# SIE265 - Engineering Management I Spring 2019

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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 Prerequisites: MATH 124 or 125. Students are expected to be reasonably proficient with Microsoft Excel.

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. No late assignments will be accepted. 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. 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.

#### **Absences and Class Participation Policy:**

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

Participating in the course and attending lectures and other course events are vital to the learning process. Students are responsible for all materials covered during class. As such, attendance is strongly recommended. Occasionally, attendance may be required for special events such as Project Presentations. Students who miss class due to illness or emergency are required to bring documentation from their health-care provider or other relevant, professional third parties. Failure to submit third-party documentation will result in unexcused absences.

**Required Text:** Contemporary Engineering Economics, 6th Edition, by Chan S. Park. Note that the 4<sup>th</sup> or 5<sup>th</sup> 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-89 or TI nspire. No laptops or PDAs will be allowed for exams.

## Required Extracurricular Activities: None

#### **Final Examination:**

The Final Exam is scheduled for Thursday May 9th from 10:30 AM – 12:30 PM in the regular classroom. **Note: attendance at the final is required.** The Final Exam Regulations can be found at https://www.registrar.arizona.edu/courses/final-examination-regulations-and-information, and Final Exam Schedule can be found at http://www.registrar.arizona.edu/schedules/finals.htm

## **Grading Scale and Policies:**

The grade for this course will be determined as follows:

60% - Exams

30% Final Exam- Thursday May 9th 10:30 AM – 12:30 PM.

Note: attendance at the final is required.

30% - Midterms

15% - 1st Midterm Exam- Friday February 15th

15% - 2<sup>nd</sup> Midterm exam- Friday March 22nd

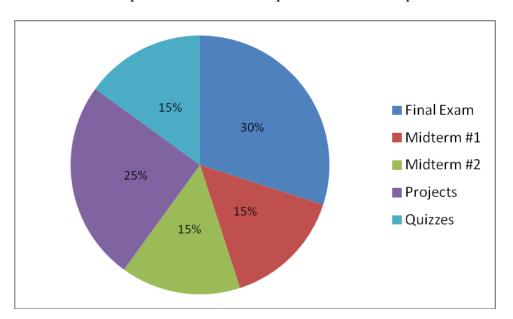
One page of notes on 8.5" x 11" paper (both sides) are allowed for each exam.

## 25% - Projects

There are 9 assignments due during the semester. Each assignment is equal weight except Project 9 which is worth 2x the other assignments. Note: Honors Students have an extra assignment.

# 15% - Quizzes

In addition, there are multiple on-line quizzes. These quizzes are open for two attempts each. Best score is recorded. Note: The first three quizzes and the Ethics quiz are worth more points.



Final Grades for this course will be computed as follows:

>90% A

>80% В

 $\mathbf{C}$ >70%

>60% D

<60% E The following table shows the due dates for all material:

# SIE/ENGR 265 Spring 2019 Calendar

Assignment	Due Date
Project 1	January 18
Quiz 1	January 23
Project 2	January 30
Quiz 2	February 6
Project 3	February 8
Quiz 3 and Quiz 4	February 13
Midterm 1	February 15 (9:00 am – 9:50 am)
Project 4	February 25
Quiz 5	March 11
Project 5	March 13
Quiz 6	March 15
Quiz 7 & Quiz 8	March 20
Midterm 2	March 22 (9:00 am – 9:50 am)
Project 6	March 25
Honors Project Part 1	March 29 Midnight
Project 7	April 3
Project 8	April 15
Quizzes 9 through 14	April 15
Honors Project Part 2	April 19 Midnight
Project 9	April 26
Quizzes 15 through 23	April 29
Final Exam	May 9 (10:30 am – 12:30 pm)

All assignments due at 9:00 am unless otherwise noted

# **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:**

#### All students:

- Check D2L regularly.
- Turn-in assignments by due date/time (allow for D2L "glitches").
- Treat instructors, speakers and peers with respect.
- Always behave in an ethical manner.
- Students are encouraged to use laptops for note taking and other class activities.
- All students are required to abide by the Student Code of Academic Integrity: Student Code of Academic Integrity
- Threatening behavior by students is strictly prohibited. For detailed information see: Threatening Behavior by Students and Disruptive Behavior in an Instructional Setting

## On-campus students:

- Arrive on-time, turn off cell phones, beepers, social networks, etc.
- Attend class regularly and participate in class discussions and activities.

#### Distance Ed students:

• View lectures in a timely manner, preferably within 48 hours of the lecture date.

## **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.

If you have reasonable accommodations, please plan to meet with me by appointment or during office hours to discuss accommodations and how my course requirements and activities may impact your ability to fully participate.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

#### **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: <a href="http://deanofstudents.arizona.edu/academic-integrity/students/academic-in

The University Libraries have some excellent tips for avoiding plagiarism, available at http://www.library.arizona.edu/help/tutorials/plagiarism/index.html.

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 e-mail to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of student e-mail 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; 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

Student Assistance and Advocacy information is available at http://deanofstudents.arizona.edu/student-assistance/students/student-assistance

## **Confidentiality of Student Records**

All student records are held in strict confidence. Additional information can be found at http://www.registrar.arizona.edu/personal-information/family-educational-rights-and-privacy-act-1974-ferpa?topic=ferpa

# **Subject to Change Statement:**

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