

## MSE 101: Materials in Today's World

3 cr., Fall 2025

CRN: 30427 and (39568 or 39569)

### Lecture:

3025 Campus Instructional Facility

Tuesday, Thursday 3:00-3:50 PM

### Discussion:

0018 (Tuesdays) or 2018 (Thursdays)

Campus Instructional Facility

4:00-4:50 PM

### Contact

Dr. Matthew D. Goodman

mgoodman@illinois.edu

115B Materials Science and Engr Building

217-244-9253

### Office Hour (other times by appointment):

- TBD.

### Class Description and Objectives

Introduce the field of materials science and engineering through examining and demonstrating properties of materials through their use in everyday objects. Survey the role materials have played and will continue to play in shaping society. Develop and explore the underlying principles in material selection and design. Focus on sustainable engineering solutions through selection of appropriate materials and their processes based on performance requirements and stakeholder needs.

Technical elective credit is not given to engineering majors.

### Required Text/Equipment

- *Stuff Matters*, by Mark Miodownik
- Many other texts are on hold at Grainger Library.
- Canvas (<https://canvas.illinois.edu>)

### Grading Policies

20% Worksheets

35% Exams I & II

25% Final Exam

20% Term Paper

### Preliminary Grading Scheme

|    |             |    |           |    |           |    |           |
|----|-------------|----|-----------|----|-----------|----|-----------|
| A+ | 97% and up  | B+ | 87–89.99% | C+ | 77–79.99% | D+ | 67–69.99% |
| A  | 93.0–96.99% | B  | 83–86.99% | C  | 73–76.99% | D  | 63–66.99% |
| A- | 90–92.99%   | B- | 80–82.99% | C- | 70–72.99% | D- | 60–62.99% |

**Worksheets:** Lecture and Discussion worksheets will be assigned, and students will have approximately one week to complete them for full credit. These will be uploaded and submitted via Canvas. To earn full credit, students should show all work and state any assumptions.

**Exams:** Two in-class exams will be given on **Thursday, September 25** and **Thursday, October 30**. The final will be given during the final exam slot, scheduled to be **Monday, Dec 15 1:30-4:30**. Make-up quizzes and exams will be at the discretion of the instructor and typically only for verified, excused absences.

**Term Paper:** A 4-page term paper will be due on Dec. 7 at 11:59 PM (uploaded to Canvas). Question prompt and rubric will be posted on Canvas.

**Late Homework:** Late worksheets will be accepted with a -10% penalty for every 24 hours late, to a minimum penalty of -60% if submitted before the final exam is taken.

**Makeup assignments:** For excused and verified absences due to illness or other unexpected/unplanned event, a makeup quiz will be available for full points if it can be administered in a timely manner. If, due to the absence, this cannot occur, a "0" will be given as a temporary grade, with the final replacing this score at the end of the semester. Late penalties on worksheets may be eliminated or adjusted and will be dealt with on a case-by-case basis.

**Re-grading policy:** For simple addition/subtraction errors on points awarded, please bring up the assignment or exam after class or stop by during office hours. Any other requests require a type-written explanation that includes your name, assignment or exam, problem in question, and a written description describing the mis-grading and why a re-grading is warranted. Any attempt to "doctor" or manipulate the assignment will be dealt with under the Student Code.

**AI Policy:** The use of AI is broadly accepted for generating ideas and exploring options. Students must document the version of AI utilized and the input prompts. AI must not be used to create portions of reports or homework. The goal is for students to synthesize the AI output and create something new. Refer to specific assignments for details and discuss with the instructor with any questions or concerns.

### Academic Integrity

Alleged misconduct is a violation of the Student Code and must be reported as an infraction of academic integrity. I reserve the right to take photographic evidence. Unless specifically stated on an assignment, submitting work generated using AI (e.g., ChatGPT, etc.) will be considered an academic integrity violation.

The University of Illinois Urbana-Champaign *Student Code* should also be considered as a part of this syllabus. Students should pay particular attention to Article 1, Part 4: Academic Integrity. Read the Code at the following URL: <http://studentcode.illinois.edu/>.

Academic dishonesty may result in a failing grade. Every student is expected to review and abide by the Academic Integrity Policy: <https://studentcode.illinois.edu/article1/part4/1-401/>. Ignorance is not an excuse for any academic dishonesty. It is your responsibility to read this policy to avoid any misunderstanding. Do not hesitate to ask the instructor(s) if you are ever in doubt about what constitutes plagiarism, cheating, or any other breach of academic integrity.

### Community of Care

As members of the Illinois community, we each have a responsibility to express care and concern for one another. If you come across a classmate whose behavior concerns you, whether in regards to their well-being or yours, we encourage you to refer this behavior to the Student Assistance Center (217-333-0050 or <http://odos.illinois.edu/community-of-care/referral/>). Based

on your report, the staff in the Student Assistance Center reaches out to students to make sure they have the support they need to be healthy and safe.

Further, as a Community of Care, we want to support you in your overall wellness. We know that students sometimes face challenges that can impact academic performance (examples include mental health concerns, food insecurity, homelessness, personal emergencies).

Should you find that you are managing such a challenge and that it is interfering with your coursework, you are encouraged to contact the [Student Assistance Center \(SAC\)](#) in the Office of the Dean of Students for support and referrals to campus and/or community resources.

### **Mental Health**

Significant stress, mood changes, excessive worry, substance/alcohol misuse or interferences in eating or sleep can have an impact on academic performance, social development, and emotional wellbeing. The University of Illinois offers a variety of confidential services including individual and group counseling, crisis intervention, psychiatric services, and specialized screenings which are covered through the Student Health Fee. If you or someone you know experiences any of the above mental health concerns, it is strongly encouraged to contact or visit any of the University's resources provided below. Getting help is a smart and courageous thing to do for yourself and for those who care about you.

- Counseling Center (217) 333-3704
- McKinley Health Center (217) 333-2700
- National Suicide Prevention Lifeline (800) 273-8255
- Rosecrance Crisis Line (217) 359-4141 (available 24/7, 365 days a year) If you are in immediate danger, call 911.

\*This statement is approved by the University of Illinois Counseling Center

### **Students with Disabilities**

To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor as soon as possible and provide the instructor with a Letter of Academic Accommodations from Disability Resources and Educational Services (DRES). To ensure that disability-related concerns are properly addressed from the beginning, students with disabilities who require assistance to participate in this class should apply for services with DRES and see the instructor as soon as possible. If you need accommodations for any sort of disability, please speak to me after class, or make an appointment to see me or see me during my office hours.

DRES provides students with academic accommodations, access, and support services. To contact DRES, you may visit 1207 S. Oak St., Champaign, call 217-333-1970, e-mail [disability@illinois.edu](mailto:disability@illinois.edu) or visit the DRES website at <http://www.disability.illinois.edu/>. Here is the direct link to apply for services at DRES, <https://www.disability.illinois.edu/applying-services>.

### **Disruptive Behavior**

Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. A student responsible for disruptive behavior may be required to leave class pending discussion and resolution of the problem and may be reported to the Office for Student Conflict Resolution (<https://conflictresolution.illinois.edu>; [conflictresolution@illinois.edu](mailto:conflictresolution@illinois.edu); 333-3680) for disciplinary action.

### **Religious Observances**

Illinois law requires the University to reasonably accommodate its students' religious beliefs, observances, and practices in regard to admissions, class attendance, and the scheduling of examinations and work requirements. Students should complete the [Request for Accommodation for Religious Observances form](#) should any instructors require an absence letter in order to manage the absence. In order to best facilitate planning and communication between students and faculty, students should make requests for absence letters as early as possible in the semester in which the request applies.

### **Emergency Response Recommendations**

Emergency response recommendations and campus building floor plans can be found at the following website: <https://police.illinois.edu/em/run-hide-fight/>. I encourage you to review this website within the first 10 days of class.

### **Sexual Misconduct Reporting Obligation**

The University of Illinois is committed to combating sexual misconduct. Faculty and staff members are required to report any instances of sexual misconduct to the University's Title IX Office. In turn, an individual with the Title IX will provide information about rights and options, including accommodations, support services, the campus disciplinary process, and law enforcement options.

A list of the designated University employees who, as counselors, confidential advisors, and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: [wecare.illinois.edu/resources/students/#confidential](https://wecare.illinois.edu/resources/students/#confidential).

Other information about resources and reporting is available here: [wecare.illinois.edu](https://wecare.illinois.edu).