

Manufacturing Engineering
EML 4321 Section 12646 (only)
Class Periods: MWF 2nd period (8:30-9:20)
Location: LIT 113
Academic Term: Fall 2024

Instructor:

Prof. John K. Schueller
322 MAE-B
schuejk@ufl.edu (best way to contact)
352-392-0822 (the answering machine on this phone does not work well, so email)
Office Hours: MW 1:30-2:30 (tentative)

Assistant:

Assistant's name and availability will be announced.

Course Description

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

Modality

This is a live lecture class which you are expected to attend.
You are expected to daily (except weekends and holidays) check your ufl.edu email for listserv messages.
Course management will be through Canvas, although starting one or two weeks after the semester begins.

Course Pre-Requisites

EML 2322L, EMA 3010, EML 3005

Course Objectives

Upon completion of this course, students will demonstrate:

1. a descriptive and qualitative understanding of traditional manufacturing processes;
2. the ability to use engineering science tools such as advanced mathematics, stress analysis, and materials science to analyze manufacturing processes and machines; and
3. the ability to rapidly and accurately perform manufacturing engineering evaluations and analyses

Relation to Program Outcomes (ABET):

Outcome	Coverage*
1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	High
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	Low
3. An ability to communicate effectively with a range of audiences	Low
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	Low

5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies	High

*Coverage is given as high, medium, or low. An empty box indicates that this outcome is not covered or assessed in the course.

Required Textbook

Kalpajian, Schmid. *Manufacturing Processes for Engineering Materials*, 6th ed. 2017. Pearson.

Note: Must be hardcopy (for open-book exams), must be USA 6th edition, must have “Engineering Materials” in title to avoid confusion with a similar textbook by the same authors. Since I posted this textbook requirement months ago, **I expect you to have read Chapter 2 through (including) 2.2.5 before the first class.**

Course Schedule

Every cohort of students is different. Every semester is different. Sometimes I can go faster and sometimes (for example, if I need to go back to reinstruct material which you did not exhibit sufficient knowledge of on an exam) I have to go slower. Sometimes there is new, exciting state-of-the-art material to add. You deserve something better than a fixed schedule. We will cover most of the first eight chapters and chapter 12 in the order they appear in the textbook.

There will be exams after approximately the 1/3 and 2/3 points in the class. I will survey the class for competing exams and will announce the exams at least a week in advance. There will be frequent homework.

The final exam will be at the Registrar-appointed time. It will **not** be given early. So plan your winter break accordingly.

Attendance Policy, Class Expectations, and Make-Up Policy

You are adults. You are responsible for everything covered in lectures, in the assigned readings, in the assignments, and any other communications. You must turn in homework at their due dates and times and take the exams at the required times. If there is a problem for serious and justifiable reasons, please communicate with me as soon as possible and we will see if an arrangement can be made.

Although the three MAE full professors who teach this course communicate very frequently and have very similar goals and expectations for this course, you are expected to comply with the very specific requirements of this section.

This statement is required:

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies. Click here to read the university attendance policies:

<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

Note: Subsequent to the original publishing of this syllabus there were minor changes to the boilerplate. For more details see: <https://www.eng.ufl.edu/faculty/wp-content/uploads/sites/42/2024/08/HWCOE-Undergrad-Course-Syllabus-Fall-2024-v0801-post.docx>

Evaluation of Performance

Assignment	Percentage of Final Grade
Homework Sets (approx.. 10)	10%
Midterm Exams (2)	60%
Final Exam Thursday 12/12/24 10:00-12:00	30%
Total	100%

Grading Policy

Percent	Grade	Grade Points
93 - 100	A	4.00
90 - 93	A-	3.67
87 - 90	B+	3.33
83 - 87	B	3.00
80 - 83	B-	2.67
77 - 80	C+	2.33
73 - 77	C	2.00
70.0 - 73.3	C-	1.67
67 - 70	D+	1.33
63 - 67	D	1.00
60 - 63	D-	0.67
0 - 60	E	0.00

More information on UF grading policy may be found at:
<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Students Requiring Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

In-Class Recording

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services.

A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

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 Conduct Code (<https://sccr.dso.ufl.edu/process/student-conduct-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Commitment to a Safe and Inclusive Learning Environment

The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:

- Your academic advisor or Program Coordinator
- Jennifer Nappo, Director of Human Resources, 352-392-0904, jpennacc@ufl.edu
- Pamela Dickrell, Associate Dean of Student Affairs, 352-392-4524, pld@ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@eng.ufl.edu

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

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: <https://registrar.ufl.edu/ferpa.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: <https://counseling.ufl.edu>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Discrimination, Harassment, Assault, or Violence

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

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 Connections Center, Reitz Union, 392-1601. Career assistance and counseling; <https://career.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://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>; <https://care.dso.ufl.edu>.

On-Line Students Complaints: <https://distance.ufl.edu/state-authorization-status/#student-complaint>.