CSC 101
Introduction to Computer Science

Instructor/Professor

- Diana Diazh, PhD
  - Call me Dr. Diazh (/ “DEE”+ “az”/)
  - Welcome!
- Computer Science is in Gould-Simpson (GS)
- My Office: GS 835
  - Email: ddiana@arizona.edu
  - Tentative Office Hours: Wed 1:00-2:00pm
    - Or by appointment

Teaching Assistants

- What do they do?
  - Help answer questions in the classroom and the class question/answer forum (Piazza)
  - Hold office hours (GS 914)
  - Grade your assignments
  - Help grade tests
  - Act as a “point of contact” for course questions, grading, and help in understanding concepts covered

Teaching Assistants

- Elias Zheng - Class Coordinator
- Caleb McKinley - Coordinator in-training
- Ishita Shirke
- Aditya Pise
- Chelina Obiang
- Chance Krueger
- Alex Myers
- Ram Adithya Muthukumarasamy

- TA Introductions!
  - Advice for students, Interesting Programming Project, Unpopular opinion, or Favorite CS topic

Introduce yourselves!!!

1. Go around your table and introduce yourselves to everyone
    a. Say your name/major/year
2. Come up with a name for your group
3. As a group, try to answer these questions (no Googling)
    a. How many words does the shortest story ever written has?
    b. How many official “Grand Theft Auto” video games are there?
    c. What is the longest-living animal?

Share the name of your group in the course Q & A

1. Go to (the link only works during lecture)
2. One person of the group enter the group name
3. The rest of the group endorse the “question” (thumbs-up)

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General Info – Introduction to Computer Science

- This is probably your very first CS course!
  - Prerequisites: None!
- If you already have significant CS or Math background, this might not be the course for you
  - More on this later...

Learning outcomes

- By the end of this course, you (the student) will:
  - Understand what the field of Computer Science (CS) is
  - Be better equipped to solve problems using computational methods
  - Know how to understand and develop basic algorithms
  - Have a broad understanding of the many applications of CS

Learning outcomes

- By the end of this course, you (the student) will:
  - Be able to write simple, well-structured computer programs
    - Using: variables, conditionals, loops, functions, events
  - Realize that not all problems can be solved by computers
  - Understand how computers and computer networks are physically structured

Class Information and Communications

- Class website
  - https://bit.ly/intro_csc101
    - syllabus, lectures, assignments posted here
- Class forum
  - Piazza –
    - sign up!
    - question and answer forum
    - ask questions about assignment here!
    - TA office hours posted here
    - announcements

Textbook

- Required book:
  - Getting Started with Processing (Fry, Reas)
    - This will be the main book we use to learn programing
    - Some of the ICA problems will come from this
    - You can access it for free (link on Syllabus)

- Will also require readings from other online/free resources and videos

Assignments

- Roughly 1 programming assignment per week
    - Some programming assignments will have multiple parts
- Will be a total of 12 assignments (some multi-part)
- No assignment grades will be dropped!
- Typically will be due on Fridays

Assignments

- Each assignment is due at the day and time given on the assignment specification
- Don’t start last-minute!
- You have 3 “free” late days
  - A **late day** allows you to turn in an assignment up-to 24 hours after the due date/time
  - These should be used sparingly… you only get 3!
  - Cannot use more than 1 for a single assignment
- Assignments are worth **48% of your final grade!**

Turning in Assignments

- We will use Gradescope
  - Link: https://www.gradescope.com/
    - You will get an email – then sign in!
    - Some programming assignments will have multiple parts
    - Turn in everything!

ICAs and Quizzes

- In Class Activities (ICAs)
  - We do activities in every lecture
  - ICA activity sheet handouts will be turned in (~20)
  - Worth 5% of the grade
- Quizzes
  - There will be ~5 group quizzes – work with people at your table
  - Worth 3% of the grade
  - Quizzes are *unannounced* -- no make-ups!
- I don’t take attendance, but…
  - **if you miss class often**, your grade will be affected
  - see the Syllabus for details

Exams

- There will be 4 exams
  - Midterms (10% * 3) 50 mins
  - Final (14%) 120 mins
- Exam dates are on the syllabus
- 30% + 14% = **44%** of the final course grade
- No make up exams, but
  - The lowest midterm score will be replaced by the final exam score *if the final exam score is higher*
  - *If you miss more that one midterm, you will get a 0 on one of them*

Exams and Quizzes

- Exam are held in the regular class (dates on syllabus)
  - Show up on time! You won't be given extra time if you show up late
  - Exams are individual
- Group quizzes are unannounced
  - Will not have any on an exam day
  - May be given at the beginning, middle, or end of class!
  - Can work with your tablemates and ask questions
- There will be **no make-up quizzes or exams**
  - "I slept in" is not an emergency :)

Absence and Class Participation Policy

- ICAs & Quizzes
  - Each ICA is worth about .25% of your grade
    - ✔ missing 4 would lower your grade by 1%
    - ✔ (overall grade of 100% would then be 99%)
  - Each Quiz is < .6% of the grade
    - ✔ missing two would lower your grade by 1.2%
    - ✔ (overall grade of 100% would then be 98.8%)
- Administrative Drops
  - Will drop all students who have not turned Programming Assignment (PA) 1 by the no-W Drop Day (9/8)
  - After 9/8, will drop any student who fails to attend class & turn in PAs, ICAs and Quizzes for a 2-week period

Grading Breakdown

Quizzes	3%
ICAs	5%
Regular Exams	30%
Final Exam	14%
Assignments	48%

Grading Policy

- We will do our best to get all grades back (quizzes, exams, assignments) within ***6 days*** after the last possible submission (including late)
- From the time you receive a grade, you have at most ***7 days*** to submit a grade complaint or regrade request
  - request a regrade in Gradescope
  - After that, your grade is final

Classroom behavior

- Treat other respectfully
- Do not be noisy or disruptive during lecture
- In class you may use technology, but only for note-taking and following along with lecture, and coding
  - You may not (chat, game, facebook, netflix, etc)
  - We will enforce this
- If you need to make a call, leave class and come back when done

Lecture

- Show up on time!
- Some days will have group quizzes
- Even when we don’t have group quizzes, will have in-class-activities

Getting help

- **Office Hours**
  - Dr. Diazh's office hours start today
  - The TAs will start next week
  - Will be Posted on Piazza and course Website
- **Piazza** (all course communication)
  - If you have a questions about course administration, or high-level questions about a topic of assignment, create a public post
  - If you have a question that requires including details of your implementation of an assignment, or contains details about your course grade, make a private post
- **No Email**
  - Just use Piazza!

Getting help

- Replying to Piazza/Email
  - **Weekdays 8am - 5pm**
    - I check my email and Piazza frequently
  - **After 5pm**
    - Won’t guarantee reply until the next day
  - **Weekends**
    - Typically check my email only 1-2 times per day, so I will respond but probably not as quickly
- The TAs will monitor Piazza –all questions are answered
  - within reasonable hours (not at 2am!)

Piazza Practice

1. Go to https://piazza.com/arizona/fall2024/csc101
2. Register (UA email) and join the class, if you have not.
3. Add a follow up to the Welcome to Piazza message with an appropriate meme, joke, or question for your classmates.
4. How to turn off emails from Piazza?

Academic Integrity

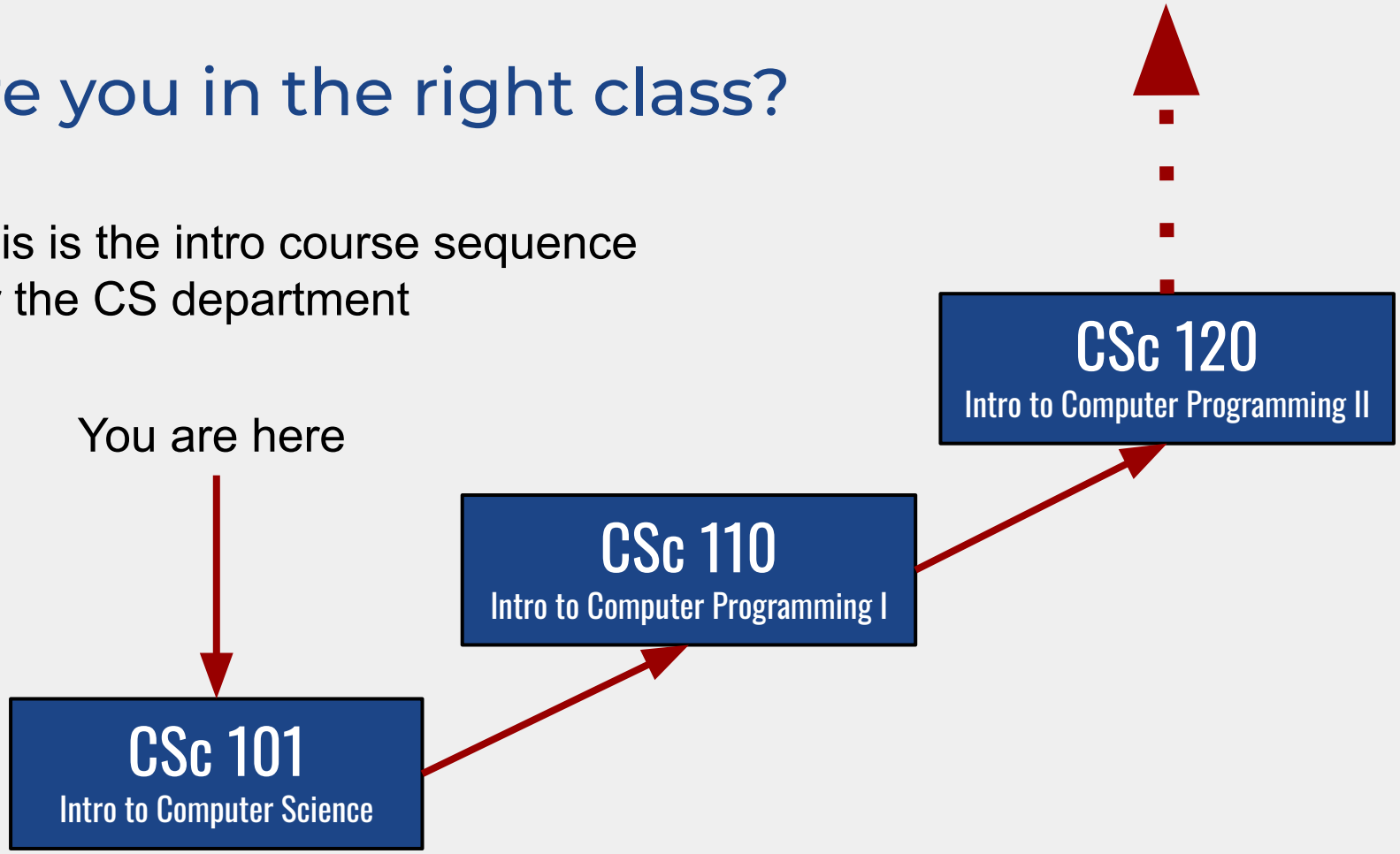
- **You may**
  - Have high-level discussions with others about techniques and strategies for solving a problem
- **You may not**
  - Discuss the specifics of code/work/solutions
  - Partner with someone on the assignment
  - Copy/Paste or Share code/work/solutions
  - Solicit help from online forums, ChatGPT, etc.
- See syllabus for more details
  - There are stiff penalties for cheating

How to Succeed

- Make sure you understand the material!
  - If you do not, ask questions and come to office hours!
- Attend lectures
- Do all of the readings!
- Participate
  - Ask questions, be engaged
- Do all of the assignments
  - Start early, read carefully, test thoroughly, follow the directions, submit on time
- Study and practice topics on your own

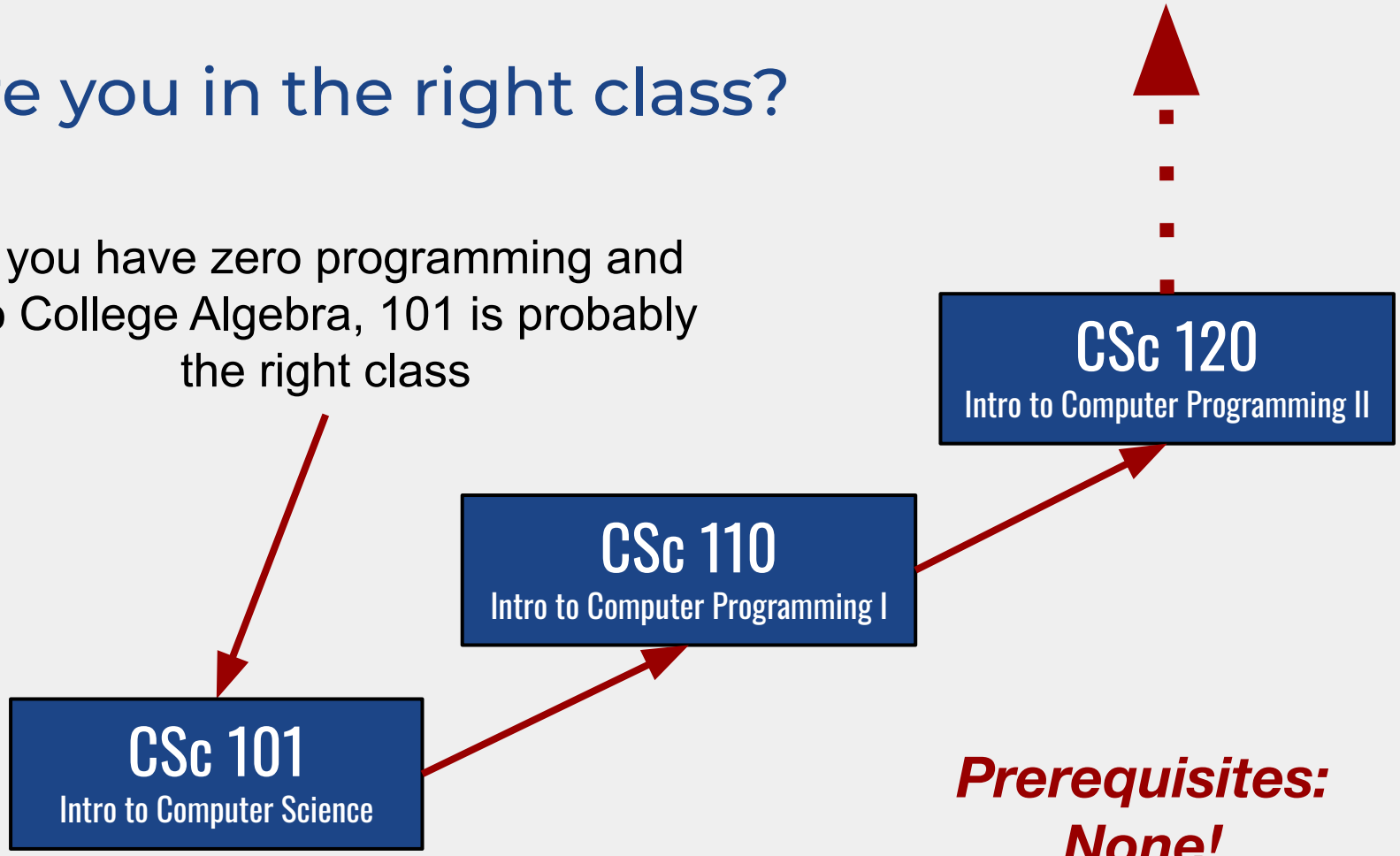
Are you in the right class?

This is the intro course sequence for the CS department



Are you in the right class?

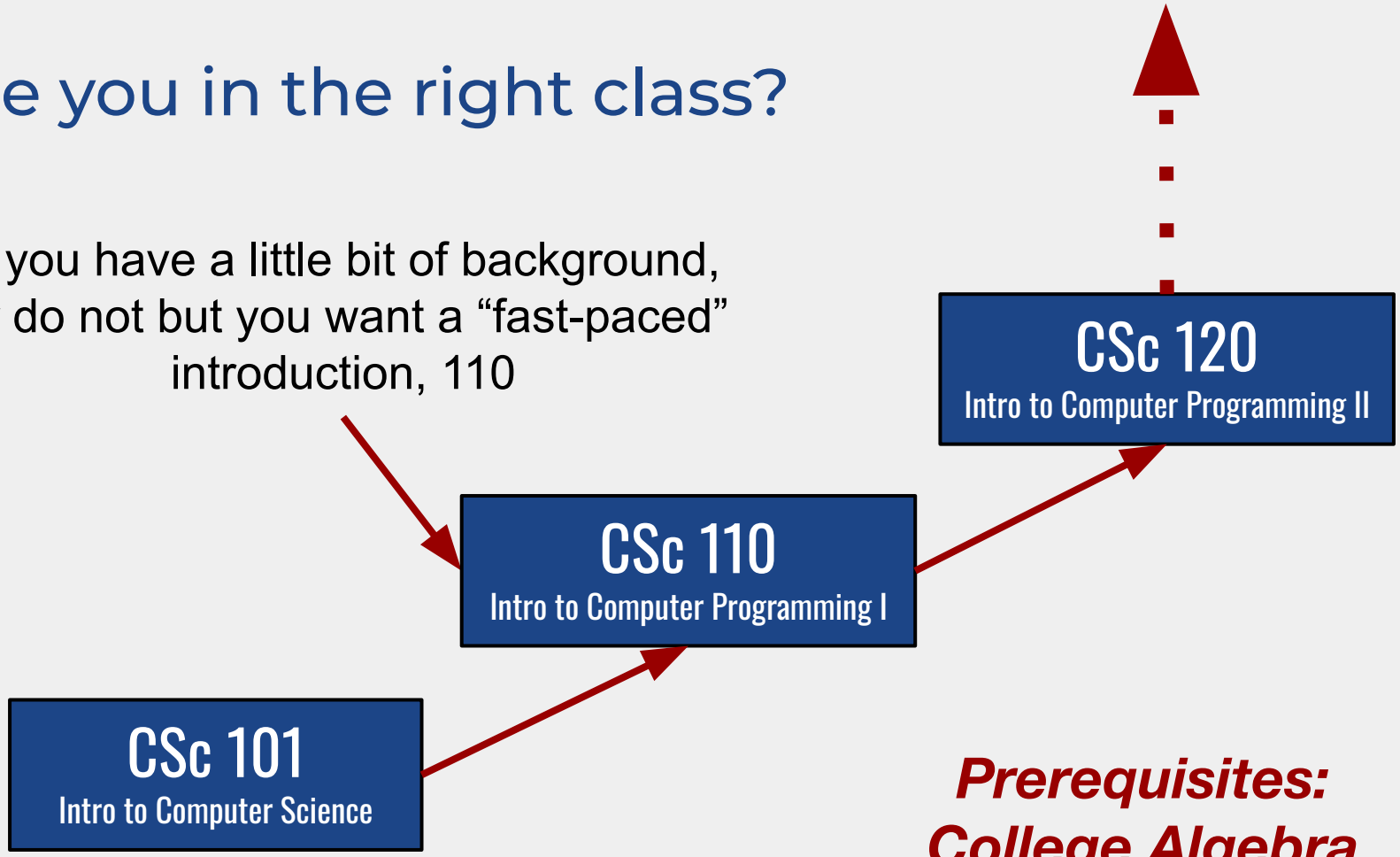
If you have zero programming and no College Algebra, 101 is probably the right class



Prerequisites: None!

Are you in the right class?

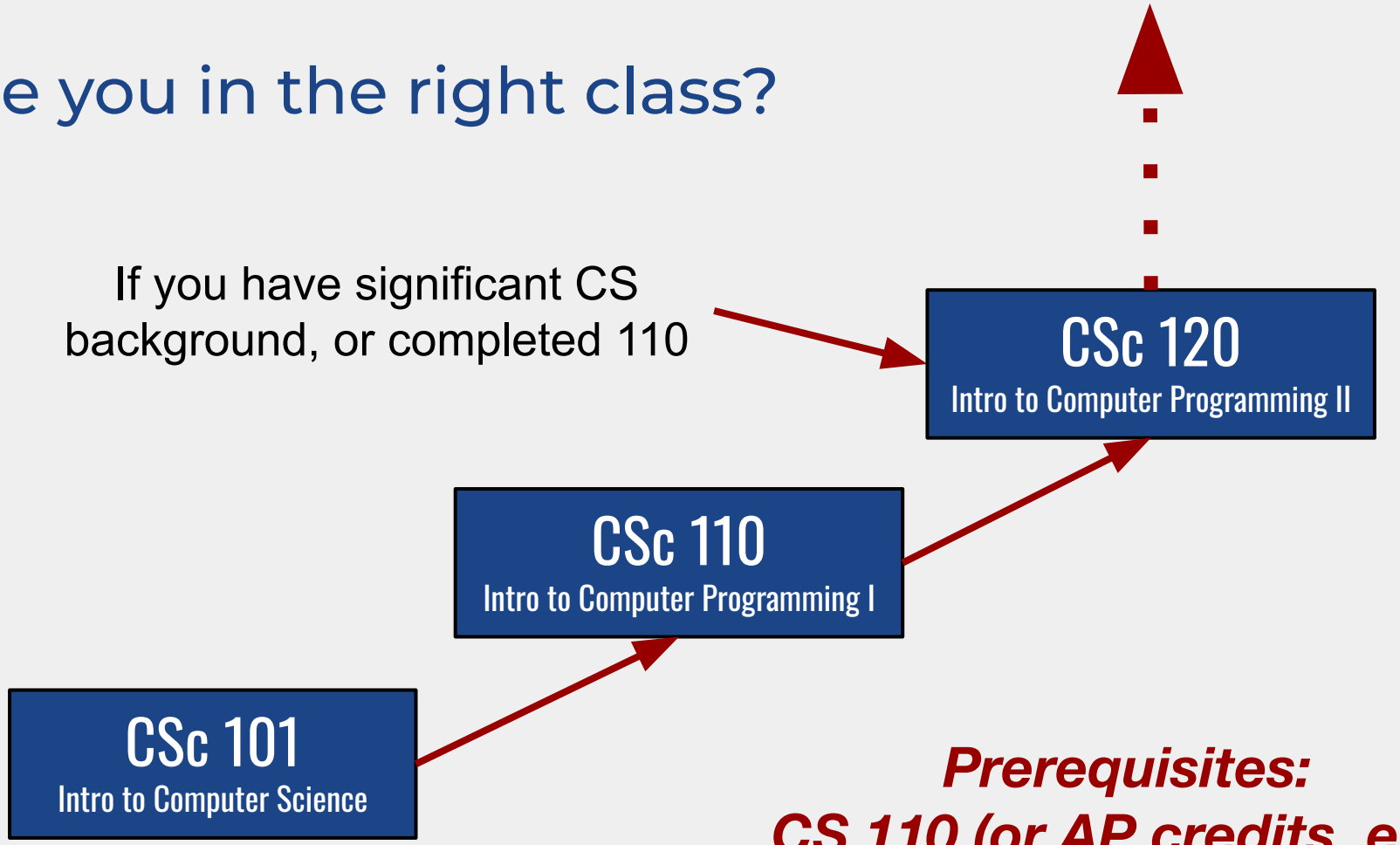
If you have a little bit of background, or do not but you want a “fast-paced” introduction, 110



Prerequisites: College Algebra

Are you in the right class?

If you have significant CS background, or completed 110



Prerequisites:
CS 110 (or AP credits, etc.)

Online resources

- **Main Course website:**
  - https://bit.ly/intro_csc101
  - Syllabus, assignments, lecture resources posted here
- **Piazza:**
  - https://piazza.com/arizona/fall2024/csc101
  - Question/Answer platform
- **Gradescope: https://www.gradescope.com/**
  - Used for submitting assignments and ICAs
- **D2L:** d2l.arizona.edu
  - Used only for posting grades

What is **Computer Science** ?

1. Get into groups of 2-3
2. Devise a 1-3 sentence definition of computer science, in your own words
   - No Googling!!!

What is **Computer Science** ?

“Computer science is a very large subject with lots of applications. Computer scientists design new software, solve computing problems and develop different ways to use technology.” (BBC)

“Computer Science is the study of computers and computational systems” (UMD)

What is **Computer Science** ?

“Computer science is the study of the theory, experimentation, and engineering that form the basis for the design and use of computers. It is the scientific and practical approach to computation and its applications and the systematic study of the feasibility, structure, expression, and mechanization of the methodical procedures (or algorithms) that underlie the acquisition, representation, processing, storage, communication of, and access to information.” (Wikipedia)

What is **Computer Science** ?

- These definitions are correct, but they are not easy to comprehend
- Let’s devise a definition that is easier to understand

What is **Computer Science** ?

In simpler terms, computer science can be defined as…

Problem Solving using Computational Techniques

...but this definition depends on the definition of “Problem Solving” and “Computational Techniques” so let’s define them

What is **Computer Science** ?

Problem Solving: The process of finding solutions to difficult or complex issues.

Computational Techniques: Defining a set of steps or instructions to be run by a computer for accomplishing a particular task.

What is **Computer Science** ?

Combining the definitions:

The process of finding solutions to difficult or complex issues by defining a set of steps or instructions to be run by a computer for accomplishing a particular task*

**Note: some areas of CS are very theoretical and formalize the idea of what can/cannot be computed.*