

# IEE 456/556 Introduction to Systems Engineering

## Syllabus [S22T]<sup>1</sup>

[Any information in this syllabus (other than grading and absence policies) may be subject to change with reasonable advance notice.]

### 1)Welcome All!

I am so excited to start this course. I am looking forward to a great semester! This is an in-person course that is going to be conducted in the classroom during ASU scheduled days, times, and location.

This is the syllabus for your course. Read, clarify, discuss it carefully and make sure you understand fully. No word or sentence is colored or underlined in the sentences (except for some titles), as every line is important for your success!

2) All students should have access to pdfs of the Power Point slides, lectures, readings, video links and any additional readings on Canvas. Make sure to complete all the requirements in the initial module (Module0) to unlock the course content.

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**Office hours:** See Canvas for Office Hours

**Course Description:** This course addresses the concepts needed for a successful system engineering process. Topics include successfully bringing large scale systems to completion on schedule and on budget. standards driving Systems Engineering such as ISO 15288 and ISO 12207 for software, EIA 632 and IEEE 1220, the Systems Engineering professional association certification topics from INCOSE, the modern new product development process, systems engineering modeling techniques, cost estimating techniques, and finally an introduction to risk and risk analysis.

**Pre-requisite:** Undergraduate Engineering juniors and seniors. Graduate students are expected to have a background in and understanding of large-scale systems.

### ***COURSE FOUNDATION***

3)This course is the introductory course to our Systems Engineering curriculum at ASU. As such it must address all of the concepts needed for a successful system engineering process. The foundation for the course is based upon the following notions:

- The course must be directly related to ISO 15288 and EIA 632 as the standard of choice.
- The course must be directly related to INCOSE as the handbook of choice.
- The course must be based upon IEEE 1220 as the foundation of choice.
- The course must be timely and relevant to the practicing Systems Engineer.
- Yet highlight the solid, analytical foundation needed for success.
- The course must be engineering-oriented.

<sup>1</sup> This syllabus is subject to change (only by the instructor) as needed through the semester

- The course must take a complete system engineering view.

### ***COURSE OBJECTIVE AND EXPECTED LEARNING OUTCOMES***

4)At the completion of this course, students will be able to have:

- an understanding of the Systems Engineering Concept, scope and scale
- an understanding of the applicable standards and foundations
- an understanding of how the professional association of INCOSE applies Systems Engineering principles
- an introduction to Large Scale Systems and all the phases needed for success
- an introduction to CMM and CMMI
- an introduction to a modern New Product Development process
- an understanding of developing a complete systems view
- an understanding of static and dynamic modeling techniques
- an introduction to the modern cost estimation technique of CoSYSMo and COCOMO
- an introduction to variability and making decisions under certainty

### ***SUGGESTED TEXTBOOK***

5)No textbook required.

Instead of using a specific textbook, the class is going to cover a broad range of topics in system engineering. Students can use class slides as learning and reviewing materials. Refer to the instructions how to access to the copyright protected material, if you have any technical problems contact directly to the provided name for solutions. Students will also attain ANSI ISO 15288 standards through their ASU account. Details access instructions will be given later.

### ***COURSE TIME COMMITMENT AND SUCCESS TIPS***

6)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.

- Suggestion: Taking notes directly on the lecture slides is a proven, effective means of material retention. Attend lecture and participate in the discussions, this will also increase your material retention. You can also try taking digital notes if that works best for you
- You are expected to watch attend course live. You have the option to listen in via Zoom, but this is not meant to be a regular practice for the students as the course is designed to be in-person.
- ASRs will be issued weekly for attendance. However attendance is not a part of course final grade.
- 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 dates as there will be late submission/completion penalties. (1% per hour)
- Once the due date passes three days, you will be able to earn points from that particular submission/work.
- You have an advantage that the online students do not: You can reach out to your Professor right before and after lecture times. Take advantage of that fact. If you do not understand something, try asking questions on yellowdig and office hours as well as TA/grader.

### ***COURSE DELIVERY MECHANISM***

This is an in-person and in-class course. The semester the fundamental delivery mechanism will be live lectures in the classroom during the ASU allocated times and days, but you will have the option to watch the live through provided Zoom links if you have any ongoing excuses like travel delays (beginning of the semester), exposure to someone positive with Covid, or yourself tested positive. The recording may be available for those students who miss the lectures due to Covid19 virus contraction or being exposed and quarantining upon student request.

You will have three in person and in class exams, weekly discussion board posts, or Literature Review (for graduate students) and group presentation (for undergraduate students).

7) I want you all to be successful, and I believe you can be! However, you need to do the followings (more on Canvas for you to read) 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
- create a study and/or assignment schedule to stay on track
- make sure to complete the necessary modules before the exam dates
- 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, TA(if applicable) and peers (on discussion platform)
- 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 really help
- not only do your part in a project, ensure the validity of the entire project (if you have team members)
- get involved in the content and classmates through Yellowdig discussion platform (if you have any)

## ***SCHEDULE***

8)A detailed schedule of lecture topics, required reading, assignments, and exams is going to be posted separately on Canvas. Teach plan will be available the first day on paper as well as on canvas. The schedule and this syllabus may be subject to change with reasonable advance notice. It is OK to adjust your learning tempo and speed (actually you must) according to how you think of your school- work-family balance. Your responsibility is to cover and understand all the required material (at least) once before each exam, quiz and assignment dates. No extra work or make-up will be given. Note that class sessions may be recorded, if recorded the recordings will be provided to enrolled students, and instructional support personnel. If you have concerns about being recorded, please contact the course instructor at the beginning of the course. Recordings may be used to accommodate student absences. If approved by the instructor. If you case is approved, request access by emailing TA

## ***CANVAS, YELLOWDIG AND ZOOM***

9) All course materials will be posted on the Canvas site for this class. You are mandated to complete the Module 0 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](https://my.asu.edu) and [asu.instructure.com](https://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. You also have to choose a topic, otherwise you will be assigned one.

## **ZOOM**

10) 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. Pay attention to Zoom netiquette. Office hours will also be conducted via Zoom. Any class meetings are going to be conducted via Zoom. It is the primary synchronous communication modality for faculty office hours, individual or group meetings and also class meetings (if the instructor deem necessary for any reason). You must familiarize yourself with Zoom features and also where to find the correct links.

## **YELLOWDIG**

11) 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. Make sure to tag (#) your posts so they are easy to filter later. You also need to use "labels" appropriately. More details are on your course canvas page.

12) 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 with peer interactions, see a TA, UGTA or the Instructor for help during office hours or just email them. Do not expect your Professor to answer and comment posts on this platform!

13) 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. It is a cumulative grade throughout the semester so do not be concerned if your score is low in the initial portions of the semester. You will increase your total through weekly maximums throughout the semester as you post each week. Do not share posts for the exam, quiz, assignment; like questions, solutions, answers and others like sharing your work. Doing so will be considered an academic integrity policy (AIP) violation.

## ***E-MAIL CORRESPONDENCE***

14) Your primary communication mean with your Professor is through office hours and email- not through yellowdig. 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 any 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, documenting and easy reach purposes. Do not forward your official ASU.edu emails to third party as you might not get Canvas announcements and faculty emails.

15) 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 to be managed. 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. Remember something you call urgent may not be really urgent from different viewpoints.

16) Course Canvas Inbox, SpeedGrader Comments section and Yellowdig 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 or office hours. Be professional and respectful in your email correspondences. If you are answering an email from the instructor "always use reply" so an email chain is created documenting the background of what happened.

### ***CALCULATORS***

17) We will do financial computations on a calculator. You will need a calculator for exams. Most students use a TI-83, 84 or 89 but any calculator with financial functions is sufficient. 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***

18) 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 your photo is missing. 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.

### ***SPRING 2021 B SCHEDULE AND DUE DATES (AZ TIME)***

19) Here is the schedule, the exact due dates are on Canvas. If you think the course is not right for you or you are having trouble catching up with the course content, comprehending the material, check the due dates for drop, course withdrawal or complete semester withdrawal. Advisor are the best contact point to help you figure out what to do in such situations.

### ***GRADING POLICY***

20) 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 or any others) will be communicated separately on Canvas. You may receive an EU, EN or I depending on your performance and engagement. Y grades are not honored in this course. If you miss any of two of the three exams, you will receive a failing grade from the course. Academic Status Reports (ASRs) are issued to track and monitor the student learning progression, please comply with the instructions communicated in it and see your advisor.

21) Your work is weighted for your course average as follows:

| Category                                                               |             |
|------------------------------------------------------------------------|-------------|
| Exam 1[in-person in-class] [100 ]                                      | 70%         |
| Exam 2(not cumulative) [in-person in-class] [100]                      |             |
| Final (not cumulative) [in-person in-class] [100]                      |             |
| Pre-literature Review [20] (only graduate students)                    | 20%         |
| Final Literature Review [80] (only graduate students)                  |             |
| Presentations [100] (only undergraduate students)                      |             |
| Yellowdig Engagement (earn weekly maximums, need to post weekly) [100] | 10%         |
| <b>Total Available 500</b>                                             | <b>100%</b> |

22) Be assured that no one with an average lower than your average received a higher grade! As you can see projects, assignments, yellowdig discussions 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 at the end of the semester. However, extra credits will be disseminated in some of the exams, that means you can collect >100 points from the exams. Use this opportunity. There will be built-in extra credit exams and assignments if you opt to attempt those questions and points. If you need honors contract, communicate early in the semester, there might be some opportunities.

23) Extra credit work is not available in this class to bump up your grade at the end of the semester. If you dispute the grading of your work, you will have three calendar days after graded work is returned to request a review. When your request is received, a meeting will be scheduled if needed. No review can be done after the following exam, so plan accordingly. Usually, office hours are the best times to carry out an exam review. Joining office hours is the best way for getting this done quickly. You can just click the office hours link during the dedicated faculty times and discuss your exam. You do not need to submit any forms to make a review, this eliminates extra step for you to take. There will be no make-up or extra opportunity to collect points. Not attempted and not completed assignments, quizzes or exams can't be completed all together at the end of the semester (no last-minute submissions for the past due assignments). Instructors must be fair to all students in the class and protect other student's rights too. This mechanism is established to prevent bottlenecks during the busy end of semester period.

24) 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.

25) Final exam questions are usually not posted; final questions and answers can be reviewed only after the following semester starts. There is no time between final date and grades are due to discuss concerns.

26) *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 (if applicable) with grading disputes that are unrelated to actual academic achievement, 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. This behavior will be reported to Dean's office.

27) You are guaranteed a course grade per the following: (EU, EN, I and Academic Integrity Violation grades are considered and evaluated case by case)

| 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 AND ATTENDANCE***

28) *Assignments and any submissions* due dates are on the schedule and fixed. All submissions are due by 1159 pm-AZ on the declared day on canvas. There will be no deadline extensions; Late homework/assignment loses 1% (one percent) per hour from the final submission score. Three days after the due date, the assignment is not going to be graded and you will receive a zero. Carefully check the difference between due dates and availability dates in each assignment, quiz or other submissions. In some case, instructor has the authority to extend the due dates deemed necessary. If you miss any of the exams, your make-up exam will be in-person and in-class (if you are approved to take a make-up). There will not be any online exams.

Attendance is encouraged by ASU and also expected. There will be an attendance sheet to sign but attendance is not a part of your final grade. ASRs will be issued based on your attendance to monitor and record your progress and engagement.

29) *Concept Quiz* due dates are on the schedule and on canvas. 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 initial quizzes as well.

30) *Exam* dates are on the schedule and fixed in Canvas. No late submissions for exams. It is a good idea to follow the most current canvas announcements (and student discussion board if applicable) as things might change slightly. You will have more than 24 hours to complete it, so use this time wisely. The opportunity for a make-up exam will be

available in the following situations: [however each situation 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". Work performed in the line-of-duty according [\[SSM 201-18\]](#)
5. Illness, quarantine, or self-isolation related to illness as documented by a ASU Health Clinic/health professional. Absences for illness, quarantine or self-isolation related to illness should be documented by a health professional and communicated to the instructor as soon as possible by email and/or joining office hours.

31) You must provide verifiable documentation for all of the above situations. For #1 and #2, it is your responsibility to notify the instructor at the beginning of the semester. For #3 and #5, 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. Work with your official commanding officer and Student Advocacy and Assistance for documentation.

Excused absences do not relieve students from responsibility for any part of the course work required during the period of absence. You have to seek guidance and instruction from the instructor for activities, assignments and make-up work.

32) If you are unable to take an exam or quiz due to illness, you must (a) inform and email the instructor before the exam window opens. (b) produce an authorized, verifiable doctor's (not nurse or nurse practitioner) excuse within 3 (three) days of the missed exam. If (a) and (b) are complying, you will be honored make-up the exam again at a later date. The weight can't be moved because each exam covers different material and not comprehensive. 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 preparation 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. Emailing your instructor does not mean an auto-approval, and you are not going to be approved if you are not complying with the outline process. But in any case, make sure to inform your instructor timely (informing does not mean approval)

33) If you do not take the Final Exam and if you are excused by the instructor, you will receive a course grade of “I” In order to pass this course, you must take the Final Exam beginning of the next semester.

### ***SYLLABUS QUIZ AND CONCEPT QUIZZES***

34) Syllabus and concept quizzes are in Canvas. There may be other pop-up quizzes during the lectures for extra credit. These types of quizzes might or might not be announced in advance. You must take the quizzes to unlock the content. The purpose of concept quizzes 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. You are expected to study for the pop-up quizzes. Personal travel, family or friend visitation, etc. will not qualify for exam or quiz excuse.

### ***EXAM PROCTORING***

35) The exams will be in-person, in-class and on-paper. The detailed instructions can be found on canvas. 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 nots 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 if this is a serious and/or repetitive. 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***

36) 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 Experience Center 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. Attaining a ticket number is required step but not sufficient to skip(excuse from) the test. You have to solve the problem with IT helpdesk within the exam window. More details are posted in course Canvas site.

### ***EXAM INSTRUCTIONS***

#### **Expected Classroom Behavior**

37) 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.

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## **Policy Against Threatening Behavior**

38)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***

39)Suitable accommodations will be made for students having disabilities. Students needing accommodations must register with the ASU Student Accessibility and Inclusive Learning Services(SAILS) 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 <https://eoss.asu.edu/drc/s>

## **Accessibility Statement**

40)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***

41)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](#)).

42)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>.

43) 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.

### ***SCAI UNDERGRADUATE INSTRUCTIONAL CONCERNS PROCESS***

44) SCAI 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**

45) 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. 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](#).

46) 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.

### **47) 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 yellowdig to do the homework problems, course content and grow your understanding with the content.(before the assessments and not specific questions/answers from assessments)
- You may post your individual homework problem statement on yellowdig and seek answers and assistance from your peers. .(before the assessments and not specific questions/answers from assessments)
- You may discuss the quiz preparation on yellowdig.(before the assessments and not specific questions/answers from assessments)

### **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.

48)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 one full letter grade reduction for your final course grade.

49)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. Check more information on Canvas and ASU websites.

### **Diversity and Inclusion**

50)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**

51)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.

52)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.

53)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 Dan Shunk 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**

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54) 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.

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### **Course and Syllabus Disclaimer**

55) 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!

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60)Course Topics (tentative)

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| <p><b>BLOCK1</b></p> <p><u>Module1</u><br/>Introduction to Systems Engineering</p> <p><u>Module2</u><br/>How would you define SE and Strategic Role of SE<br/>Overview of Strategic Planning</p> <p><u>Module3</u><br/>Strategic Role of SE Overview of Strategic Planning</p>                                                    | <p><b>BLOCK5</b></p> <p><u>Module 17</u><br/>SEMP and IDEF overview</p> <p><u>Module 18</u><br/>SE using IDEF</p> <p><u>Module 19</u><br/>UML Overview</p>                                                                            |
| <p><b>BLOCK2</b></p> <p><u>Module 4</u><br/>Standards Foundations for SE</p> <p><u>Module 5</u><br/>Systems Engineering Policy</p> <p><u>Module 6</u><br/>The House of Quality<br/>The Strategic NPD Process</p> <p><u>Module 7</u><br/>Stage-Gate Process</p> <p><u>Module 8</u><br/>Basic process for Defining requirements</p> | <p><b>BLOCK6</b></p> <p><u>Module 20-21</u><br/>Using BRM and BPMN and continued</p> <p><u>Module 22</u><br/>Static and Dynamic Intro</p> <p><u>Module 23</u><br/>COCOMO Software Estimations</p> <p><u>Module 24</u><br/>COSYSMO</p> |
| <p><b>BLOCK3</b></p> <p><u>Module 9</u><br/>Idea generation</p> <p><u>Module 10</u><br/>Configuration management</p> <p><u>Module 11</u><br/>DoDAF Overview</p> <p><u>Module 12</u><br/>Why Systems Fail? (top 10 reasons)</p> <p><u>Module 13</u><br/>CMM and CMMI</p>                                                           | <p><b>BLOCK7</b></p> <p><u>Module 25</u><br/>EVM and CAIV</p> <p><u>Module 26</u><br/>FMEA</p> <p><u>Module 27</u><br/>RCA, DMAIC and Lean</p>                                                                                        |
| <p><b>BLOCK4</b></p> <p><u>Module 14</u><br/>Overview of New Product Process</p> <p><u>Module 15</u><br/>Bob Beaver-Guest Lecture</p> <p><u>Module 16</u><br/>SE Tools</p>                                                                                                                                                        |                                                                                                                                                                                                                                       |