

Course Syllabus
EMA 4324, Environmental Stability of Materials
Fall 2013

1. Course Description – This is an undergraduate course in environmental degradation and stability of materials. Topics covered include the mechanisms, energetics and kinetics of environmental degradation of materials as well as the economic impact, prevention and mitigation strategies, and contemporary issues (3 credit hours).
2. Pre-requisites and Co-requisites – EMA 4314.
3. Course Objectives Include:
 - a. to develop an understanding of environmental conditions and degradation mechanisms that drive the deterioration of engineering materials and what is necessary for prevention or control;
 - b. to become familiar with traditional terminology, conventions and sources of materials degradation;
 - c. to be able to identify contemporary issues in environmental degradation of materials and how to go about understanding degradation mechanisms, rates, control, etc. in these novel problems;
 - d. to develop an understanding of the environmental and economic impact of materials and their degradation throughout their life cycle;
4. Instructor – Gerhard E. Fuchs
 - a. Office location: 116 Rhines
 - b. Telephone: 352-846-3317
 - c. E-mail address: gfuch@mse.ufl.edu
 - d. Course website:
 - e. Office hours: regular times TBD, based on undergraduate and lecturer schedules and by appointment (email a request).
5. Teaching Assistant – TBA
 - a. Office location: TBA
 - b. E-mail address: TBA
 - c. Office hours: TBA
6. Meeting Times – MWF, Period 7th (1:55pm-2:45pm).
7. Meeting Location – WEM 1094.
8. Final Exam – Per the University pre-assigned schedule, the OPTIONAL final exam is scheduled for Wednesday, December 11th, 10am-12noon.
9. Textbook Required –
 - a. Title: Principles and Prevention of Corrosion, 2nd edition
 - b. Author: Denny A. Jones
 - c. Publication: Prentice Hall, 1996
 - d. ISBN: 0-13-359993-0

10. Other Reading Materials and Resources –

- a. “Handbook of Environmental Degradation of Materials,” by Myer Kutz; William Andrew Publ. (2005).
- b. “Principles of Corrosion Engineering and Corrosion Control,” by Zaki Ahmad; Elsevier (2006).
- c. Various handouts throughout the course.

11. Grading –

Without Optional Final:

Approximately weekly homework: 25%

3 Mid-term exams (25% each): 75%

With Optional Final:

Approximately weekly homework: 20%

3 Mid-term exams (20% each): 60%

Optional Final exam: 20%

No extra credit work accepted.

Tentative Schedule

Week #	Week of:	Monday	Wednesday	Friday
1	8/19	No Class		
2	8/26			
3	9/2	<i>Holiday</i>		
4	9/9			
5	9/16			
6	9/23	Midterm #1		
7	9/30			
8	10/7			
9	10/14			
10	10/21	Midterm #2		
11	10/28			
12	11/4			<i>Homecoming</i>
13	11/11	<i>Holiday</i>		
14	11/18			
15	11/25	Midterm #3	<i>Holiday</i>	<i>Holiday</i>
16	12/2			<i>Reading day</i>
17	12/9		Final Exam 10am-12noon	

Homework assignments are given approximately bi-weekly, due within 1 week of assignment. Late homework accepted until solutions handed-out, but penalized 10% per day after due date. All work must be shown for full/partial credit. Once a solution set has been posted, late homework can not be accepted for a grade.

12. Grading Scale -

Percentage	≥92	≥88	≥84	≥80	≥76	≥72	≥68	≥65	≥62	≥59	≥56	<56
Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
Grade Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0

(Grade percentages containing decimals will be rounded upwards).

13. Honesty Policy – All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others. Students found in violation of this policy will receive a failing (E) grade in the course.

14. Accommodation for Students with Disabilities – Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

15. UF Counseling Services – Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- University Counseling Center, 301 Peabody Hall, 392-1575, Personal and Career Counseling.
- SHCC mental Health, Student Health Care Center, 392-1171,
- Personal and Counseling Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161, sexual assault counseling.
- Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

16. Software Use – All faculty, staff and student 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.