technology.

A number of specific requirements are listed for DL courses. **The department proposing the change in delivery method is responsible for ensuring that the requirements are satisfied at the individual course level.** It is the responsibility of the instructor to have read and understood the university-level assurances regarding an equivalent DL students utilizing DL (available at <http://www.uky.edu/USC/New/forms.htm>).

Course Number and Prefix:	ME/MFS 505	Date:	12/8/2014
Instructor Name:	Fazleena Badurdeen	Instructor Email:	badurdeen@enr.uky.edu
Check the method below that best reflects how the majority of the course content will be delivered.			
<input checked="" type="checkbox"/> Internet/Web-based <input checked="" type="checkbox"/> Interactive Video <input checked="" type="checkbox"/> Hybrid			

Curriculum and Instruction

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 Syllabus Guidelines, specifically the Distance Learning Considerations?

The course syllabus conforms to University Senate Syllabus Guidelines, specifically the Distance Learning Considerations. The use of Blackboard, email, and web-conferencing provides for timely and appropriate interaction

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 go assessment of student learning outcomes, etc.

Student learning outcomes are assessed for all sections of the course, along with the usual TCE evaluations.

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; acad policy; etc.

Standard university policy will be followed in all academic aspects, and all quizzes and exams will be proctored on site.

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 as defined above?

Yes.

Which percentage, and which program(s)?

100%; Manufacturing Systems Engineering MS Program

*As a general rule, if approval of a course for DL delivery results in 50% or more of a program being delivered through DL, the effective date of the course's DL deli months from the date of approval.

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 se

Access to student services will be the same as for other web-based courses in the University.

Library and Learning Resources

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

Students will be required to access resources on-line using venues such as Blackboard

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

Activities will be designed as web-based interactive games/simulations and posted on Blackboard for student access
A residency requirement is included where students will come to the central campus, from Wednesday through Saturda

Student Services

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/ the course, such as the Information Technology Customer Service Center (<http://www.uky.edu/UKIT/>)?

Syllabus provides this access information.

9. Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)?

Yes

No

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

N/A

10. Does the syllabus contain all the required components, below? Yes

- Instructor's *virtual* office hours, if any.
- The technological requirements for the course.
- Contact information for Distance Learning programs (<http://www.uky.edu/DistanceLearning/>) and Information Technology Customer Service Center (<http://www.uky.edu/UKIT/Help/>; 859-218-HELP).
- Procedure for resolving technical complaints.
- Preferred method for reaching instructor, e.g. email, phone, text message.
- Maximum timeframe for responding to student communications.
- Language pertaining academic accommodations:
 - "If you have a documented disability that requires academic accommodations in this course, please make your request to the University Disability Res The Center will require current disability documentation. When accommodations are approved, the Center will provide me with a Letter of Accommod details the recommended accommodations. Contact the Disability Resource Center, Jake Karnes, Director at 859-257-2754 or jkarnes@email.uky.edu
- Specific dates of face-to-face or synchronous class meetings, if any.
- Information on Distance Learning Library Services (<http://www.uky.edu/Libraries/DLIS/>)
 - Carla Cantagallo, DL Librarian
 - Local phone number: 859 257-0500, ext. 2171; long-distance phone number: (800) 828-0439 (option #6)
 - Email: dliservice@email.uky.edu
 - DL Interlibrary Loan Service: http://www.uky.edu/Libraries/libpage.php?lweb_id=253&lib_id=16

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

Instructor Name:

Fazleena Badurdeen

Abbreviations: DLP = Distance Learning Programs ATG = Academic Technology Group Customer Service Center = 859-218-HELP (<http://www.uky.edu/UKIT/Help>)

Revised 8/09

- ¹¹See 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 "n form will be sent to appropriate academic Council for normal processing and contact person is informed.
- ¹²Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.
- ¹³Signature of the chair of the cross-listing department is required on the Signature Routing Log.
- ¹⁴Removing a cross-listing does not drop the other course - it merely unlinks the two courses.
- ¹⁵Generally, 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 generally represents at least two hrs per wk for a semester for 1 credit hour. (See *SR 5.2.1.*)
- ¹⁶You must *also* submit the Distance Learning Form in order for the course to be considered for DL delivery.
- ¹⁷In order to change a program, a program change form must also be submitted.

'The MFS 505 course is one of the core courses for the Manufacturing Systems Engineering MS degree that is being converted for online delivery. The primary change in this syllabus is to adding the distance learning aspect to enable delivering this course online starting Fall 2015'.

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.

UGE Review ()

Prerequisites should match on syllabus and eCATS form

Revise Make-Up Policy - students with an excused absence do not have to contact instructor in advance, except for major religious holidays

May want to clarify if meetings are synchronous or asynchronous (if synchronous, is there an attendance policy?)

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

Committee Review ()

Comments

ME 505/MFS 505 MODELING OF MANUFACTURING PROCESSES

Fall 2015

Course Description:

This course is aimed at providing the undergraduate and graduate students in mechanical and manufacturing engineering basic knowledge and understanding of the major manufacturing processes for modeling, monitoring and control of these processes through a series of analytical and experimental techniques and tools, including group work for assignments and experiments.

Prerequisites: EM 302 Mechanics of Deformable Solids
EM 313 Dynamics
Engineering Standing
Or
Graduate standing with instructor consent

Credits: 3

Instructor: I. S. Jawahir, Room 414B, CRMS Building
Phone: (859) 323-3239 (Work)
E-mail: is.jawahir@uky.edu
Virtual Office: <https://connect.uky.edu/xxxxxxxxx/>
Virtual office hours: Thursday 5-6 pm

Teaching Assistant: Bo Huang, Room 414O, CRMS Building
Phone: (859) 323-3256 (Work)
E-mail: Bo Huang bo.huang@uky.edu

Student Learning Outcomes:

Upon completion of this course, the students should be able to

1. Understand the complex manufacturing processes in terms of relevant input variables and the most desirable outputs, and then model the processes for improved productivity, enhanced product quality and reduced production cost
2. Evaluate and decide on various manufacturing options for achieving the production objectives within the constraints
3. Experimentally validate the modeling outcomes for applications
4. Monitor and implement product/process quality in component manufacturing
5. Work in teams/groups for developing suitable solutions to production issues including product/process quality
6. Develop skills and techniques for technical writing and documentation of project findings

Canvas Access:

This course will use Canvas (<http://canvas.instructure.com>) as a Learning Management System (LMS). An invitation will be sent to you through your UK email address including a link to join the online course shell. You will be prompted to sign in with your LinkBlue Id and Password. Be sure to verify access during the first week of the semester. Canvas will be used to communicate course content, announcements, exam grades, etc.

Course Outline:

	Introduction to Manufacturing Processes	1 Week
Module 1:	Bulk Deformation Processes <ul style="list-style-type: none">• Fundamental Material Properties• Deformation Processing Principles• Modeling and Analysis of Forging, Drawing and Rolling Processes	3 Weeks
Module 2:	Sheet Metalworking Processes <ul style="list-style-type: none">• Modeling and Analysis of Shearing and Bending Processes• Forming Limit Diagrams• Drawing and Deep Drawing Processes• Other Processes	1 Week
Module 3:	Machining Processes <ul style="list-style-type: none">• Metal Cutting Theory• Basic Metal Cutting Models• Stress Distributions in Machining• Temperature Analysis in Metal Cutting• Machinability and Machining Performance Factors• Selection and Application of Cutting Tools• Tool Wear and Tool-life• Fundamentals of Machining Economics• Cutting Fluids• Surface Finish• Chip Control	(Assignment 1) 6 Weeks
Module 4:	Quality Control in Manufacturing <ul style="list-style-type: none">• Fundamental of Statistical Quality Control• Control Charts• CMM-based Quality Assessments• Geometric Dimensioning and Tolerancing	(Assignment 2) 2 Weeks

Textbook: John A. Schey
Introduction to Manufacturing Processes
3rd Edition, McGraw Hill, 2000.

Reference Books/Material:

1. G. Boothroyd and W. A. Knight

Fundamentals of Machining and Machine Tools
Second Edition, CRC Press, 2006.

2. S. Kalpakjian and R. Schmid
Manufacturing Processes for Engineering Materials
Fourth Edition, Addison-Wesley Publishing Co., 2006.
3. George Tlusty
Manufacturing Processes and Equipment
Prentice Hall Publishers, 2000.
4. D. A. Stephenson and J.S. Agapiou
Metal Cutting Theory and Practice
CRC Press, 2006
5. E. J. A. Armarego and R. H. Brown.
The Machining of Metals
Prentice-Hall, Inc., Englewood Cliffs, NJ, 1969.
6. I.S. Jawahir
Course Notes on
Module 3: Machining Processes
Module 4: Quality Control in Manufacturing
Other selected topics

Assessment:	2 Tests (Week 6 and Week 11)	40%
	Final Exam	30%
	2 Homework Assignments (Due in Week 7 and Week 12)	15%
	2 Lab Reports (Due in Week 8 and Week 10)	15%

**Additional questions/assignments will be given for students taking this course for graduate credit.*

Materials and Technology Requirements for Distance Learning:

Access to a scanner for homework submissions is required when needed. Web cam and microphone are recommended for online interactions. For additional information regarding technical requirements and Distance Learning Library Services go to <http://www.uky.edu/Libraries/DLLS>. You can also contact Carla Cantagallo, DL Librarian through phone (859-257-0500 ext. 2171 or long-distance phone number: 800-828-0439) or email (dllservice@email.uky.edu).

Homework Assignments:

Homework must be submitted electronically through Canvas. All grades for the homework assignments will be posted on Canvas. All homework submitted on Canvas must be completed on white paper (lined notebook paper or white printer paper), scanned and submitted in pdf format. You can also use MS Word, MS PowerPoint, MS Excel, etc., to provide answers to the

homework. Any equations and computations should be clearly written and scanned or typed with an equation editor. All the documents for an assignment must be collected and converted into pdf format before being submitted through Canvas.

Lab Reports:

This course includes two lab activities, which may be conducted in the virtual environment with data and background provided. For example, this may entail viewing demonstration videos portraying lab activities, and analyzing provided data. Alternatively, a campus visit to conduct experiments can also be arranged. The on-campus visit can be arranged but is not a requirement for the course. Additional details will be provided in Canvas under the appropriate modules. Specific guidelines will be provided.

Exams:

The exams will test the student's understanding of the intended learning outcomes for this course. Exams are open-book; you may need a calculator to answer some questions. Exams are take-home type and must be completed individually, and submitted by the pre-specified day and time. The grades for these exams will be posted in myUK by the deadline established in the Academic Calendar (<http://www.uky.edu/Registrar/AcademicCalendar.htm>).

Student Interactions:

Students can maintain regular communication with the instructor and the TA using the following mechanisms. Primary communication mode is email, with responses typically to be expected on the day of receipt. Responses may be delayed during travel periods. For urgent matters, cell # is provided.

Web-Conferencing (Adobe Connect): Virtual office meetings are held through Adobe Connect using the virtual office address <https://connect.uky.edu/xxxxxxxxx/>. The most suitable time for regular meetings via Adobe Connect will be established at the beginning of the semester.

Email: UK email addresses will be used by default, so students must activate e-mail forwarding if they prefer another primary e-mail address.

Canvas Discussion Board: Discussion topics may be introduced for sharing among the instructor and other students on the Canvas course shell

Phone: Suitable times for phone to be established.

I.S. Jawahir: (859) 323-3239 (Work)

(859) 312-2574 (Cell-urgent communications)

Bo Huang: (859) 323-3256 (Work)

Technical Support:

Students experiencing difficulty with delivery of the course material should contact the instructor or the UK help desk. For difficulties with Canvas or logins, contact the Teaching and Academic Support Center <http://www.uky.edu/ukit/atg/tasc>, or the Information Technology Customer Support Center at <https://www.uky.edu/ukit/help>, and inform the instructor.

The UK IT customer service center can be reached at 859-218-HELP

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.

Reasonable cause may include unforeseen emergencies such as where the student is involved in an automobile accident.

Students anticipating an absence for a major religious holiday re 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. James 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.

Late Submission Policy: Students who wish to submit a homework assignment/report later than the due date should obtain permission in advance from the instructor; otherwise, it will be treated as failure to submit the assignment as required. The number of additional days provided to submit the assignment/report will be decided by the instructor based on the reasoning for the delay.

Points will be deducted for every late submitted assignment/report if delayed further than the extended deadline. Five percent of the grade will be taken off for each day the submission is delayed from the newly stipulated deadline.

Make-up Policy for Missed Work with and Excused Absence: Those students who have obtained prior permission from the instructor to have an excused absence will have one week to contact instructor regarding missed graded work.

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, the student, and the student alone must do it. 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.*

For information on Distance Learning Library Services go to <http://www.uky.edu/Libraries/DLLS>. You can also contact Carla Cantagallo, DL Librarian through phone (859-257-0500 ext. 2171 or long-distance phone number: 800-828-0439) or email (dllservice@email.uky.edu).

Accommodations due to disability:

If you have a documented disability that requires academic accommodations in this course, please make your request to the University Disability Resource Center. The Center will require current disability documentation. When accommodations are approved, the Center will provide you with a Letter of Accommodation, which details the recommended accommodations. Contact the Disability Resource Center: Jake Karnes, Director by phone 859-257-2754 or email address: jkarnes@email.uky.edu.