
SIE 265 – Spring 2023

Engineering Management I

Mondays		
Wednesday	09:00 – 09:50 AM	Aero & Mech Engr, Rm S212
Fridays		

INSTRUCTOR

Dr. Mohammed Shafae; shafae1@arizona.edu;

Office Hours: TBD

TEACHING ASSISTANTS

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Office Hours: TBD

COURSE DESCRIPTION

Methods and modern techniques of engineering management analysis for financial decision making. Development of income, cash flow, and balance sheet statements. Topics include Time value of money, valuation techniques, replacement analysis, and project acceptance criteria.

Prerequisite(S): MATH 124 or 125

COURSE OBJECTIVES

This course introduces students to concepts of economic analysis, profitability, and cost estimation. Specific outcomes include:

1. Understanding concepts of the time value of money.
2. Understanding of Pro Forma Income Statements, Cash Flow Statements and Balance Sheets.
3. Ability to create financial statements for evaluating Engineering Projects.
4. Ability to determine the economic viability of Engineering Projects.

TEXTBOOK

Sullivan, W., E. Wicks, and C. Koelling (2019). Engineering Economy, (17th edition), Pearson/Prentice-Hall. AVAILABLE THROUGH INCLUSIVE ACCESS ON D2L (SEE BELOW FOR MORE INFORMATION). This textbook is required for the class, and it is highly recommended to read assigned text material as an aid to solving homework problems, and before coming to class.

Required: Pearson MyLab Engineering online access. This is an online homework and tutorial system which accompanies your text. It uses a combination of immediate feedback, study tools, and videos to help you learn. To learn how to register and gain access to the eText and MyLab Engineering through D2L, follow the

instructions in the document “Vital Source Inclusive Access to eText and Courseware” available in Course Syllabus and Policies tab under the Content tab of the D2L course site.

Please read the following information carefully:

- Required Course materials are being delivered digitally via D2L through the Inclusive Access program.
- Please access the material through D2L on the first day of class to make sure that there are no issues with delivery so any problems can be addressed quickly.
- You have complimentary access to the course materials through 01/24/2023.
- You must act (even if you have not accessed the materials) to opt-out if plan to drop out of the course. Add/drop course deadline is 01/24/2023 and it is the last day to opt out from the course materials without being charged.
- **If you are continuing in the class, you cannot opt out as MyLab Engineering online access is required for exams, homework assignments, and in-class assignments.**
- If you do not opt-out and choose to retain your access, the cost of the digital course materials will appear on your Bursars account typically within 5 days of the deadline as Inclusive Access Digital Books.

Please refer to the Inclusive Access FAQs at <https://shop.arizona.edu/textbooks/Inclusive.asp> for additional information.

COURSE FORMAT

Per the Schedule of Classes, the Instruction Mode of this class is "In Person" so we will meet in Room S212 in the AME Building for all classes unless otherwise announced beforehand.

EQUIPMENT AND SOFTWARE REQUIREMENTS

You will need to use your computer frequently during class time to access in-class assignments through MyLab and D2L and to use Microsoft Excel. Also, exams will be administered through MyLab and you will use your computers for that as well.

ABSENCE AND CLASS PARTICIPATION POLICY

Participating in the course and attending lectures are vital to the learning process. As such, **ATTENDANCE IS REQUIRED AND GRADED.**

General Policies

- The UA’s policy concerning Class Attendance, Participation, and Administrative Drops is available at: <http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop>.
- The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, <http://policy.arizona.edu/human-resources/religious-accommodation-policy>. To accommodate religious holidays, students must inform the course instructor at least two weeks in advance.
- Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: <https://deanofstudents.arizona.edu/absences>.
- If you feel sick and suspecting COVID-19, please follow [University protocols](#).
- Non-attendance for any reason does **not** guarantee an automatic extension of due date or rescheduling of examinations/assessments.

- Please communicate and coordinate any request directly with your instructor.
- If you must miss the equivalent of more than one week of class, please contact the Dean of Students Office DOS-deanofstudents@email.arizona.edu to share documentation about the challenges you are facing (e.g., doctor's note). The Dean of Students Office will communicate the receipt of the note (with expected end date) to the course instructor.

Course-Specific Policies

- The Instruction Mode of this class is "In Person" and ATTENDANCE IS MANDATORY.
- If a student needs to miss less than three classes in a row for ANY reason, the student **DOES NOT** need to contact the course instructor because the class has a **"three absent classes with NO penalty"** policy; that is three absent classes of course attendance points will be dropped for all students (no questions asked) to account for short-term absences for ANY reason. However, it is the student's responsibility to be aware of all the materials covered in the missed class as it will absolutely impact your progress towards the following classes.
- If you must miss three or more classes in a row, please directly contact the Dean of Students Office DOS-deanofstudents@email.arizona.edu to share documentation about the challenges you are facing. The Dean of Students Office will communicate the situation to the course instructor, and then the student can communicate with the course instructor to discuss what needs to be done to receive attendance points for the missed classes.
- Please note that during the lectures students may be assigned to smaller groups to work together on in-class assignments which can be a very valuable learning and engagement experience that you will miss by not attending in addition to losing the attendance and in-class assignment grades themselves.
- All students must attend the **full** 50-minute lecture entering the classroom no later than 09:00 AM to minimize any class disruption. The instructor reserves the right to not allow any student to enter the classroom after 09:00 AM.

CLASS RECORDINGS

For lecture recordings, which are used at the discretion of the instructor, students must access content in D2L only. Students may not modify content or re-use content for any purpose other than personal educational reasons. All recordings are subject to government and university regulations. Therefore, students accessing unauthorized recordings or using them in a manner inconsistent with UArizona values and educational policies (Code of Academic Integrity and the Student Code of Conduct) are also subject to civil action.

Note that the class recordings are made available to use for your reference only and cannot be used as a replacement for class attendance by any means.

ASSIGNMENTS AND EXAMINATIONS

In-Class/Post-Class Work and Participation

- There will be practice problems and/or engagement questions/surveys assigned and solved by the students during class time in most classes through different means such as MyLab Engineering, D2L, or handwritten notes to be uploaded to D2L as an assignment. Those account for 10% of the overall course grade.

- In-class work is intended to help students follow up with the material during class time, highlight unclear concepts during class time, ask clear solid questions, and prepare students to solve homework problems smoothly.
- Sometimes students will be split into smaller groups to perform in-class work collaboratively.
- **Note that completing in-class work assigned in MyLab Engineering or D2L without attending the class in-person will not receive any grades.**
- In some classes, you will start an assignment in/after the class and will be asked to submit it before the following class.
- Active in-class participation may encourage the instructor to give bonus points to highly active and participating students.
- **The lowest three in-class assignment grades will be dropped.**

Class Attendance

- Class attendance is required in all classes and accounts for 5% of the course grade
- Attendance checks may not be collected every class and will be collected randomly throughout the semester
- Attendance checks may be collected directly through an attendance check sheet or based on in-class assignments/surveys conducted during class time.
- The class has a **“three absent classes with NO penalty”** policy; that is three absent classes of course attendance points will be dropped for all students (no questions asked) to account for short-term absences for ANY reason. However, it is the student’s responsibility to be aware of all the materials covered in the missed class as it will absolutely impact your progress towards the following classes.

Homework Assignments

- One homework assignment will be typically assigned each week and is due by 11:59 PM on Fridays. Homework assignments account for 25% of the overall course grade.
- You are allowed late submissions till 11:59 PM on Sunday, with a 20% late submission penalty per day (i.e., 20% by 11:59 PM on Saturday and 40% by 11:59 PM on Sunday) applied ONLY to questions you solve after the original deadline.
- To accommodate students with circumstances that arise, illness, travel, disappointing performance, etc., **the two homework assignments with the lowest grades will be dropped** for all students.
- The homework problems will be assigned and solved online through MyLab Engineering in D2L or directly in D2L assignments (more details will be shared with the first homework assignment).
- For each homework problem, you will be typically allowed **two** attempts to solve each problem and each attempt allows you three trials for numerical questions. Accordingly, you are highly encouraged to consult the instructor and/or the teaching assistants during office hours if you do not get a problem done right in your first attempt. **Starting to solve your homework early is key to success and high grades in this class.**
- Homework grading will be done entirely automatically based on the final answers. To seek feedback on your solutions, we offer several office hours timeslots weekly which you can visit to seek feedback on questions you could not solve correctly. You are also welcome to ask the TAs for one-on-one time if needed or if you are not available at any of the scheduled office hours’ time-slots.

- Homework is intended to improve your understanding of the course materials by giving you an opportunity to apply the tools presented in the course. The best way to succeed in this class is by practicing. Therefore, you are strongly encouraged to not only do the homework problems assigned but check your work with the instructor and/or one of the TAs at office hours and ask questions.
- Discussion of homework assignments with other students is encouraged. The exchange of opinions and discussion with your peers is a valuable learning opportunity. However, each student must complete their homework on their own and show independent work.

Course Project

In the last few weeks of the semester, there will be a multi-assignment project that the instructor will share specific instructions about during class time. This will be assigned individually, and all students will be working on the same problem assigned by the instructor. **Note:** Honors Students have an extra project assignment.

Exams

- This course has three equally weighted exams and are tentatively scheduled on 2/17, 3/24, and 4/28. Dates will be confirmed later.
- Exams will be conducted during regular class meetings. More specific details will be shared later.
- Attending the three exams is OBLIGATORY for all students. It is the student responsibility to notify the instructor at least one week in advance if you have a conflict with the set exam time.

GRADING POLICY

The final course grade will be based on the total weighted points and the following scale. Final scores will be calculated to the hundredths decimal and rounded to the nearest whole number (e.g., 89.50 = A and 89.49 = B, no exceptions).

A: 100-90%; **B:** 80-90%; **C:** 70-80%; **D:** 60-70%; **E:** below 60%

Grades will be assigned based on performance using the following percentages.

Course Requirement	Percentage of Grade
Class Attendance	5%
In-Class/Post-Class Work and Participation	10%
Homework Assignments	25%
Exam I	15%
Exam II	15%
Exam III	15%
Project	15%

The instructor reserves the right to give **bonus points** for in-class work and participation.

HONORS STUDENTS

If you are an Honors student, there will be an extra two-part assignment. In addition, we will meet three times together outside of the normal class time. We will choose a mutually agreeable time after classes start.

CLASS SCHEDULE

The tentative course schedule is available on D2L. It lists all material to be covered by date and includes references to the textbook chapters.

CLASSROOM BEHAVIOR POLICY

To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.).

THREATENING BEHAVIOR POLICY

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See <http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students>.

ACCESSIBILITY AND ACCOMMODATIONS

Our goal in this classroom is that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please let me know immediately so that we can discuss options. You are also welcome to contact the Disability Resource Center (520-621-3268) to establish reasonable accommodations. For additional information on the Disability Resource Center and reasonable accommodations, please visit <http://drc.arizona.edu>.

CODE OF ACADEMIC INTEGRITY

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: <http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity>.

The University Libraries have some excellent tips for avoiding plagiarism, available at <http://new.library.arizona.edu/research/citing/plagiarism>.

UA NONDISCRIMINATION AND ANTI-HARASSMENT POLICY

The University of Arizona is committed to creating and maintaining an environment free of discrimination. In support of this commitment, the University prohibits discrimination, including harassment and retaliation, based on a protected classification, including race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, or genetic information. For more information, including how to

report a concern, please see <http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>

Our classroom is a place where everyone is encouraged to express well-formed opinions and their reasons for those opinions. We also want to create a tolerant and open environment where such opinions can be expressed without resorting to bullying or discrimination of others.

ADDITIONAL RESOURCES FOR STUDENTS

UA Academic policies and procedures are available at <http://catalog.arizona.edu/policies>

Campus Health

<http://www.health.arizona.edu/>

Campus Health provides quality medical and mental health care services through virtual and in-person care. Phone: 520-621-9202

Counseling and Psych Services (CAPS)

<https://health.arizona.edu/counseling-psych-services>

CAPS provides mental health care, including short-term counseling services. Phone: 520-621-3334

The Dean of Students Office's Student Assistance Program

<http://deanofstudents.arizona.edu/student-assistance/students/student-assistance>

Student Assistance helps students manage crises, life traumas, and other barriers that impede success. The staff addresses the needs of students who experience issues related to social adjustment, academic challenges, psychological health, physical health, victimization, and relationship issues, through a variety of interventions, referrals, and follow up services.

Email: DOS-deanofstudents@email.arizona.edu

Phone: 520-621-7057

Survivor Advocacy Program

<https://survivoradvocacy.arizona.edu/>

The Survivor Advocacy Program provides confidential support and advocacy services to student survivors of sexual and gender-based violence. The Program can also advise students about relevant non-UA resources available within the local community for support.

Email: survivoradvocacy@email.arizona.edu

Phone: 520-621-5767

SUBJECT TO CHANGE STATEMENT

Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.

Students are responsible for all the policies above and for any announcements, assignments, or changes to the syllabus that are announced in class, by e-mail, and/or posted on D2L.