

ASEN 1022Spring2023
Materials Science for Aerospace Engineers

Instructors:

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treatment. This course will provide insight into the design and selection of materials for aerospace applications.

Major Course Topics

1. Atomic bonding.
2. Perfect and imperfect crystalline structures.
3. Diffusion.
4. Phase diagrams.
5. Mechanical and thermal behavior.
6. Failure mechanisms.
7. Heat treatment.
8. Material processing techniques.
9. Design and selection of materials

Grading Guideline

Homework	16% (WileyPlus)
6 Quizzes	84% (14% each)
Total:	100%

Please verify all your scores and grades on Canvas within 2 weeks after they are posted; requests to change a score need to be made within this period. All regrade requests should be submitted to Canvas folder as outlined in 'Important Notes' below.

We reserve the right to make minor changes to this distribution weights based on variations in assignments.

Quiz and Optional Final Exam Times and Locations

1. Quiz 1: 2/10, 8:00 to 8:40 AM MT
2. Quiz 2: 2/24, 8:00 to 8:40 AM MT
3. Quiz 3: 3/10, 8:00 to 8:40 AM MT
4. Quiz 4: 3/22, 8:00 to 8:40 AM MT (NOTE THIS IS A WEDNESDAY!!!)
5. Quiz 5: 4/14, 8:00 to 8:40 AM MT
6. Quiz 6: 4/28, 8:00 to 8:40 AM MT
7. OPTIONAL Final Exam: Weds May 10 at 7:30 to 9:30 PM MT

Lecture:

Lectures are MWF at 8 AM to 8:50 AM in Math 100. We HIGHLY recommend attending lectures in person. All lectures will be recorded via classroom capture and posted to the Canvas website. Please utilize these recordings in the case of illness, interviews, conferences, or to go back and review material for quizzes. There is no need to email us if you miss the lecture.

Quiz Times and Policies

Instead of exams, students will take 6 quizzes every other Friday throughout the semester during the class period. Students may use the final exam to make up or replace up to 3 quizzes for any reason.

Students who have submitted official accommodations letters through the university accommodations portal will receive an email 1 week prior to the quiz with quiz locations and times. Accommodations must be received one week prior to the quiz or final exam for student to receive them.

As the final exam can be utilized to replace or make up three quiz grades, there are no make up quizzes or alternative quiz times in this course with the exception of religious obligations

Final Exam

The final exam is optional: students are not required to take the final exam and the final exam will not

2. Emails to your instructor should only be in the case of a family, medical, or personal emergency, or if you are struggling in the course and need advice. All questions regarding homework, quizzes, or course policies MUST go to the Canvas discussion board asked in office hours. This allows for the instructional team to quickly respond to questions, and also you to see other student questions.
3. If you are having a family, medical, or personal emergency, or are struggling in the course, please reach out to us via email. Note that email will be responded to during business hours, i.e. Monday through Friday, 8:00 am - 5:00 pm. Please address the email to both Prof. Glusman and Prof. Wingate, and include ASEN1022 in the email subject line.
4. Changes may be made to the weekly course schedule based on occurring events that require different dispositions. We will give sufficient advance notice through announcements in class and posting on Canvas. Changes to this syllabus and assignments may be announced at any time during class periods. We will post the current syllabus and assignments on Canvas. Both are dated in the footnote.
5. Canvas will be used to send out announcements, to provide comments to you daily on class activities, and to provide general information about course assignments.
6. Why have homework and quizzes?
 - Homework assignments are to allow you to PRACTICE the important applications of current material. Remember you cannot learn to juggle by watching someone juggle, you must attempt it yourself. The same is true with engineering. Homework enforces the mental processes that help you to become proficient in a subject. Before beginning any homework assignment, you should read the text and work the examples in the text.
 - Quizzes allow us to assess your learning and determine if you will be prepared for the following courses, industry positions, and/or graduate school.
7. Homework:
 - All homework questions must be submitted to the Canvas discussion forum under the appropriate homework assignment/question. No homework questions should be emailed to the instructional team- all questions should be asked at office hours or posted on Canvas. The instructional team will not respond to posts that are posted after 5 PM the day before the homework is due.
 - Collaboration is permitted on homework. However, we strongly recommend to first work on your own on the homework before comparing your results with your homework team members. You may discuss the means and methods for formulating and solving problems and even compare answers, but you are not free to copy someone's assignment. Copying material from any resource (including solutions manuals) and submitting it as your own is

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The CU Boulder campus is currently mask-optional. However, if public health conditions change and masks are again required in classrooms, students who fail to adhere to masking requirements will be asked to leave class, and students who do not leave class when asked or who refuse to comply with these requirements will be referred to Student Conduct and Conflict Resolution. For more information, see the policy on classroom behavior and the Student Code of Conduct. If you require accommodation because a disability prevents you from fulfilling these safety measures, please follow the steps in the “Accommodation for Disabilities” statement on this syllabus.

If you feel ill and think you might have COVID

(dating or domestic violence), stalking, protected class discrimination and harassment, and related retaliation by or against members of our community on and off-campus. These behaviors harm individuals and our community. The Office of Institutional Equity and Compliance (OIEC) addresses these concerns, and individuals who believe they have been subjected to misconduct can contact OIEC-49202127 or email cureport@colorado.edu. Information about university policies [reporting options](#) and support resources can be found on the [OIEC website](#)

Please know that faculty and graduate instructors have a responsibility to inform OIEC when they are made aware of any issues related to these policies regardless of when or where they occurred to ensure that individuals impacted receive information about their rights, support resources, and resolution options. To learn more about reporting and support options for a variety of concerns, [Don't Ignore It](#)

RELIGIOUS HOLIDAYS

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, please contact the instructors if you have a conflict with a quiz or the final exam because of religious obligations

See the [campus policy regarding religious observances](#) for full details.