

Cover Sheet: Request 13434

EML 4321 Manufacturing Engineering

Info

Process	Course Modify Ugrad/Pro
Status	Pending at PV - University Curriculum Committee (UCC)
Submitter	Bruce Carroll bfc@ufl.edu
Created	12/20/2018 9:54:32 AM
Updated	1/9/2019 12:09:54 PM
Description of request	Revise catalog description to reflect current content of course. The course has evolved to include both traditional and nontraditional manufacturing techniques. This is a reflection of manufacturing technology changes and improvements.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	ENG - Mechanical and Aerospace Engineering 011902000	Bruce Carroll		12/20/2018
EML4321 Syllabus.docx					12/20/2018
College	Approved	ENG - College of Engineering	Heidi Dublin	Approved by the HWCOE Curriculum Committee.	1/9/2019
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			1/9/2019
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

Course|Modify for request 13434

Info

Request: EML 4321 Manufacturing Engineering

Description of request: Revise catalog description to reflect current content of course. The course has evolved to include both traditional and nontraditional manufacturing techniques. This is a reflection of manufacturing technology changes and improvements.

Submitter: Bruce Carroll bfc@ufl.edu

Created: 12/20/2018 9:47:26 AM

Form version: 1

Responses

Current Prefix EML

Course Level 4

Number 321

Lab Code None

Course Title Manufacturing Engineering

Effective Term Earliest Available

Effective Year Earliest Available

Requested Action Other (selecting this option opens additional form fields below)

Change Course Prefix? No

Change Course Level? No

Change Course Number? No

Change Lab Code? No

Change Course Title? No

Change Transcript Title? No

Change Credit Hours? No

Change Variable Credit? No

Change S/U Only? No

Change Contact Type? No

Change Rotating Topic Designation? No

Change Repeatable Credit? No

Maximum Repeatable Credits 0

Change Course Description? Yes

Current Course Description Descriptive and analytical treatment of manufacturing processes and production equipment automation computer control and integrated systems. Applications of mechanics stress analysis vibrations controls heat transfer. Discrete time simulation.

Proposed Course Description (50 words max) Traditional and nontraditional manufacturing processes and equipment. Application of engineering analysis tools to manufacturing.
Change Prerequisites? No

Change Co-requisites? No

Rationale The proposed revision to the catalog description more accurately describes the course content. Changes in technology over time have led to the inclusion of "nontraditional" techniques which are now being included in the course.

EML4321 Manufacturing Engineering

Class Periods: MWF 8th Period

Class Location: MAE-A 303

Instructor:

Hitomi Greenslet

hitomiy@ufl.edu

352-392-0812

Office Hours: 11:45 am to 12:35 pm, MAE-B 226

Teaching Assistants:

TA to be determined

Course Description

Traditional and nontraditional manufacturing processes and equipment. Application of engineering analysis tools to manufacturing. Credits: 3

Course Pre-Requisites / Co-Requisites

Pre-Requisites: EMA3010, EML2322L, EML3005

Co-Requisites: None

Course Objectives

Upon completion of this course, students will demonstrate:

- a descriptive and qualitative understanding of traditional and non-traditional manufacturing processes,
- the use of engineering science tools including advanced mathematics, stress analysis, vibrations, control theory, and heat transfer to analyze manufacturing processes and machines,
- the ability to rapidly and accurately perform manufacturing engineering evaluations and analyses,
- and the ability to create computational simulations of manufacturing processes and machines.

The objectives will be achieved through:

- In class lectures and examples
- Student completion of homework
- Student completion of Hour Exams and Final Exam

Materials and Supply Fees: None

Required Textbooks and Software

Manufacturing Processes for Engineering Materials, Serope Kalpakjian and Steven Schmid, Pearson Education, 2017 (6th Edition), ISBN 978-0-13-429055-3

Course Schedule

Week 1: Introduction to course, mechanical behavior of materials

Week 2: Surface structure, tribology, metrology, HW1 Due

Week 3: Metrology, casting processes, HW2 Due

Week 4: Casting processes, HW3 Due

Week 5: Casting processes, heat treatment, HW4 Due

Week 6: Review, **Exam 1**

Week 7: Bulk deformation processes (forging, rolling), HW5 Due

Week 8: Bulk deformation processes (extrusion, drawing), HW6 Due
 Week 9: Bulk deformation processes (die failures), HW7 Due
 Week 10: Review, **Exam 2**
 Week 11: Machining processes (mechanics of chip formation), HW8 Due
 Week 12: Machining processes (cutting tools, turning), HW9 Due
 Week 13: Machining processes (drilling, milling), HW10 Due
 Week 14: Machining processes (machine tools), HW11 Due
 Week 15: Abrasive processes, HW12 Due
 Week 16: Review
Final Exam

Evaluation of Grades

Homework will be assigned weekly. There will be two in-class hour exams during the semester and a cumulative final exam.

Assignment	Percentage of Final Grade
Homework	20%
Exam 1	25%
Exam 2	25%
Final Exam	30%

Grading Policy

Percent	Grade	Grade Points
93.4 - 100	A	4.00
90.0 - 93.3	A-	3.67
86.7 - 89.9	B+	3.33
83.4 - 86.6	B	3.00
80.0 - 83.3	B-	2.67
76.7 - 79.9	C+	2.33
73.4 - 76.6	C	2.00
70.0 - 73.3	C-	1.67
66.7 - 69.9	D+	1.33
63.4 - 66.6	D	1.00
60.0 - 63.3	D-	0.67
0 - 59.9	E	0.00

More information on UF grading policy may be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Attendance Policy and Make-Up Policy

Class attendance is expected although not explicitly included in the grade. Excused absences are consistent with university policies in the undergraduate catalog and require appropriate documentation (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>).

Make-up work is allowed for excused absences. Students must contact the instructor to make arrangements for make-up work.

Students Requiring Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://www.dso.ufl.edu/drc>) by providing appropriate documentation. Once registered, students will receive an accommodation letter to present to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Course Evaluation

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu/evals>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

Class Demeanor

Students are expected to arrive to class on time and behave in a manner that is respectful to the instructor and to fellow students.

University Honesty Policy

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. A violation of the honor code will result in academic sanctions (typically a failing grade assigned for the course) and further disciplinary action. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see:

<http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html>

Campus Resources:

Health and Wellness

U Matter, We Care:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or
<http://www.police.ufl.edu/>.

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
<https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling.
<https://www.crc.ufl.edu/>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.
<https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
<https://writing.ufl.edu/writing-studio/>.

Student Complaints Campus: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.

On-Line Students Complaints: <http://www.distance.ufl.edu/student-complaint-process>.