

**Introduction to Inorganic Materials**  
EMA 3050  
Section 3052, Class # 27890

**Class Periods:** T: Period 3: 9:35– 10:25 am  
R: Periods 2 and 3: 8:30 – 9:20 and 9:35 am – 10:25 am

**Location:** PSY 151

**Academic Term:** Fall 2022

**Instructor:**

Dr. Simon Phillpot  
sphil@mse.ufl.edu  
352-846-3782

**Office Hours:**

- M 2:00 – 3:00 pm, Rhines 164 and Zoom  
<https://ufl.zoom.us/j/92428401388?pwd=aDQ5bFVCaWJsQzdFTnRVcFp6anllUT09>
- W 1:00 – 2:00 pm Rhines 164 and Zoom  
<https://ufl.zoom.us/j/95916310381?pwd=aVVkd3lSV1RDU3piOFB2TXAzaHgxdz09>

**Teaching Assistant/Peer Mentor/Supervised Teaching Student:**

**Course Description**

Uses, structure, processing and properties of inorganic materials, including metals, alloys, and ceramics. Scientific principles are introduced through discussion of developed inorganic materials for high technology applications (3 credit hours).

**Course Pre-Requisites / Co-Requisites**

EMA 3010, 3011

**Course Objectives**

To gain an understanding of the relationships between crystal structure, processing, and properties of inorganic materials including ceramic and metallic materials. To develop the ability to select appropriate materials to meet design specifications for engineering applications.

**Relation to Program Outcomes (ABET):**

<b>Outcome</b>	<b>Coverage</b>
1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	<b>High</b>

2. An ability to communicate effectively with a range of audiences	<b>Medium</b>
An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	<b>Medium</b>

***Required Textbooks and Software***

a. Title: Modern Physical Metallurgy

- Author: R. E. Smallman & A. J. W. Ngan
- Publication: Butterworth-Heineman
- ISBN: 9780080982045

This book is available electronically through UF library.

b. Title: Modern Ceramic Engineering: Properties, Processing, and Use in Design

- Author: David W. Richerson
- Publication: CRC Taylor & Francis
- ISBN: 1574446932

***Course Schedule:*** Details posted separately

**In Class Exams:**

Thursday, September 22

Thursday, November 3

Thursday, December 1

**There will not be a final exam.**

***No Class:*** Thursday November 24 (Thanksgiving)

***Attendance Policy, Class Expectations, and Make-Up Policy***

Attendance is expected. There will be in-class graded and ungraded activities. Proper behavior in class is always important and leads to a relaxed and productive educational environment. Thus, eating, drinking, texting, reading of newspapers, working on homework for this or other courses, or other activities that are not part of the class are not allowed. Students who do not comply with these requirements or who behave disorderly or disrespectfully may be asked to leave the classroom. Leaving your cell phone on, leaving early or arriving late can be VERY distracting. All electronic devices (cell-phones, etc.) should be turned off or in silent mode.

*If a student who is withheld from campus attends class, the student should be asked to leave the classroom and be reported to the Dean of Students Office.*

**Exams.** You will take 3 exams throughout the semester; the exam content may change but the dates given above will not. **There will be no final exam.** Each exam is weighted equally and will be worth 17% of your final grade. Requests for regrading must be made in writing and within one week after an exam has been returned; only exams completed in pen are eligible for

re-grading. **Make-up exams** will be provided only with the *prior approval of the instructor or excused absence*. In general, acceptable reasons for excused absence include documented illness, serious family emergencies, special curricular requirements, military obligation, court-imposed legal obligations, religious holidays and participation in official university activities such as music performances, athletic competition or debate.

**Homework.** Homework problems will be assigned, together with due dates, through e-Learning. These homework questions are *essential* to your study and some exam questions will be adapted from them. Homework will be posted through the Canvas web site and must be submitted electronically by the posted deadline. **Late homework assignments will not be accepted and will receive a score of zero.** The lowest homework score will be dropped.

**In-Class Activities.** There will be an in-class activity of some sort (CrystalMaker, Materials Project, quiz etc.) in all or most weeks in which there is not an exam. One score will be dropped from the final grade.

**Pre-Recorded Lectures** will help you prepare for the active learning activities and are a critical aspect of learning the content of this course. You are required to watch them using Perusall. Whether and how you watch and interact with the lectures will be evaluated and will be worth 9% of the grade.

### ***Evaluation of Grades***

Your final grade will be allocated based on the following distribution:

Homework: 20%

Perusall Lectures: 9%

In-Class Activities: 20%

Three In-Class exams: 17% each

### ***Grading Policy***

Percentage  $\geq 92 \geq 88 \geq 84 \geq 80 \geq 76 \geq 72 \geq 68 \geq 65 \geq 62 \geq 59 \geq 56 < 56$

Letter Grade A   A-   B+   B   B-   C+   C   C-   D+   D   D-   E

More information on UF grading policy may be found at:

### ***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 Honor 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. 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.

### ***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 Graduate Program Coordinator
- Jennifer Nappo, Director of Human Resources, 352-392-0904, [jpennacc@ufl.edu](mailto:jpennacc@ufl.edu)
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, [taylor@eng.ufl.edu](mailto:taylor@eng.ufl.edu)
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, [nishida@eng.ufl.edu](mailto: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](mailto: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](mailto: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>.