

**Introduction to Inorganic Materials**  
EMA 3050 Section 13199

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

Class sessions are live in FLG 270 and also by Hyflex with Zoom link  
<https://ufl.zoom.us/j/97121182811?pwd=L1AwNmV3VOcldxQVM2VVZ2VmVRZz09>

**Location:** Florida Gym 270

**Academic Term:** Fall 2021

**Instructor:**

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

**Office Hours:**

- M Period 7 (2:00 – 3:00 pm), Rhines 164 and Zoom  
<https://ufl.zoom.us/j/94914643583?pwd=UVBNOVZDNXA2V3BicDBvSTRYblZSQTO9>
- W Period 3 (9:30 – 10:30 am) Rhines 164 and Zoom  
<https://ufl.zoom.us/j/98940761422?pwd=OWMzREV5Mm1hdGM0NGVwNTJpbUhlZz09>

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

Ximeng Wang  
[ximeng.wang@ufl.edu](mailto:ximeng.wang@ufl.edu)

**Office Hours:**

- T and R Period 9 (3:00 – 4:00 pm) Zoom
- <https://ufl.zoom.us/j/94295408797>

**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><i>Outcome</i></b>	<b><i>Coverage</i></b>
1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	<b><i>High</i></b>
2. An ability to communicate effectively with a range of audiences	<b><i>Medium</i></b>
An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	<b><i>Medium</i></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:***

Tuesday, September 28

Tuesday, November 2

Tuesday, December 7

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

***No Class:*** Thursday November 11 (Veterans' Day)

***No Class:*** Thursday November 25 (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 20% 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.

**Quizzes and Other in-Class Activities.** There will be at least 15 short “pop” quizzes or other graded in-class activities throughout the semester; at least five in each of the three modules. The scores of the best 10 will count to the quiz grade, although at least two must come from each module. **There will be no make-up quizzes or make-up in-class activities.**

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

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

Homework: 30%

Quizzes and other in-Class Activities: 10%

Three In-Class exams: 20% 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

### ***Students Requiring Accommodations***

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://www.dso.ufl.edu/drc>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be

presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

### ***Course Evaluation***

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

### ***Online Course Recording***

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

### ***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/policies/student-honor-code-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***

## **COVID-19**

- You are expected to wear approved face coverings at all times during class and within buildings even if you are vaccinated.
- If you are sick, stay home and self-quarantine. Please visit the UF Health Screen, Test & Protect website about next steps, retake the questionnaire and schedule your test for no sooner than 24 hours after your symptoms began. Please call your primary care provider if you are ill and need immediate care or the UF Student Health Care Center at 352-392-1161 (or email [covid@shcc.ufl.edu](mailto:covid@shcc.ufl.edu)) to be evaluated for testing and to receive further instructions about returning to campus.
- If you are withheld from campus by the Department of Health through Screen, Test & Protect, you are not permitted to use any on campus facilities. Students attempting to attend campus activities when withheld from campus will be referred to the Dean of Students Office.
- UF Health Screen, Test & Protect offers guidance when you are sick, have been exposed to someone who has tested positive or have tested positive yourself. Visit the [UF Health Screen, Test & Protect website](#) for more information.
- Please continue to follow healthy habits, including best practices like frequent hand washing. Following these practices is our responsibility as Gators.

### **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 Resource 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**: <http://www.distance.ufl.edu/student-complaint-process>.