

Fall 2014 Syllabus: EMA 4161C
Physical Properties of Polymers

1. **Course Description:** (4 credit hours) – Molecular structure and the physical property relationships for polymers: viscoelastic behavior, the glass transition, thermomechanical and rheological properties, the crystalline and amorphous molecular solid state. Correlation of properties with design engineering of polymer applications. Laboratory section included.
2. **Pre-requisites and Co-requisites:** EMA 3066 – Introduction to Organic Materials
3. **Course Objectives:**
 - Develop an understanding of structure-property relationships in polymers
 - Conduct experiments to characterize the structure and properties of polymers
 - Characterize and design polymer processes within realistic physical constraints
 - Understand the societal impacts of polymer processing
 - Develop communication skills
 - Develop lifelong learning skills
4. **Contribution of course to meeting the professional component:**

This course provides 4 credits towards Engineering. This course addresses the following MSE Program outcomes:

 - Ability to apply knowledge of mathematics, science, and engineering to materials systems. (High coverage)
 - Ability to identify, formulate, and solve engineering problems.
5. **Instructor:** Dr. Antonio Webb
 - Office location: Rhines Hall 135
 - Telephone: 352-392-6551
 - E-mail address: awebb@mse.ufl.edu
 - Class Web site: The course website can be found on the Canvas system <http://lss.at.ufl.edu>. There you can find the course syllabus, lecture notes, grades, and announcements. Check it frequently.
6. **Teaching Assistant:** TBD
7. **Office hours:** Wednesday 2:00-3:00 pm and by appointment
The TA's office hours to be announced
8. **Meeting Times:** Tuesday, period 4 (10:40-11:30)
Thursday, period 4 and 5 (10:40-11:30 and 11:45-12:35)
Thursday (Lab), period 9-11 (4:05-7:05)
9. **Meeting Location:** Mechanical and Aerospace Engineering Building B, Room 238 (MAEB 238)
10. **Material and Supply Fees:** \$88.52 (See ISIS Website)
11. **Textbooks and Software Required:**

Title:	Introduction to Physical Polymer Science, 4 th Edition
Author:	L.H. Sperling
Publisher:	Wiley, ISBN-13: 978-0-471-70606-9

12. **Attendance and Expectations:** Lecture attendance is highly recommended. While attendance is not mandatory, experience has shown that those who attend lectures earn higher grades in the course. Arrival on time is expected. Please turn off all cell phones upon entering class. Reading of newspapers, work on assignments for this or other classes, or other activities that are not part of the class are not allowed during lecture. Students who do not comply with these requirements or who behave disorderly or disrespectfully may be asked to leave the classroom.
13. **Exams:** You will be given 3 exams throughout the semester. There will be NO Final Exam. Each exam is weighted equally and each exam will be worth 20% of your final grade. Students have one week after test results are posted to resolve questions about scores/grades. No changes to your exam grade will be made after that time.
14. **Exam Conflicts with other course exams:** The exams will be “in class”, meaning the exams will be administered during our normally schedule class time.
15. **Make-up exams:** Make up exams will be provided only with the ***approval of the instructor in accordance with university policies.*** (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>) In general, acceptable reasons for excused absence from an exam include illness, serious family emergencies, special curricular requirements, military obligation, court-imposed legal obligations, and religious holidays. In all cases, you will be required to provide written documentation, and obtain instructor approval. You will not be excused from any exam without following the policy above, with no exceptions. Students not in attendance for the scheduled exam will receive a score of zero. Make-up exams for excused absences as well as exam conflicts must occur within 1 week of the missed exam, and may occur before the missed exam.
16. **Homework Exercises:** Homework exercises will be assigned regularly. These homework questions are essential to your study and some exam and quiz questions will be adapted from them. **No late homework assignments will be accepted.** Please see the TA during his office hours to discuss homework problems.
17. **Quizzes:** You will be given short quizzes throughout the semester; and the lowest quiz grade will be dropped. Make up quizzes will be provided only with the ***approval of the instructor in accordance with university policies.***
18. **Grading:** 60%: Three exams (equally weighted)
 15%: Homework
 10%: Quizzes
 15%: Labs
19. **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 | 4.00 | 3.67 | 3.33 | 3.00 | 2.67 | 2.33 | 2.00 | 1.67 | 1.33 | 1.00 | 0.67 | 0.00 |
20. **Honesty Policy:** All students admitted to the University of Florida have signed a statement of academic honesty committing them 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. Note that failure to comply with this commitment will result in disciplinary action compliant with the UF Student Honor Code Procedures. See <http://www.dso.ufl.edu/sccr/procedures/honorcode.php>

21. **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.
22. **UF Counseling Services:** Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:
- UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, psychological and psychiatric services.
 - Career Resource Center, Reitz Union, 392-1601, career and job search services.
23. **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.