

# SYSE 530: Overview of Systems Engineering Processes

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## *Syllabus*

Spring Semester, 2023

Instructor: Dr. James Cale

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## Meeting Location and Time

- Physical Location: Behavioral Sciences (BHSCI) 103, Fort Collins campus
  - Lectures will be streamed live over Zoom and recorded for later viewing; the Zoom link will be provided through Canvas at the beginning of the course.
- Time: Monday evenings, 5:15–8:00 PM (MST)

## Prerequisites<sup>1</sup>

- Working knowledge of undergraduate communications principles and statistics
  - Can be fulfilled by: ECE 303/STAT 303 (Introduction to Communications Principles) or STAT 315 (Statistics for Engineers and Scientists)
- Undergraduate engineering mathematics, including calculus and linear algebra

## Required Text

B. Blanchard and W. Fabrycky, *Systems Engineering and Analysis, 5th ed.*, Upper Saddle River, NJ: Pearson Hall, 2011. ISBN: 9780132217354.

Additional technical content for this course will be provided via the instructor's lecture notes, displayed and/or written during lecture.

## Other Learning Materials

Additional technical content for this course will be provided via the instructor's lecture notes, displayed and/or written during lecture.

## Communication Policy

Questions on the course material can usually be answered most quickly via Canvas messaging or email; this is the preferred method when possible. The instructor or TA will respond to your inquiry within 36 hours (but typically sooner). For more in-depth questions, you may choose to schedule a Zoom meeting with the instructor or TA. Important: this is a *graduate-level course*; questions/office hours will not be used to “walk you through” assignments. Office hours are for additional clarification of course content if needed.

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<sup>1</sup>Contact the instructor if you have questions on the prerequisites or need approval based on other coursework.

## Grading Weights

Quizzes:	15%
Mid-term Exam:	40%
Project Presentation Delivery:	10%
Project Slides and Calculations:	35%

## Quizzes

Quizzes over the lecture material will be posted within Canvas and will consist of questions on the text and/or shorter analytical problems with multiple-choice answers. Quizzes will generally be open for at least one week (details will be provided in the Quiz assignment announcements). No late quiz solutions will be accepted.

## Mid-term Exam

There will be a mid-term exam in this course, which will be released on Canvas on Sunday, **March 5, 2023**, before midnight. The exam will be “open-book, open notes” and you will have one week to submit your solution. The mid-term exam problems will be based on the material discussed in lecture, the textbook, and quizzes. No make-up exams will be given, except possibly under severe extenuating circumstances. If unable to make a deadline or comply with the time constraint for any reason, contact the instructor at least five days beforehand.

## Final Project

This course includes a final project, which demonstrates your knowledge of the class material on an example (real or fictitious) project. Final projects will be done in groups. The deliverables for the project are: a slide presentation of your summarized content, documentation of your supporting calculations, and delivery of your presentation to the class. (Detailed project instructions will be provided after the first class session). Class presentations will be held during normal class time on May 1, 2023 and May 8, 2023.

*All* final project presentations will be due by 11:59 PM on April 30, 2023 regardless of which day your team is presenting. No late presentations or edits to your presentation will be accepted after the due date.

## Office Hours<sup>2,3</sup>

- Office hours for the instructor or TA can be scheduled by appointment upon the student’s request, and are held via Zoom teleconference only.
- It is preferred that you contact the TA to seek an answer to your question first; failing that, contact the instructor.

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<sup>2</sup>Messaging through Canvas or email is typically the best (fastest) way to obtain answers to most questions

<sup>3</sup>There is a one hour per week limit on Zoom office hours per student.

## Working Together

Studying together in this class is encouraged. However, any individual assignment (quizzes, mid-term exam) *must be solely your own work*. Solutions will be checked to ensure academic honesty. Academic misconduct has serious consequences (see below).

## Final Grade Assignments

Grade	Score
A+	96.67–100.00
A	93.33–96.66
A–	90.00–93.32
B+	86.67–89.99
B	83.33–86.66
B–	80.00–83.32
C+	76.67–79.99
C	70.00–76.66
D	60.00–69.99
F	0.00–59.99

## Academic Integrity

The faculty expects every member of the CSU community to practice honorable and ethical behavior both inside and outside the classroom. Any actions that might unfairly improve a student's score on homework or examinations will be considered academic misconduct and will not be tolerated. Examples of academic misconduct include (but are not limited to):

- Sharing results or other information during quizzes, projects or examination.
- Working on an assignment before or after the official time allowed.
- Requesting a regrade of answers or work that has been altered.
- Submitting work that is not your own.
- Representing as your own work anything that is the result of the work of someone else. This includes solutions obtained via solution manuals, the Internet and/or other services.

At the professor's discretion, academic misconduct on an assignment or examination/report will result in a reduced score, a zero score, or a failing grade for the course. All occurrences of academic misconduct will be reported to the Vice President for Student Affairs and copied to the Systems Engineering Department Head. If there is any question as to whether a given action might be construed as academic misconduct, please see the professor before you engage in any such action. For more information, please see CSU's page on Practicing Academic Integrity.<sup>4</sup> For information on the Honor Pledge, see the Honor Pledge.<sup>5</sup>

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<sup>4</sup><http://learning.colostate.edu/integrity/>

<sup>5</sup><http://tilt.colostate.edu/integrity/honorpledge/>

## **Sexual Harassment-Free Environment**

Colorado State University strives to create and maintain a work and study environment that is fair, humane, and responsible so that each member of the University community is treated with dignity and rewarded for such relevant considerations as ability and performance. Abusive treatment of individuals on a personal or stereotyped basis is contrary to the concepts of academic freedom and equal opportunity. Sexual harassment is one form of such abuse and cannot be tolerated.

For more information, please see the CSU Office of Equal Opportunity's Sexual Harassment Policy<sup>6</sup> and Principles of Community<sup>7</sup>.

## **COVID-19 University Policy**

We will follow all guidance by the University regarding implementation of COVID-19 policies and safeguards, which may change from time to time. As of May 2022, all CSU faculty, staff and students are *required* to use the COVID Reporter<sup>8</sup> to tell the CSU Public Health office without delay if they:

- test positive (even via a home test)
- believe they have been exposed

For the latest information about the University's COVID resources and information, visit the CSU COVID-19 site: <https://covid.colostate.edu/>.

## **Additional Resources and Policies**

For additional information on university resources and policies, see the "Resources and Policies" document posted under Canvas > Modules > Organizational.

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<sup>6</sup><http://oeo.colostate.edu/sexual-harassment-policy>

<sup>7</sup><http://oeo.colostate.edu/colorado-state-university-principles-of-community/>

<sup>8</sup><https://covid.colostate.edu/reporter/>