SIE265 -Engineering Management I
Fall 2025

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Class time & location: Tue/Thur 11:00AM-12:15PM at AME S212

Designation: Required course in Systems Engineering, Industrial Engineering, and Engineering Management.

Course Description: Engineering Management I (3 units): 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.

Course Format and Course Communication: This class will use web-based D2L (Desire to Learn) as the only means of distributing class materials including assignments. All Projects and Homework must be uploaded into the Assignments box on or before the due dates. Your grades for this course will also be available on D2L. You will need a UANet ID to access D2L at the following site: http://d2l.arizona.edu/. You are expected to check D2L frequently for class information.

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

1. Calculating the time value of money and compounding interest.

2. Creating Pro Forma Income Statements, Cash Flow Statements and Balance Sheets.

3. Creating financial statements for evaluating Engineering Projects.

4. Determining the economic viability of Engineering Projects.

Textbook: Contemporary Engineering Economics, 6thEdition, by Chan S. Park. Note that the 4th or 5th Edition Textbooks are OK as well as any international (soft cover) editions. Note: this text is not required but is an excellent reference.

Required Materials:

- You **must** have either a financial calculator (HP -10B or TI BA Plus for example) or a calculator that can download financial software from the web such as the TI-83, TI-89or TI nspire.

- For this class, it is **required** to have your laptop/tablet during class time to access in-class assignments through D2L and to use Microsoft Excel.

- No laptops, tablet, or PDAs will be allowed for the exams.

Class Recordings: The class will be recorded using Panopto and it will be uploaded on D2L website. If you have any questions or concerns about the recording, please contact the instructor. 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 are subject to suspension or civil action.

Generative AI Use: In this course any and all uses of generative artificial intelligence (AI)/large language model tools such as ChatGPT, Dall-e, Google Bard, Microsoft Copilot, etc. will be considered a violation of the Code of Academic Integrity, specifically the prohibition against submitting work that is not your own. This applies to all assessments in the course, including projects, homework, in-class assignments, and exams.

Grading Scale and Policies:

- **Project:** The project for this course consists of 9 cumulative subassignments during the semester. Each subsequent project is an extension of the previous project. This is an individual project assignment. You will model the forecasted financial performance of a new company project. You will determine the financial viability of a production project and recommend to management whether to proceed with this project or to abandon it.
  - **Learning outcome:** In this project, you will learn to create Pro Forma Income Statements, Cash Flow Statements and Balance Sheets, and you will the economic viability of the Engineering Project.
  - **Grading:** The project has 20% of the final grade. Each assignment has an equal weight except project assignment 9 which is worth 2x the other assignments. Late submission will be graded with 30% point deduction up to the beginning of the next class.

- **In-class Assignment:** The purpose of the in-class assignments is to engage students actively in the learning process. It also allows students to practice what they have just learned by applying the newly acquired knowledge or skills immediately.

- **Grading:** In-class assignments have 10% of the final grade. There is no make up for in-class assignments. 1/3 of the lowest in-class assignment grades will be dropped.

- **Homework:** The purpose of the homework assignments is to help you practice the skills needed to meet the learning outcomes for this course. Homework assignments are assigned approximately once per week.
  - **Grading:** The homework assignments have 10% of the final grade. The homework questions are open for two attempts each and the best score will be recorded. Late submission will be graded with 30% point deduction up to the beginning of the next class.

- **Exams:** The exams will be based on the material covered during lectures, homework assignments, and the materials on D2L Content.
  - **1st midterm:** This exam has 20% of the final grade.
  - **2nd midterm:** This exam has 20% of the final grade.
  - **Final exam:** This exam has 20% of the final grade.

Final Grades for this course will be calculated as follows:

$90 - 100\%$ =A, $80 - 89\%$ =B, $70 - 79\%$ =C, $60 - 69\%$ =D, $0 - 59\%$ =E

Distance Learning Students: Students registered in sections 009 and 010 are required to join the class via Zoom (Links will be available on D2L). The exams will take place in-person in a class room on Yuma campus which will be announced accordingly.

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 Class Schedule is available on D2L. It lists all material to be covered by date and includes references to the textbook chapters and D2L modules. All assignments are listed with their respective due dates. **Note that the Assignment box for each assignment will remain open only until 9AM the day the assignment is due.**

Class Guidelines and how to be successful:

- Students should attend the class for all scheduled lecture periods. A good practice to increase the level of learning during the class is to go over the lecture notes of that day before the class. This will prepare you to participate in an active learning environment and asking more questions about the material if any part is unclear for you.

- The homework and project assignments are designed step-by-step to cover the materials taught during a one- or two-week period. This will help you to achieve the learning outcomes of this course. Therefore, actively participating in the classes and returning the homework and project assignments according to the schedule are vital components of being successful in this course.

- Office hours or Student hours are for **everyone** with any amount of preparation. The office hours are designed for you to talk to the professor about: learning strategies, research opportunities, career goals, and challenges.

- Treat instructors, speakers, and peers with respect and always behave in an ethical manner.

- D2L announcements provide the most recent updates about the course and class events.

- It is encouraged to use Laptop or tablet for note-taking.

Classroom Attendance:

- Notify your instructor(s) if you will be missing a course meeting or an assignment deadline.

- 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 before the due dates or exam days. Late requests will not be considered.

- If you must miss the equivalent of more than one week of class, you should contact the Dean of Students Office DOS-deanofstudents@email.arizona.edu to share documentation about the challenges you are facing.

Absence and Class Participation Policy:
Participating in the course and attending lectures and other course events are vital to the learning process. As such, attendance is required at all lectures and discussion section meetings. Absences may affect a student's final course grade. If you anticipate being absent, are unexpectedly absent, or are unable to participate in class online activities, please contact me as soon as possible. To request a disability-related accommodation to this attendance policy, please contact the Disability Resource Center at (520) 621-3268 or drc-info@email.arizona.edu. If you are experiencing unexpected barriers to your success in your courses, the Dean of Students Office is a central support resource for all students and may be helpful. The Dean of Students Office is located in the Robert L. Nugent Building, room 100, or call 520-621-7057. 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. Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: https://deanofstudents.arizona.edu/absences

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 (i.e. texting, chatting, reading a newspaper, making phone calls, web surfing, etc.). Students are asked to refrain from disruptive conversations with people sitting around them during lecture. Students observed engaging in disruptive activity will be asked to cease this behavior. Those who continue to disrupt the class will be asked to leave lecture or discussion and may be reported to the Dean of Students.

Safety on Campus and in The Classroom:
For a list of emergency procedures for all types of incidents, please visit the website of the Critical Incident Response Team (CIRT): https://cirt.arizona.edu/case-emergency/overview

Also watch the video available at https://arizona.sabacloud.com/Saba/Web_spf/NA7P1PRD161/comm

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

Accessibility and Accommodations:
At the University of Arizona, we strive to make learning experiences as accessible as possible. If you anticipate or experience barriers based on disability or pregnancy, please contact the Disability Resource Center (520-621-3268, https://drc.arizona.edu) to establish reasonable accommodations.

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. Selling class notes and/or other course materials to other students or to a third party for resale is not permitted without the instructor's express written consent. Violations to this and other course rules are subject to the Code of Academic Integrity and may result in course sanctions. Additionally, students who use D2L or UA email to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of student email addresses. This conduct may also constitute copyright infringement.

UA Nondiscrimination and Anti-harassment Policy:
The University is committed to creating and maintaining an environment free of discrimination, 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. Name and pronoun usage statement. This course supports elective gender pronoun

use and self-identification; rosters indicating such choices will be updated throughout the semester, upon student request. As the course includes group work and in-class discussion, it is vitally important for us to create an educational environment of inclusion and mutual respect. Inclusive Excellence is a fundamental part of the University of Arizona's strategic plan and culture. As part of this initiative, the institution embraces and practices diversity and inclusiveness. These values are expected, respected and welcomed in this course.

Additional Resources for Students:
UA Academic policies and procedures are available at:
http://catalog.arizona.edu/2015-16/policies/aaindex.html
Student Assistance and Advocacy information is available at:
http://deanofstudents.arizona.edu/student-assistance/students/student-assistance
Office of Diversity (http://diversity.arizona.edu) http://www.health.arizona.edu/counseling-and-psych-services

Subject to Change Statement: The information contained in the course syllabus, other than the grade and absence policies, may be subject to change.