

CSPB 2824 - Stade - Discrete Structures

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CSPB 2824- Discrete Structures Syllabus

Print out and save this syllabus for reference during the semester.

In the unlikely event you cannot connect to Moodle, be sure to bookmark use the Piazza, and ZOOM links from Moodle to connect to your class.

CSPB 2824 Discrete Structures Syllabus

Please use THE LINKS IN MOODLE to access the first day of classes

Instructor: Elisabeth Stade (she/her)

Contact: Piazza Forum for coursework, discussions and questions.

Email: elisabeth.stade@colorado.edu

OFFICE HOURS:

General Office Hours:

- Wed. 6 pm - 7 pm Live Mountain Time
- Thursdays 12 pm - 1 pm Live Mountain Time

*Any changes to OH will be posted directly in Moodle.

IMPORTANT DATES - Please mark your calendars now and make arrangements to be available on these days.

Midterm Exam One	October 6th	7:30 am - 9:30 pm (any 2 hour window)
RSA Project	October 27th AND October 30th	11:59 pm
Midterm Exam 2	November 17th	7:30 am - 9:30 pm (any 2 hour window)
Final Exam	December 18th	7:30 am - 9:30 pm (any 3 hour window)

COMMUNICATION

I want everyone to have the resources they need to succeed.

At the top of each week in Moodle will be an overview of the week.

Please also find the **Moodle Announcements** in the top box of Moodle (please check it out before taking the syllabus quiz). You can always find these messages archived in the **Moodle Announcement or in your email**. Always use your campus **colorado.edu email** address to contact or access course resources.

For most day-to-day communication we will use Piazza - you may post anonymously to classmates if you wish.

Please use Piazza for all homework and coursework questions as these cannot be answered by email.

All times Mountain Time Zone.

Individual Check-In

If you have a unique situation that may be affecting your work or class experience -or- you need clarification of an email, Piazza, or ZOOM exchange, please email your instructor with the subject line "Individual Check-In". Your instructor will email you back to set up a Zoom call to discuss the specific situation and work with you to develop a solution and/or strategy to move forward.

Service Interruptions and Support

Due to the online nature of the program, there is always the possibility of service interruptions. If you are unable to access the course materials (Moodle, Piazza, etc), we encourage you to visit <https://www.isitdownrightnow.com/applied.cs.colorado.edu.html>.

For non-urgent issues relating to platform support, please contact cscihelp@colorado.edu.

For urgent issues, for example, attempting to upload a homework near a deadline, email your instructor directly.

In cases of documented exceptional illness or circumstances affecting assignments, instructors may or may not offer an alternative assessment (which may differ in form or content) at the instructor's discretion. Please consult the [campus policy for medical leave](#) if needed.

PREREQUISITES:

CSPB 1300 - this is a co-req, that is you can take both 1300 and 2824 at the same time. If you are in 1300 concurrently you will be using Python as you are learning it. Be ready to apply topics as you learn them and look up up additional resources as needed.

High school and College Algebra is essential for success in this course. If it has been awhile since you have used mathematics, please have some review resources handy - an old textbook or Kahn Academy videos for example.

If you are using transfer credit for 1300, be aware you will also need a knowledge of Python Language or the ability to use it in this class.

A good Python review for Discrete Structures can be found at Runestone Academy:

<https://runestone.academy/runestone/books/published/pythonds/index.html>

TEXTBOOK AND MATERIALS:

Required Textbook: Discrete Mathematics and Its Applications **7th Edition**, Rosen, McGraw Hill, ISBN 978-0-07-338309-5.

*****Be careful to get exactly this edition*****

There are a variety of purchase options.

Do not purchase the online "Connect" version as we are not part of that program.

You can also find the 7th edition on Amazon, and other online used and new book sellers (search Rosen 7th Edition)

IF YOU ARE WAITING FOR THE BOOK - you may find PDFs of the book online.

Recommended Book: Mathematics A Human Endeavor - Harold Jacobs - 3rd edition.

https://www.amazon.com/gp/offer-listing/071672426X/ref=dp_olp_used?ie=UTF8&condition=used

This book is out of print and you can get an inexpensive used copy. The book covers many similar topics in extraordinary depth with simple exercises. It is a useful tool as you make the transition to advanced topics and applications.

Recommended materials:

For one assignment you will need:

- index cards (about 10-25)
- one paper clip
- a hole punch or similar
- scissors
- also, you may find it useful to have a deck of cards handy.

Graph paper may be need for one or more assignments - you can print this out from an image search if needed.

COURSE INFORMATION

The course covers fundamental ideas from discrete mathematics, especially for computer science students. It focuses on topics that will be foundational for future courses including algorithms, artificial intelligence, programming languages, theoretical computer science, computer systems, cryptography, networks, computer/network security, databases, and compilers.

Course description and purpose:

Mathematics is the true language of computers. With a strong foundation of logic, proofs and the fundamentals of number theory and probability we can communicate effectively with these machines and solve interesting problems efficiently and cheaply.

This course is about understanding and using mathematics, not just blind computation at which computers excel.

- For most assignments you will be assessed on your ability to communicate and demonstrate understanding of the material rather than single solutions.
- Be prepared to think, justify your answers, and explain what you have learned.

Learning Goals

We will build on the following 7 primary learning goals throughout the term:

- Use professional communication and interaction skills , including reading and applying all given instructions, treating colleagues with respect.
- Understand and construct logical arguments and proofs using formal logic, truth tables, and proof techniques.
- Understand and use the basics structures of sets, functions, sums and matrices.
- Use and understand algorithms, number theory and cryptography
- Demonstrate and make arguments using counting, and probability.
- Use, develop, and analyze formal relations, and graph theory.
- Develop the skills of "Mathematical Maturity" including:
 1. The capacity to generalize from a specific example to broad concept.
 2. The capacity to handle increasingly abstract ideas.
 3. A significant shift from learning by memorization to learning through understanding
 4. The ability to recognize mathematical patterns and think abstractly.
 5. Read, write and critique formal proofs
 6. Teach yourself and fill in missing details.

This course is based on weekly modules in Moodle consisting of videos, assignments, and supplemental materials. The weekly assignments will prepare you for the exams and projects and ongoing discussions in Piazza will connect you to the class.

Teaching Methods:

This is a live course and participation is essential. While there is flexibility in when you access the materials, there are strict weekly due dates - no late work is accepted. You may have access to future assignments if you wish to move faster, however, weekly discussion and instructor support will be focused on the current week.

A variety of materials and approaches will be used including: videos, readings, discussions, quizzes, writing assignments, and even a few hands on activities.

As this is an online course, it requires a good deal of self-discipline and time management skills in order to be completed successfully. It is up to you, the student, to understand the schedule and keep up with the assignments. Make sure you know your deadlines and due dates.

GRADING POLICIES:

NO LATE WORK ACCEPTED - The lowest assignment score will be dropped to cover emergency situations.

Assignments will be auto-graded and manually graded. Any grading questions must be asked within a week of the assignment being returned. By resubmitting your work for grade review you understand that ALL problems and aspects of your work may be regraded regardless of whether it is to your advantage or not.

No extra credit is given in this class. However, if a student demonstrates improved performance over the semester, that may factor into the student's final grade.

Unless adjustments are necessary, letter grades will be assigned using the standard grading scale. In particular, the grading is purely individual based: the performance of your classmates will have no bearing on your own grades. In cases of documented exceptional illness or circumstances affecting assignments, instructors may or may not offer an alternative assessment (which may differ in form or content) at the instructor's discretion. Please consult the [campus policy for medical leave](#) if needed.

All coursework grades are final and will not be changed after the last day of classes. Please review your scores during the semester.

93%-100%	A
90%-93%	A-
87%-90%	B+
83%-87%	B
80%-83%	B-
77%-80%	C+
73%-77%	C
70%-73%	C-
67%-70%	D+
63%-67%	D
60%-63%	D-
0%-59.9%	F

Grading

- A and R - Analysis and Reflection (Piazza) 7.5%
- Online Quizzes 7.5%
- Mastery Workbooks. 35%
- Programming Project 10%
- Midterm Exam One 15% (must score at least 60% to pass the course)

- | | |
|--------------------|--|
| • Midterm Exam Two | 15% (must score at least 60% to pass the course) |
| • Final Exam | 10% |

Weekly Online Quizzes

The online quizzes for each module will consist of multiple-choice and short answer type questions that can be completed online. The quizzes are designed to be answered in partnership with the lectures. As you complete a topic or even during the lectures, try answering the related quiz questions. You will have 2 complete attempts at each quiz. Use your first attempt to explore the questions, and then use the second attempt to get your final score. Due the on Monday at 11:59 pm the week following the module. (for example if Module 1 begins in the week of May 1st, the online quiz will be due Monday May 8th at 11:59 pm.) No late quizzes will be accepted.

Mastery Workbook (MW) Mastery Workbooks are your **Study Guides** and will be provided weekly. These weekly PDF workbooks are a **study guide** for the course and will consist of longer theoretical problems that need to be solved, suggested practice questions, and selected graded activities/problems. The activities in the **MW Study Guides** will relate to the topics of the learning goals and emphasize developing the important skills of the 6th learning goal. The Mastery Workbooks are a chance for us to explore topics in depth and can be challenging. Often these types of questions are important topics that cannot be tested and the goal is for you examine these concepts in depth. I will also point out which are more "exam" type problems.

All assignments must be submitted by the indicated deadline: no exceptions.

However, for your convenience, we will drop the lowest Mastery Workbook score. This provides you the option to skip one assignment through the semester.

IMPORTANT

Grading of your Mastery Workbook will be done in Gradescope:

Submit your Mastery Workbook in Gradescope using the provided PDF template.

- When submitting in Gradescope, the student will identify the position of each question in the template.
 - In general, please, use one page per question as in the template.
 - Do not break answers across pages.
 - Do not cram multiple answers on one page.
 - Always include the first page with your name and the academic honesty pledge.
- If you handwrite, be sure to turn in a finished copy - not scribbles and erase marks.
- If you typeset (with Latex or other) you may reformat the problem set, but you please try to keep solution to a single page unless otherwise stated.
- If you reformat your work, you may omit the provided text if you need more space - please try to keep answers to a single page.
- You may add extra pages or notes for yourself in the MW - these will not be graded - just select what you want to be graded.
- All answers require some explanation - in some cases, this may be minimal. However, single number answer such as "3.14" will not receive full credit. The only exception to this is for rare "fill in the blank" questions.
- I do not require solution be formatted in Latex. I do accept handwritten work IF it is neat, legible, and well organized.

In particular, ANYTIME you are assigned a problem from the book (with or without solutions in the back) you must add a few lines of original interpretation or insights.

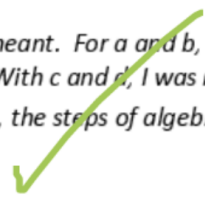
Depending on the question, this can look like:

- Your attempt before seeing the solution, and notes after viewing solutions.
- Personal reflection - "I've seen this before, but this is a new technique for me."
- What you learned - "This was tricky, but now I see that using $a = 0$ was the key."
- What you need to remember - "I need to understand better the difference between the inclusive and exclusive or. I'll put a big star here to help me remember."

Example:

2. # 12 (Rosen page 168)

**These problems were tricky for me at first until I really broke down what they meant. For a and b, it wasn't until I realized that a_n was a constant number that I was able to see the solution. With c and d, I was missing the step that breaks apart $(-4)^{n-1}$ into $(-4)^n * \left(\frac{1}{-4}\right)$. Once I was able to see this, the steps of algebra were much more clear.*



$$a_n = -3a_{n-1} + 4a_{n-2}$$


a) $a_n = 0$ *** a_n is constant ***

$$a_n = -3a_{n-1} + 4a_{n-2} = -3(0) + 4(0) = 0$$

b) $a_n = 1$ *** a_n is constant ***

$$a_n = -3a_{n-1} + 4a_{n-2} = -3(1) + 4(1) = -3 + 4 = 1$$

c) $a_n = (-4)^n$

$$\begin{aligned} a_n &= -3(-4)^{n-1} + 4(-4)^{n-2} = (-3) * (-4)^n * \left(\frac{1}{-4}\right) + 4(-4)^n * \left(\frac{1}{(-4)^2}\right) \\ &= \left(-\frac{3}{-4}\right) * (-4)^n + \left(\frac{4}{(-4)^2}\right) * (-4)^n \\ &= \left(\frac{3}{4}\right) * (-4)^n + \left(\frac{1}{4}\right) * (-4)^n \\ &= \left(\frac{4}{4}\right) * (-4)^n = (-4)^n \end{aligned}$$


d) $a_n = 2(-4)^n + 3$

$$\begin{aligned} a_n &= -3[2 * (-4)^{n-1} + 3] + 4[2 * (-4)^{n-2} + 3] \\ &= -3[2 * (-4)^n * \left(\frac{1}{-4}\right) + 3] + 4[2 * (-4)^n * \left(\frac{1}{(-4)^2}\right) + 3] \\ &= -3\left[\left(\frac{2}{-4}\right) * (-4)^n + 3\right] + 4\left[\left(\frac{1}{8}\right) * (-4)^n + 3\right] \\ &= \left[\left(\frac{3}{2}\right) * (-4)^n - 9\right] + \left[\left(\frac{1}{2}\right) * (-4)^n + 12\right] \\ &= \left(\frac{4}{2}\right) * (-4)^n + 3 = 2(-4)^n + 3 \end{aligned}$$

You will need to learn Latex or other text editor at some point, however in this class I do want your focus to be on learning mathematics. If Latex is too time consuming, you may hand write homework, then photography or scan it, and then submit a PDF provided:

- Handwriting is clear and readable.
- Work is well organized.
- Properly formatted - no fuzzy, messy, out of order, or rotated pages.
- Assignments not adhering to these instructions or otherwise ungradeable (at the graders discretion) may receive a 0.

Student Work Examples, Piazza Posts, and Homework Solutions

The CU CS department policy does not allow instructor posting of complete homework solutions. I will sometimes post excellent examples of student work anonymously in Piazza..

The Applied CS Department may also share samples of student work from homework, exams, or Piazza anonymously with prospective CS students and others in educational discussion and/or media. Please contact your instructor if you do not wish to have samples of coursework shared.

Programming Project

We will assign a programming project which will involve writing simple algorithms in python and implementing them for a mathematical problem. In the past, this has involved writing programs for factoring a given number into prime factors and using your factorization program to break a cryptosystem.

The project will be completed in Jupyter Lab using Python.

This is often the highlight of the course and will bring together many of the important ideas of the semester. Make sure you start early and are prepared to focus on this project during weeks 7/8/9 (6/7/8 during the summer).

Exams

Exams will include material and concepts from lectures, homework, quizzes, Piazza, text, and concepts connecting ideas. Proctorio and exam requirements are posted in each course at the top of Moodle. Non-compliance with Proctorio, exam or course instructions may result in a voided exam (score = 0) or an honor code violation. Students are required to understand the conditions allowed for each exam. Ask your instructor if you are unsure about requirements.

To pass the course, both Mid-term Exam Scores must be above 50%. If a score less of than 50% is achieved in either Mid-term, the please reach out to your instructor for options as a minimum of 50% in each mid-term is required to pass the course.

Mid-term exam scores of 80% or more show mastery of the material and scoring above 80% on both mid-terms may "unlock" alternative final exam options.

A and R - Analysis and Reflection in Piazza

Students are expected to contribute weekly to discussion via the Piazza discussion forum. In order to grade A and S the following format is required.

For full credit:

- Posted to the weekly instructor created threads for hw and office hours.
- A minimum of two non-trivial responses.
- Recommended to be completed by Wednesday.
- Due on Fridays.
- Any posts by Saturday midnight Mountain Time will be graded - last-minute, rushed posts may not receive full credit.

A and R is graded each of the 15 (12 in the summer) weeks of the semester.

COURSE TOPICS SCHEDULE

Week	Topics	Readings
1	Logic and Reasoning	Rosen Ch. 1.1 - 1.2
2	Logic and Predicates	Rosen Ch. 1.3 - 1.6
3	Proofs	Rosen Ch. 1.7 - 1.8
4	Sets, Functions and Logs	Rosen Ch. 2.1 - 2.3
5/6	Exam Week / Modulo and Number Systems	Rosen Ch. 4.1- 4.2
6/7	Number Theory	Rosen Ch. 4.2 - 4.5
7/8	Cryptography	Rosen Ch. 4.6
8/9	RSA Project	Rosen Ch. 4.6
9/10	Induction/Recursion	Rosen 2.4/5.1/5.4
10/11	Counting	Rosen Ch. 6.1 - 6.6
11/13	Probability	Rosen Ch. 7.1 - 7.4
12/14/15	Relations and Graphs	Rosen Ch. 9 and 10
	Final Exam	

CU SYLLABUS STATEMENTS

Please reach out to me directly if you have accommodations, religious holiday conflicts, need addition resources, or have special circumstances.

University Required Syllabus Statements

Classroom Behavior

Students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote, or online. Failure to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation, or political philosophy.

For more information, see the [classroom behavior policy](#), the [Student Code of Conduct](#), and the [Office of Institutional Equity and Compliance](#).

Requirements for Infectious Diseases

Members of the CU Boulder community and visitors to campus must follow university, department, and building health and safety requirements and all public health orders to reduce the risk of spreading infectious diseases.

The CU Boulder campus is currently mask optional. However, if masks are again required in classrooms, students who fail to adhere to masking requirements will be asked to leave class. Students who do not leave class when asked or who refuse to comply with these requirements will be referred to Student Conduct & Conflict Resolution. Students who require accommodation because a disability prevents them from fulfilling safety measures related to infectious disease will be asked to follow the steps in the "Accommodation for Disabilities" statement on this syllabus.

For those who feel ill and think you might have COVID-19 or if you have tested positive for COVID-19, please stay home and follow the [further guidance of the Public Health Office](#). For those who have been in close contact with someone who has COVID-19 but do not have any symptoms and have not tested positive for COVID-19, you do not need to stay home.

Accommodation for Disabilities, Temporary Medical Conditions, and Medical Isolation

[Disability Services](#) determines accommodations based on documented disabilities in the academic environment. If you qualify for accommodations because of a disability, submit your accommodation letter from Disability Services to your faculty member in a timely manner so your needs can be addressed. Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance.

If you have a temporary medical condition or required medical isolation for which you require accommodation, please contact your instructor by email. You may also request an Individual Check If needed. Also see [Temporary Medical Conditions](#) on the Disability Services website.

Preferred Student Names and Pronouns

CU Boulder recognizes that students' legal information doesn't always align with how they identify. Students may update their preferred names and pronouns via the student portal; those preferred names and pronouns are listed on instructors' class rosters. In the absence of such updates, the name that appears on the class roster is the student's legal name.

Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the [Honor Code](#). Violations of the Honor Code may include but are not limited to: plagiarism (including use of paper writing services or technology [such as essay bots]), cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty.

All incidents of academic misconduct will be reported to Student Conduct & Conflict Resolution: honor@colorado.edu, 303-492-5550. Students found responsible for violating the [Honor Code](#) will be assigned resolution outcomes from the Student Conduct & Conflict Resolution as well as be subject to academic sanctions from the faculty member. Visit [Honor Code](#) for more information on the academic integrity policy.

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

CU Boulder is committed to fostering an inclusive and welcoming learning, working, and living environment. University policy prohibits [protected-class](#) discrimination and harassment, sexual misconduct (harassment, exploitation, and assault), intimate partner violence (dating or domestic violence), stalking, and related retaliation by or against members of our community on- and off-campus. These behaviors harm individuals and our community. The Office of Institutional Equity and Compliance (OIEC) addresses these concerns, and individuals who believe they have been subjected to misconduct can contact OIEC at 303-492-2127 or email cureport@colorado.edu. Information about university policies, [reporting options](#), and support resources can be found on the [OIEC website](#).

Please know that faculty and graduate instructors have a responsibility to inform OIEC when they are made aware of incidents related to these policies regardless of when or where something occurred. This is to ensure that individuals impacted receive an outreach from OIEC about their options for addressing a concern and the support resources available. To learn more about reporting and support resources for a variety of issues, visit [Don't Ignore It](#).

Religious Holidays

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, please contact your instructor during the first week of classes to communicate any conflicts.

See the [campus policy regarding religious observances](#) for full details.

Mental Health and Wellness

Free and unlimited telehealth is available through [Academic Live Care](#). Please note that at this time this service is not available to students outside of the United States.

ONLINE COMMUNICATION GUIDELINES

The Piazza forum is for students and unlike many programs, instructors do participate. Our instructors aim to respond to questions if needed within 24 hours during the work week. Some questions are best answered by other students and so an instructor may give those more time to be answered. Instructors are not required to respond to Piazza during weekends and evenings, although many do.

Instructors do and can respond to student email for student specific concerns, however, they do not "pre-grade" homework, answer assignment questions or offer individual tutoring over email. If a student finds they need individualized attention they may engage a private tutor.

Please know that inappropriate or disrespectful communication with instructors or staff (in any form) may affect future requests for letters of recommendations, referrals, or reference inquiries from future employers.

Piazza, ZOOM, and Email expectations:

What is Piazza?

- Like a classroom, it is a place to ask questions, discuss learning strategies, explore related topics, support your classmates, and contribute to the class.
- Like a classroom blackboard, all students must read and follow the instructor posts for course and content information, and announcements.

How do we use Piazza? - See your class syllabus for details, in general:

- It is used for participation grading - see your class syllabus for details
- It is a place to practice professional collaboration strategies.
- Instructors may not reply to all inquiries and let other students answer.
- Many instructors will use Piazza as a reference in the future for a letter of recommendation.

What Piazza is not?

- A 24 hour helpdesk or answer forum.
- A robot tutor.
- A personal blog.

- A place for others to completely debug your code.

Posts and questions about classwork should be content specific and reflect effort on student's behalf. Sample questions that are not content specific and hence not appropriate:

- Please tell me how to do #6
- Explain #6
- I'm lost on #6, Help!

Sample questions that are content specific:

- I applied the technique from the video to #6, but I get an answer that is too large, could my loop be incorrect?
- In the video lecture, I understand the algebra steps in #6, but why is $0! = 1$?
- Is anyone else getting different answers to #6? It seems to depend on which method I use. (notice the student is not posting the solution)

Any post that interferes with fellow student learning is not acceptable.

Any posts, regardless of intent, that could cause abuse, obstruction, disruption, or interference with student learning, including posts that are disrespectful, aggressive, distracting or inappropriate, will be saved and deleted at the discretion of the course instructor. Such comments will be reported Student Conduct & Conflict Resolution. Please note that there are many ways a post can interfere with student learning. If you have doubts about your message, please edit. For example, sarcasm doesn't translate well into text and could be a problem. Additionally, calling out specific students' performance or telling others how to do/work around a problem (ie: Hardcoding or providing links to answers)

What are ZOOM Office Hours?

- It is much like a classroom. It is a live web session to ask questions, explore further, discussion strategies, explore related topics and support your classmates and contribute to the class. Office hours are optional.

How do we use ZOOM Office Hours?

- Discuss class content directly with the instructor and other students.
- Practice professional collaboration strategies.
- Instructors may use break out groups or/and guide discussions, at their discretion.
- Instructors decide which topics will be discussed based on what will optimize learning.
- Please wear clothes and be aware of your environment.

What are ZOOM Office Hours not?

- Answer forum.
- Tutoring session.
- Instructors cannot help you completely debug your code.
- Instructor may not reply to all inquiries and let other students speak as appropriate.

Questions should be specific and reflect effort on the student's behalf. Sample questions that are not content specific and hence not appropriate.

- Tell me how to do #6
- Please explain #6

- I'm lost on #6, Help!

Sample questions that are content specific.

- I applied the technique from the video to #6, but I get an answer that is too large, could my loop my incorrect?
- In the video lecture, I understand the algebra steps in #6, but why is $0! = 1$?
- Is anyone else getting different answers to #6? It seems to depend on which method I use. (notice the student is not sharing the solution)

Any behavior that interferes with student learning or university activities is not acceptable.

Any behavior, regardless of intent, that could cause abuse, interference, obstruction, disruption, or interference with student learning, including comments that are disrespectful, aggressive, distracting, off-topic or inappropriate, will not be tolerated and may result in being muted, at the instructor's discretion. Such behavior will be reported to Student Conduct and Conflict Resolution. For example, dominating group discussions can inhibit others opportunity to learn and will not be allowed.

What is CU Email?

Your CU email account is the official university method of communication. Enable settings in your account to ensure you see and read all email. Set aside a time each day to read email.

What is an individual check in?

When you need some extra guidance or clarification about the class, please reach out to your instructor first. Just email and ask for an individual check-in to schedule a time to speak directly with your instructor.

Post-Baccalaureate Collaboration Policy

Collaboration Policy

We welcome collaboration! Sharing insights, asking questions, learning by doing, and learning by helping others are essential skills in learning computer science.

Collaboration is discussing ideas of the course with others, sharing insights and extra resources, working through similar questions to an assignment, sharing resources, and helping others. The Piazza forum in your class is an ideal place to share ideas, lead a discussion or or be the hero that asks the "dumb question" everyone else is afraid to ask. And Piazza is often a source for content for instructors to include in letters of recommendations. Your leadership, courage, and determination will not go unnoticed.

Collaboration is not:

- "working together" on an assignment or "having a partner." In particular, Group Projects, or projects that specify "working with a partner" will have individual guidelines.
- one student solving problems 1-4, and another solving 6-10.
- an identical group solution submitted by multiple students.

Unless specified in the assignment, all submitted coursework is individual.

In general:

- You must document resources and collaboration on any assignment. This should be in the form of comments at the start of code and/or within solution notes.
- Cite Your Sources: If you collaborated with someone on an assignment, or if your submission includes quotes from a book, a paper, or a web site, you must clearly acknowledge the source.
- Plagiarism is forbidden. Copying answers directly or indirectly from solution manuals, web pages, or your peers is a violation of honor code. The assignments and code that you turn in should be written entirely on your own.
- Copying/soliciting a solution to a problem from the internet or another classmate constitutes a violation of the course's collaboration policy and the honor code and may have serious consequences.
- You may not actively search for a solution to the problem from the internet. This includes posting to sources like StackOverflow, Reddit, Chegg, CourseHero, etc.
- StackExchange Clarification: Searching for basic techniques in Python/C++ is totally fine.
- If you have taken this course prior to this semester and have done some/all of homeworks previous code or previous homework solutions may not be reused. You must start each homework from scratch.
- When in doubt, ask. If something doesn't seem right - you are not sure if you can use a resource or if you are feeling pressure to share a specific solution - please reach out to your instructor.

Last modified: Saturday, 19 August 2023, 5:08 PM

You are logged in as Taylor Larrechea (Log out)

[Data retention summary](#)

[Get the mobile app](#)

cscihelp@colorado.edu