Course Syllabus
EMA 6510: Survey of Materials Analysis Techniques
Fall 2017
Sections: 05F6 (non-EDGE); DEPT (EDGE)

1. Catalog Description (3 credits): Principles and techniques used in characterization of materials. Chemical, microstructural, and surface analysis of materials; metals, ceramics, polymers, and semiconductor systems.

2. Pre-requisites: EMA3010 or equivalent

3. Course Objectives:
   a. Grasp the principles and theory for general materials characterization techniques
   b. Understand the instrumentation requirement, set-up, and performance capabilities and limitations of these materials characterization techniques

4. Instructor: Dr. Brent P. Gila
   a. Office location: 108 Nanoscale Research Facility
   b. Telephone: 352-273-2245
   c. E-mail address: bgila@ufl.edu
   d. Class Web site: https://lss.at.ufl.edu/ (e-Learning in Canvas)
   e. Office hours: TBD

5. Teaching Assistant: NA

6. Meeting Times: MWF 8:30am-9:20am (2nd period)

7. Class/laboratory schedule: 3 classes per week

8. Meeting Location: CSE E118

9. Textbooks and Software Required
   None

10. Recommended Reading:
      Publisher: Butterworth-Heinemann.
      ISBN-13 978-0750691680
      Sawyer, L., Michael, J. 2003
      Publisher Kluwer Academic/Plenum Publishers

11. Course Outline
    The topics listed below may be subject to change and presented in a different order.

<table>
<thead>
<tr>
<th>LECTURE TOPICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
</tr>
<tr>
<td>Photo-induced Characterization</td>
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<tr>
<td>Electron-induced characterization</td>
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<td>Ion-induced characterization</td>
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<td>Other Characterization techniques</td>
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</tbody>
</table>
Important dates:
Sept. 1  No class
Sept. 4  Labor Day, No class
Oct. 6   Homecoming, No class
Nov. 10  Veterans Day, No class
Nov. 22, 24  Thanksgiving holiday, No class

   Sections of this course are offered on UF EDGE. Lectures will be recorded, and the
   lecture videos are available on the UF e-Learning (Canvas) website for all students
   (not just those who registered for the EDGE section) to review at any time. However,
   attendance is strongly encouraged for all non-EDGE students to enhance classroom
   learning and interaction.

13. Grading:
   - Exam 1:  30%
   - Exam 2:  30%
   - Exam 3:  30%
   - Project: 10%

14. Grading Scale: Final letter grade will be assigned based on a student’s overall
    performance during the semester. The following scale will be used as a guideline:
    A(100-92), A-(91-88), B+(87-84), B(83-80), B-(79-77), C+(76-74), C(73-70), C-(69-67),
    D+(66-64), D(63-62), D-(61-60), E(59-0)

15. Requirements for class attendance and make-up exams, assignments, and other work
    are consistent with university policies that can be found at:
    https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx
    Except for emergencies, make-up exams are only allowed if requested at least one
    week before the regular exam time AND approved by the instructor. Make-up exams
    will differ from regularly-scheduled exams.

16. 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 specifies a number of behaviors that are
    in violation (http://www.dso.ufl.edu/sscr/process/student-conduct-honor-code/) of this
    code and the possible sanctions. Furthermore, you are obligated to report any condition
    that facilitates academic misconduct to appropriate personnel. If you have any questions
    or concerns, please consult with the instructor or TAs in this class.

    Note that failure to comply with this commitment will result in disciplinary action
    compliant with the UF Student Honor Code Procedures.
17. 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.

18. 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, http://www.counseling.ufl.edu/cwc/Default.aspx, counseling services and mental health services.
   · Career Resource Center, Reitz Union, 392-1601, career and job search services.
   · University Police Department 392-1111

19. 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.

20. Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. 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/.