

IEE 454 Risk Management (In-Class In-person) – Syllabus [F21C]

Welcome All!

I am looking forward to a great semester! This is the syllabus for the course. Read, understand and discuss it carefully and make sure you understand fully. No word or sentence is colored or underlined on purpose (except the some titles), as every line is important!

All students should have access to the Power Point slides, lectures, readings and any additional readings on Canvas. Make sure to complete all the requirements in the initial module to unlock the course content.

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Office hours: Refer to Canvas Office Hours Section

Course Description: Methods and tools for identifying, assessing, mitigating and controlling risk in business and engineering design activities. Decision tools include cost-benefit analysis, decision trees, value of information, Bayesian statistical decision making, fault trees, and failure modes and effects analysis (FMEA).

Pre-requisite: Prerequisite(s): Engineering major OR Engineering Management Minor/Concentration; ECN 221 or IEE 380 with C or better; minimum junior standing OR Visiting University Student

COURSE OBJECTIVE AND EXPECTED LEARNING OUTCOMES

The objective of this course is to learn and apply the methods and tools for identifying, assessing, mitigating and controlling risk in business and engineering design activities. Decision tools include cost-benefit analysis, decision trees, value of information, Bayesian statistical decision making, fault trees, and failure modes and effects analysis (FMEA). This course is a foundation course to our Industrial Engineering program at ASU as such it addresses the concepts needed for a successful system planning, design and build process.

The foundation for the course is based upon the following notions:

- Risk is present throughout or lives
- All projects have risks
- Achieving efficient and effective risk management
- Issue and crisis management arise from risk management failure
- Risk is not always negative

At the completion of this course, you will be able to:

- understand how to incorporate risk minimization principles and practice in engineering design
- manage various risks through assessment methods and mitigation strategies (risk responses)
- get familiar with the modern methods of risk engineering to ensure safe, reliable, and profitable products
- manage financial, schedule, and performance risks in projects
- differentiate traditional risk management and enterprise risk management

REQUIRED TEXTBOOK

Wang, John X. and M. L. Roush, What Every Engineer Should Know About Risk Engineering and Management, CRC Press, 2000.

PMBOK guide is also used (but the book is not required to purchase) and it is accessible with no charge to ASU students from ASU library. Find the link on Canvas site.

COURSE TIME COMMITMENT AND SUCCESS TIPS

This 3-credit course requires approximately 135 hours of work. Expect to spend 3+ hours per day over a 5-day week preparing for and actively participating in this course.

- You are expected to watch the videos. Students who try to get through the course without watching the videos always earn a failing grade the course.
- Suggestion: Taking notes directly on the lecture slides is a proven, effective means of material retention. Use flagging and storytelling to retain the material
- You have an advantage that the campus students do not: You can view the lecture videos as many times as you want! Take advantage of that fact. If you do not understand something, watch the video again, stop as you see necessary to digest the material
- Make sure you do not miss quiz, assignment and discussions due date.

I want you all to be successful, and I believe you will be! Do the followings (more on Canvas site) that will potentially lead your success both in the course and in your professional development;

- make a study plan and go with your own tempo
- make sure to complete the necessary modules before the exam dates
- create a study and/or assignment schedule to stay on track
- check the course canvas site daily
- read announcements and act timely
- read and respond to course email messages as needed
- complete assignments by the due dates specified
- communicate regularly with your instructor and peers
- be aware of the course materials and access them on time
- inform instructor in a timely fashion for any issues
- cramming before the exam does not help
- not only do your part in a project, ensure the validity of the entire project
- get involved in the content and classmates through Yellowdig peer platform

SCHEDULE

A detailed schedule of lecture topics, required reading, assignments, and exams is not going to be posted separately on Canvas. The schedule and this syllabus may be subject to change with reasonable advance notice. Your responsibility is to cover and understand all the required material before each exam, quiz and assignment dates.

CANVAS, YELLOWDIG, ZOOM

CANVAS

All course materials will be posted on the Canvas site for this class. You are mandated to complete the Module 0 and Links and Tools and other modules (if applicable) first to be able to unlock the course content modules. Your ASU courses can be accessed by both my.asu.edu and asu.instructure.com ([Links to an external site.](#)); bookmark both in the event that one site is down. You are going to have access to course Canvas Site by the close of business on the first day of the classes officially starts. All lecture slides, readings, homework, class schedules, and other items will be posted there.

ZOOM

Zoom is the primary synchronous communication mean for faculty office hours, individual or group meetings and also class meetings(if applicable)- like course introduction and icebreaker (if the instructor deem necessary for any reason). You must familiarize yourself with Zoom features and also where to find the correct links. All the links are on Canvas.

YELLOWDIG

You also need to enroll Yellowdig for this class. This course uses a discussion platform called "Yellowdig" for general questions and comments about the course in addition to communicating with your fellow classmates. Prior to posting a question or comment, check the syllabus, check announcements, and check existing posts on yellowdig to ensure it's not redundant. You are encouraged to respond to the questions of your classmates to build a community and create class synergy. This platform is used by students to help each other and by TAs (if applicable) to help students with their assignments and other questions. General questions about assignments will not be answered by email; instead, post your questions to peer platform and they will be answered there. While there, help someone else with their question. If your issue cannot be resolved via the platform, see a TA, UGTA or the Instructor for help during office hours. Think of Yellowdig mostly a "Professor-free" environment, where you learn from peers, interact with course content and create a group synergy and even remind each other due dates. This will save time and effort for you, class and the instructor. Email questions of a personal nature directly to your faculty and/or TA (if applicable). Your interactions will be good indicators for the instructor that the students are engaged with the class and class content. There is scoring in yellowdig where you will collect points with your responses and comments to other students. Do not share posts for the exam, quiz, assignment, playposit content; like questions, solutions and others. Doing so will be considered an academic integrity policy violation.

E-MAIL CORRESPONDENCE

ASU e-mail is an official means of communication among ASU's students, faculty, and staff (refer to [SSM 107-03](#)). Students are expected to ensure that e-mail is accessed, read, and acted upon in a timely fashion. Students bear the responsibility of missed messages and should check their ASU-assigned e-mail on a regular basis. You **MUST** send all email from your official ASU email account. Emails not sent from that account will be automatically filtered, deleted, or best case ignored to keep your privacy and education confidentiality. Messages sent through Canvas Inbox or a personal and/or third-party email account (like icloud, gmail, yahoo and all others) do not get a response. Also, do not use SpeedGrader comments section to communicate with the instructor. All correspondence is needed to be kept in the same domain to ensure archiving and documenting. Do not forward your official ASU.edu emails to third party as you might not get Canvas announcements and faculty emails.

All instructor correspondence is sent to your ASU email account. If you have it forwarded elsewhere, you may miss important information. Not forwarding your ASU email at the first place is highly suggested. Always include the e-mail subject line such that it facilitates the process. One such example can be "IEE XXX" followed by a descriptive subject line (e.g., "IEE XXX question about the homework 1"). Expect a response in the second business day after the day you emailed. The instructor has a workflow and teaching/grading tempo just like the students. If do not receive any response, kindly follow up if you think the problem is not solved. Check if your problem is already addressed with announcements and/or peer platform post. If you think, the concern is time sensitive (meaning can't wait until the second business day), start your subject with phrase "URGENT". Always include course name and number, online or in-person with your name and last name.

Course Canvas Inbox, SpeedGrader Comments section and Piazza platform are not direct ways of communication with the instructor in this course for personal and time-sensitive situations. The best way to directly communicate is your instructor's official asu.edu email.

CALCULATORS

You will need a calculator for exams. A basic calculator will suffice most of your needs for calculations. You may not use a TI-Nspire or an internet-capable calculator during exams in this course. If you do, you will receive a score of 0 on that exam, and you may be reported for an academic integrity violation.

REQUIRED: APPROVED PHOTO ON FILE

Online students must have an approved photo on file with Sun Devil Card Services (additional information at [“ID photos for ASU Online students”](#)).

This university requirement supports academic integrity. The photo ID that you provide for exams will be compared with the photo on file. You will receive a “0” for all exams taken without a photo on file. The first exam comes quickly, so you should start the process immediately. If you are an international student in countries other than US, a government issued (not employer and others) ID or passport with a photo is enough for the exam.

GRADING POLICY

There is no curving in class or exams. The course grade will be guaranteed based upon the total points each individual student achieves in the followings. The detailed instructions and due dates for projects and assignments (like power point presentations, quizzes, literature reviews) will be communicated separately on Canvas. You may receive a EU or EN depending on your performance and engagement. Y grades are not available in this course.

Your work is weighted for your course average as follows:

Category	Points available	Weight
Exam 1	100	%70
(not cumulative) Exam 2	100	
(not cumulative) Exam 3	100	
Pre-Literature Review	20	%20
Literature Review	80	
Activities (lowest will be dropped)-Pop-Quizzes (including Quiz 0s) (lowest will be dropped)	50	%10
Total Available	450	%100

Be assured that no one with an average lower than your average received a higher grade!

As you can see projects and Quizzes are an integral part of the course collectable points, make sure you submit a professional write-up and comply with specific instructions. There will be no make-up or extra opportunity to collect points. However, extra credits will be disseminated in some of the exams, that means you can collect >100 points from the exams.

Extra credit work is not available in this class. If you need honors contract, communicate early in the semester, there might be some opportunities. If you dispute the grading of your work, you will have three calendar days after graded work is returned to request a review; instructions will be posted on Canvas. When your request is received, a meeting

will be scheduled if needed. No review can be done after the following exam, so plan accordingly. You do not need to submit any forms to make a review, this eliminates extra step to take.

Grade disputes must first be addressed by discussing the situation with the instructor. If the dispute is not resolved with the instructor, the student may appeal further. However, the instructor maintains discretion over final grades. If a student disagrees with the grading, that student has the right to confer with the TA/grader or instructor before the conclusion of the next class period after the initial grade is recorded to discuss concerns.

Final grades are not posted, final questions and answered can be reviewed only after the following semester starts.

Important Note about Grading Disputes: According to the academic integrity code, it is an academic violation to bring up the impact of a course grade on your enrollment status, graduation, scholarships, job prospects, etc. as an explicit or implicit, direct or indirect, written or spoken attempt to influence a change in announced grade. Therefore, you are strongly advised against approaching me or the course TA/grader with grading disputes that are unrelated to actual academic achievement and specific assessment (such as exams, quizzes, homework or projects), as such incidents will be forced to report these occurrences as potential academic code violations. Do not contact (verbal or email, direct or indirect) instructor for any grade or point bumps at the end of the semester, this is a serious academic integrity violation.

You are guaranteed a course grade per the following:

Course Average	$X \geq 100\%$	$90\% \leq X < 100\%$	$80\% \leq X < 90\%$	$70\% \leq X < 80\%$	$60\% \leq X < 70\%$	$X < 60\%$
Course Grade	A+	A	B	C	D	E

MAKE-UP POLICY

Assignment due dates are on the schedule and fixed. All submissions are due by 1159 pm-AZ on the declared day. There will be no deadline extensions; Late homework/assignment loses 10% per day from the final score. Three days after the due date, the assignment is not going to be graded. Carefully check the difference between due dates and availability dates in each assignment, quiz or other requirements. In some case, instructor has the authority to extend the due dates deemed necessary.

Concept Quiz due dates are on the schedule. Quizzes are due by 1159 pm-AZ. There will be no deadline extensions or make-ups. There might be extra quizzes if the instructor sees necessary. In that case, the total quiz weight is not going to be impacted. There is no make up for quizzes.

Exam dates are on the schedule and fixed in Canvas. It is a good idea to follow the most current announcements as things might change slightly. The opportunity for a make-up exam will be available in the following situations: [all needs documentation, an email from the student is not an official documentation]

1. Required class absence due to university-sanctioned activities (refer to [ACD 304-02](#)). It is your responsibility to notify the Instructor *early in the semester* about the need to be absent from class due to participation in a university-sanctioned activity.
2. Religious observance (refer to [ACD 304-04](#)). It is your responsibility to notify the Instructor *at the beginning of the semester* about the need to be absent from class due to a religious observance.
3. The death of an immediate family member, accident, or other emergency. Please work with Student Advocacy and Assistance (<https://eoss.asu.edu/dos/srr/StudentAdvocacyandAssistance>) for guidance. Once I receive notification from Student Advocacy and Assistance, you will have the opportunity for a make-up.

4. Military deployment or other military service that prohibits taking the exam. Excused absences related to missed class due to military line-of-duty activities that are in accord with [ACD 304-11](#), "Missed Class Due to Military Line-of-Duty Activities," and SSM 201-18, "Accommodating Active Duty Military"

You must provide verifiable documentation for all of the above situations. For 1 and 2, it is your responsibility to notify me at the beginning of the semester. For 3, work with Student Advocacy and Assistance for documentation; this will simplify communication with all your faculty in your other courses. For 4, let us plan when you first learn about it, and let us have a contingency plan but before the deployment a documentation is still needed.

If you are unable to take an exam or quiz due to illness, you must (a) inform me in email the instructor before the exam window opens. (b) produce an authorized, verifiable doctor's excuse within 3 days of the missed exam. If (a) and (b) are in compliance, you will take the exam again at a later date. This might require you to take an Incomplete grade and fulfill the requirement even after the semester. If you miss an exam for a non-emergency situation (forgetting, last minute unexpected IT crisis due to your lack of personal communication etc), you will receive a score of "0" for that exam.

Students who are very ill and unable to attend an exam, or on a date when a printed assignment must be turned in to me on the due date must notify me by with an email prior to the due date, and provide a doctor's note with signature from the ASU Health Clinic or a licensed MD doctor (no nurse practitioners) as explained. The exam needs to be taken in any case since the final exam is not total cumulative in terms of content covered.

If you do not take the Final Exam, you will receive a course grade of "I" In order to pass this course, you must take the Final Exam.

SYLLABUS QUIZ AND CONCEPT QUIZZES (QUIZ 0)

The syllabus and concept quizzes are in Canvas. These quizzes do not use online proctoring (see below). You must complete a syllabus to unlock lecture materials. The purpose of concept quizzes and playposit questions is to test lecture, homework, and reading concepts. If you attend lectures, do the homework, and read the textbook according to the schedule, you will do well on the quizzes/playposit. You are expected to complete the quizzes/playposit questions by yourself. You are also expected to not share questions and/or answers with others while the questions are available to be taken by other students. If you have a question, email me or UGTA/TA if applicable.

Early quizzes or exams will not be given except in provable, extreme circumstances. Personal travel, family or friend visitation, etc. will not qualify. Libraries and other locations in all cities have internet. Just plan to sneak away for a short period of time to take the quiz.

EXAM PROCTORING

This online course uses online proctoring for exams. Online proctoring records both your computer screen activity and the physical room environment in order to mimic in-person proctoring conditions. The recordings are captured to help ensure academic integrity. Check your Canvas page for extremely useful and detailed information.

Online proctoring records your face, your computer screen activity and your physical room environment in order to mimic in-person proctoring conditions. The recordings are captured to help ensure academic integrity. The proctoring service will flag your exam if suspicious activity is detected or if exam rules are broken. These recordings will be reviewed for exam rule compliance and academic integrity.

You have to get familiar and have the necessary hardware, software and preparation for the exams with RPNOW. Here are some basic rules and additional specific rules will be communicated prior to exams;

- You may use your handwritten one-page (standard 8,5-11) reference sheet for each exam (you will need to upload this 15 minutes after your submission, the link will be provided on Canvas)
- You must have a photo ID. Get an ASU Sun Card if you don't have one: <https://cfo.asu.edu/cardservices-suncard>
- You must have a roster photo uploaded to ASU
- Your face and eyes must be on camera at all times
- You must do a complete and thorough room scan (360 degrees)
- You must be alone in the room, no one must come into room during the exam
- You must have a calculator (if necessary) You may not use a TI-Nspire, and internet-Wi-fi capable ones
- You may not use your cell phones. It must be in another room
- You may not be on-line on any other devices
- You may not wear headsets or earplugs
- You may not have any windows open other than the exam window
- You may not leave the room
- You may not wear a watch of any kind. The exam has a timer that is visible.
- You may not discuss the exam with any other student while the exam is open/"live"
- You may not post exam questions anywhere online, in text messages, or reproduce the exam questions in any way at any time, even after the exam closes.
- You may not take photos or screen shots of any portion of any exam at any time, even after it closes. You will be able to see the full questions when the exam closes.

Forgetting the exam instructions is not a valid excuse or reason for the violation. If any of the above musts be violated, you will receive a zero on the exam. Should any of the above may not occur, you will receive a zero on the exam and be reported to Academic Integrity Officer (AIO) for an academic integrity violation with the recommendation that your final course grade be lowered a full letter grade. Additionally, you may be suspended or expelled from ASU. After that moment, the process is not run by the instructor. Academic integrity is taken very seriously by both faculty, administration and leadership.

IT HELP

To help ensure that everything will function properly, you must complete a practice exam before the first exam. Additional information about the online proctoring service is posted with class materials. If you need assistance, contact the ASU Help Desk for assistance: access 24/7 live chat, create a case from your My ASU Service Center, or call 855-278-5080. More details are posted in course Canvas site. For technical support, use the Help icon in the black global navigation menu in your Canvas course or call them. Representatives are available to assist you 24 hours a day, 7 days a week. Make sure you provide your ticket number for any technical problem you will encounter, including exams.

EXAM INSTRUCTIONS

There are pre-exam preparations that apply to every online exam. In addition, there will be exam-specific instructions for each exam that address exam time, permissible materials, and other exam information. Exam instructions will include, but not be limited to:

- You must have an approved photo on file to confirm your identity.

- You must complete (360 degrees) a room scan of your testing area that shows the entire work environment. Otherwise you will be in violation of the exam instructions, and you may also be in violation of ASU's Student Academic Integrity Policy. Exam points may be deducted for violating exam instructions.
- You must not have access to a cell phone, smart watch, TI-Nspire calculator, or other internet-capable device during the exam. If a cell phone, smart watch, TI-Nspire calculator, or other internet-capable device is seen out in any way or is accessible during an exam, you will be in violation of the exam instructions, and you may also be in violation of ASU's Student Academic Integrity Policy. 10% Exam points may be deducted for violating exam instructions.

Expected Classroom Behavior

Expectations for classroom behavior apply to in-person, on-line and iCourse classes and encompass both virtual and in-person interactions. If the class is cancelled or delayed, the instructor will make announcements or pre-arrangements to let the students know beforehand. If this does not happen, then students need to wait at least 15 minutes for the instructor unless they are directed for otherwise by someone from the academic unit. Students can leave the classroom after 15 minutes if the instructor or someone in the academic unit show up.

Students are entitled to receive instruction free from interference by other members of the class. An instructor may withdraw a student from the course when the student's behavior disrupts the educational process per Instructor Withdrawal of a Student for Disruptive Classroom Behavior.

Appropriate online behavior (also known as netiquette) is defined by the instructor and includes keeping course discussion posts focused on the assigned topics. Students must maintain a cordial atmosphere and use tact in expressing differences of opinion. Inappropriate discussion board posts may be deleted by the instructor.

Policy Against Threatening Behavior

Students, faculty, staff, and other individuals do not have an unqualified right of access to university grounds, property, or services. Interfering with the peaceful conduct of university-related business or activities or remaining on campus grounds after a request to leave may be considered a crime. All incidents and allegations of violent or threatening conduct by an ASU student (whether on- or off-campus) must be reported to the ASU Police Department (ASU PD) and the Office of the Dean of Students, per ASU policy ([SSM 104-02](#)). Note that "conduct" encompasses both in-person and virtual interactions.

DISABILITY ACCOMMODATIONS

Suitable accommodations will be made for students having disabilities. Students needing accommodations must register with the ASU Disabilities Resource Center (DRC) and provide documentation of that registration to the Instructor. Students should communicate the need for an accommodation in sufficient time for it to be properly arranged. Campus-specific location and contact information, as well as information on eligibility and documentation policies, can be found at the [ASU Disability Resources website](#).

Accessibility Statement

In compliance with the Rehabilitation Act of 1973, Section 504, and the Americans with Disabilities Act as amended (ADAAA) of 2008, professional disability specialists and support staff at the Disability Resource Center (DRC) facilitate a comprehensive range of academic support services and accommodations for qualified students with disabilities.

[Qualified students with disabilities may be eligible to receive academic support services and accommodations](#). Eligibility is based on qualifying disability documentation and assessment of individual need. Students who believe they have a current and essential need for disability accommodations are [responsible for requesting accommodations and providing qualifying documentation](#) to the DRC. Every effort is made to provide reasonable accommodations for qualified students

with disabilities. Qualified students who wish to request an accommodation for a disability should contact the DRC by going to <https://eoss.asu.edu/drc>, calling (480) 965-1234 or emailing DRC@asu.edu. See [ACD 304-08](#) Classroom and Testing Accommodations for Students with Disabilities. The name is changed to SAILS(Student Accessibility and Inclusive Learning Services) but the websites and emails are correct.

HARASSMENT AND SEXUAL DISCRIMINATION

Arizona State University is committed to providing an environment free of discrimination, harassment, or retaliation for the entire university community, including all students, faculty members, staff employees, and guests. ASU expressly prohibits discrimination, harassment, and retaliation by employees, students, contractors, or agents of the university based on any protected status: race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, and genetic information. Any occurrence of discrimination, harassment or retaliation will be reported, per ASU policy ([ACD 401](#)).

Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at <https://sexualviolenceprevention.asu.edu/faqs>.

As an employee of the University, I am considered a mandated reporter. As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services, <https://eoss.asu.edu/counseling>, is available if you wish to discuss any concerns confidentially and privately. Online students may also contact “360 Life Services” for counseling.

CIDSE UNDERGRADUATE INSTRUCTIONAL CONCERNS PROCESS

CIDSE has outlined the process to be followed to address instructional concerns and course-related complaints. Please refer to the guidelines posted at the CIDSE website: [Undergraduate-Instructional-Concerns](#) Academic Integrity and Copyright Laws

Academic Integrity

Students in this class must adhere to ASU’s Academic Integrity Policy, which can be found at <https://provost.asu.edu/academic-integrity/policy>. Students are responsible for reviewing this policy and understanding each of the areas in which academic dishonesty can occur. In addition, all engineering students are expected to adhere to both the [ASU Student Honor Code](#) and the [Fulton Schools of Engineering Honor Code](#).

All academic integrity violations will be reported to the Fulton Schools of Engineering Academic Integrity Office (AIO). The AIO maintains record of all violations and has access to academic integrity violations committed in all other ASU college/schools.

Academic honesty is expected of all students in all examinations, papers, laboratory work (if applicable), academic transactions and records. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the

transcript as a grade of XE), loss of registration privileges, disqualification and dismissal. For more information, see <http://provost.asu.edu/academicintegrity>. [Links to an external site.](#)

Additionally, required behavior standards are listed in the Student Code of Conduct and Student Disciplinary Procedures, Computer, Internet, and Electronic Communications policy, and outlined by the Office of Student Rights & Responsibilities. Anyone in violation of these policies is subject to sanctions.

Students in this class must adhere to ASU's academic integrity policy, which can be found at <https://provost.asu.edu/academic-integrity/policy>). Students are responsible for reviewing this policy and understanding each of the areas in which academic dishonesty can occur. In addition, all engineering students are expected to adhere to both the ASU Academic Integrity [Honor Code](#) and the Fulton Schools of Engineering [Honor Code](#). All academic integrity violations will be reported to the Fulton Schools of Engineering Academic Integrity Office (AIO). The AIO maintains record of all violations and has access to academic integrity violations committed in all other ASU college/schools.

ASU "Two Strike" Policy

ASU tracks Academic Integrity issues across the campuses. So, one strike in English and another in IE and you will be asked to depart from the College of Engineering for at least a year.

Examples of activities permitted in this course:

- You may and should work with other students in person and on Piazza to do the homework problems.
- You may post your individual homework problem statement on Piazza.
- You may discuss the quiz questions on Piazza

Examples of activities forbidden in in this course:

- You may not use Chegg.com, CourseHero.com or any similar resource to find answers or solutions to any class work: homework, quizzes, or exams.
- You may not simply copy your friends' answers to homework problems.
- You may not collaborate with another person(s) on concept quizzes, including sharing questions and/or answers while the quiz is available in Canvas (i.e., the "open" time window).
- You may not collaborate with another person(s) on exams, including sharing questions and/or answers while the exam is available in Canvas (i.e., the "open" time window).
- You may not have another person do any part of any homework, quiz or exam for you.
- You may not post course content to Chegg.com, CourseHero.com or a similar web site.
- You may not talk about exam questions on Piazza, simply ask for a review from your instructor before the next exam

If you do any of the forbidden activities above:

- You will be reported to the Dean's office for an academic integrity violation.
- The recommended sanctions will be a zero on the work item AND/OR one full letter grade reduction for your final course grade.

The list of forbidden activities above is not comprehensive. If you are not sure whether something you are doing violates ASU's Academic Integrity Policy, ask the Instructor. Unless specifically permitted above, an activity or resource is forbidden until the Instructor says it is permitted.

Students are entitled to receive instruction free from interference by other members of the class. An instructor may withdraw a student from the course when the student's behavior disrupts the educational process per Instructor Withdrawal of a Student for Disruptive Classroom Behavior.

Appropriate online behavior (also known as netiquette) is defined by the instructor and includes keeping course discussion posts focused on the assigned topics. Students must maintain a cordial atmosphere and use tact in expressing differences of opinion. Inappropriate discussion board posts may be deleted by the instructor. The Office of Student Rights and Responsibilities accepts incident reports from students, faculty, staff, or other persons who believe that a student or a student organization may have violated the Student Code of Conduct.

Diversity and Inclusion

ASU is proud of not whom it excludes but whom it includes. All diverse backgrounds and perspectives be well served in this course. If any of you have any concern/conflicts rising out of being diverse, please let me know so we can work it out for you. It is important for me that you make the most out of my class with a comfortable learning environment. If you already have established accommodations, please convey it to me at your earliest convenience.

Copyright

Course content, including lectures, are copyrighted materials and students may not share outside the class, upload to online websites not approved by the Instructor, sell, or distribute course content or notes taken during the conduct of the course (see [ACD 304-06](#), "Commercial Note Taking Services" and [ABOR Policy 5-308 F.14](#), "Student Code of Conduct" for more information). Course content includes, but is not limited to, lecture slides, written materials, assignments, homework, exercises, quizzes, and exams.

You must refrain from uploading to any course shell, discussion board, or website used by the course Instructor or other course forum, material that is not the student's original work, unless the students first comply with all applicable copyright laws; faculty members reserve the right to delete materials on the grounds of suspected copyright infringement.

All course content and materials, including lectures (Zoom recorded lectures included) are copyrighted materials. The assignment files, lecture example files, videos, and all other materials used in this course are the property of Arizona State University, Dr Daniel R. McCarville and Dr A. Kucukozyigit and are copyright protected. They can NOT be copied, given to a friend, uploaded to an internet site, or distributed in any way.

Course Evaluation

Students are expected to complete the course evaluation. The feedback provides valuable information to the instructor and the college and is used to improve student learning. Students are notified when the online evaluation form is available, and there might be announcements encouraging the students to participate.

Let us all have a fulfilling semester!

Course and Syllabus Disclaimer

Every attempt is made by the instructor to provide a syllabus that is complete, comprehensive and that provides an accurate overview of the course. However, unforeseen circumstances (e.g. conflict of schedule, cancellation of classes due to any reasons) may make it necessary for the instructor to partly modify the syllabus during the semester. This will affect the scheduling not the grading and absence policies. This may also depend, in part, on the progress, needs, and experiences of the

students attending the class. Any information in this syllabus (other than grading and absence policies) may be subject to change with reasonable advance notice. Remember to check your ASU email and the course site often for updates, announcements!

Course Topics (Tentative)

Introduction

Risk Management Definition, Overview,

RM steps and Risk Assessments

Risk Identification - Physics of failure

- Testing Reliability and Environmental Impact

- Fishbone Diagrams as a brainstorming tool

Risk Assessment

- Probability as it relates to Risk

- Fault Tree Analysis

- Event Tree Analysis

- Risk, Uncertainty and Safety (SF and SI)

Developing RRRS

- Failure Mode and Effects Analysis-1

- Failure Mode and Effects Analysis-2

- Redundancy and Fault Tolerance-1

- Redundancy and Fault Tolerance-2

- What are RRSs? Developing RRS

Risk in Project Environment

- Project Risk Management Overview - Introduction

- Uncertainty in Projects

- Project Schedule Risk Management - PERT and CPM

- Project Budget Risk Management

- Project Risk Management - Monitor and Control EVM

- Enterprise Risk Management - Procedures and Documentation

Financial Risk Management

- TVM and Interest

- CFD

- Financial Key Ratios

Miscellaneous

- Cyber Risk Awareness

- Risk Acceptance

- Risk Mitigation

- Safety risk management

Security Risk Management

ISO 31000-2018 RM Principles and Guidelines

Online: Crisis Management-Dr Dan

Online: Cyber Security and awareness –expert talk- Dr Pinto

Online: Monte Carlo Simulation-Dr Dan

Online: Quality System Project - Reyman

Online: Robust Parameter Design -Dr Dan