CS1101 Programming and Problem Solving

Dr. Gina Bai

Spring 2023

Instructor

- Dr. Gina Bai

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- Office: FGH 381

- Office Hours:
    - Mon/Tue, 1:30pm – 3:00pm
    - OR by appointment

Teaching Assistants (TAs)

We have a group of TAs!

- Names, emails, and office hours will be posted on **Brightspace | Content | Staff | Office Hours**
- ALL TA office hours will be held in **FGH 201**

Piazza

- https://piazza.com/vanderbilt/spring2023/cs1101

- **Preferred** communication method

- Class discussions & Questions
    - All questions related to **programming assignments**
    - You are encouraged to **ask** questions and **answer** other's questions
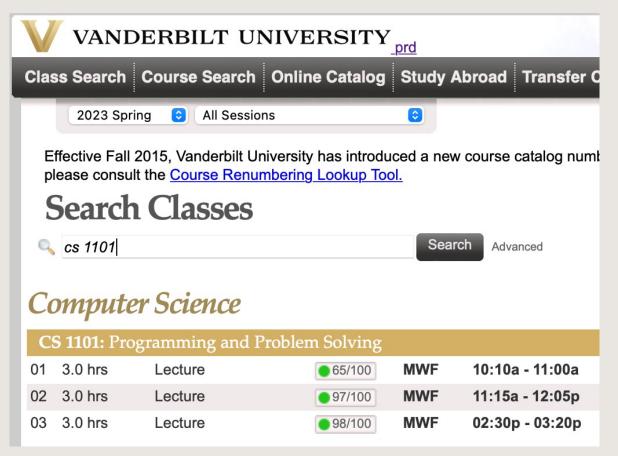   - **NEVER post your code publicly**
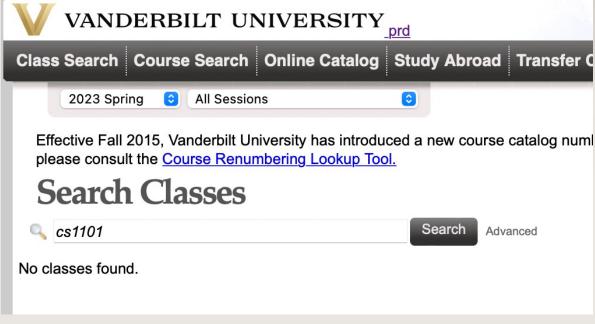
What is computer science?

- Computer science is the study of **computation**

- Computer science and engineering is the systematic study of algorithmic processes that **describe and transform information**: their theory, analysis, design, efficiency, implementation, and application.

  by ACM (Denning, et al., 1988)

Challenges when dealing with computers

- Computers have no rational thought.

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- Computers require steps of instructions that are very specific.
  - **Computer Program**: a list of instructions to be carried out by a computer
  - **Programming**: the art of **designing** and **writing** a group of **instructions** that the computer's processor executes.

Challenges when dealing with computers

- Computers have no rational thought.

- Computers require steps of instructions that are very specific.

- Computers do not understand natural languages.

How do we interact with computers?

- Programming languages
  - Allow us to write code that uses mostly English and arithmetic operators

- Compilers and/or Interpreters
  - Translate code we can understand into 0's and 1's that the processors can understand

What will you learn in CS1101?

- Problem-Solving
  - The purpose of writing a program is to solve a problem

- Basics of Java Programming Language

- Concepts of Object-Oriented Programming (OOP)

- Documentation Techniques

Course Resources – Required

Brightspace

Grades, slides, deadlines,
announcements,
course schedule...

TopHat

In-class activities / Participation

Course Grading

- **TopHat Activities** – **5%**
  - Graded based on **completion**
    - To receive 100% of the grade, you must complete at least **70%** of all TopHat activities during class time

Course Resources – Required

zyBook

Textbook

1. Sign in or create an account at
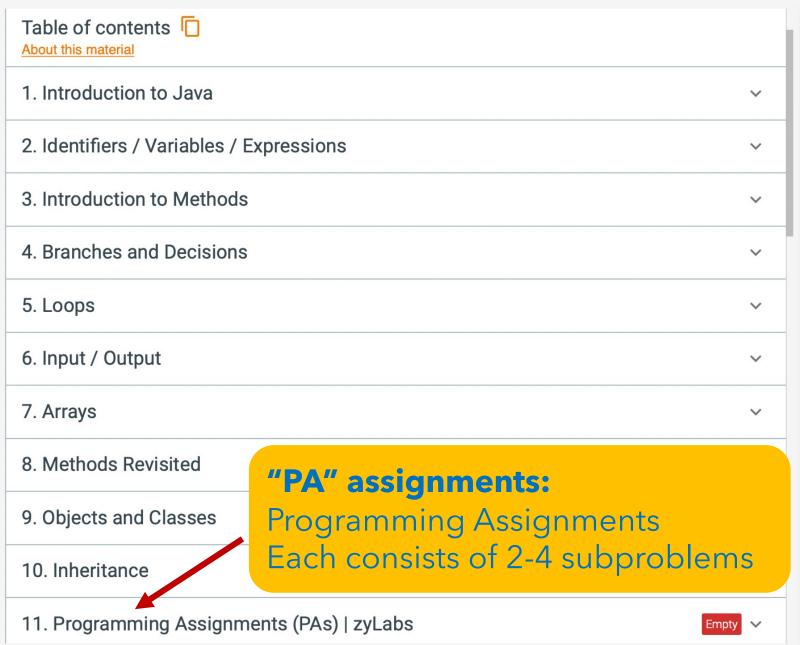   **learn.zybooks.com**

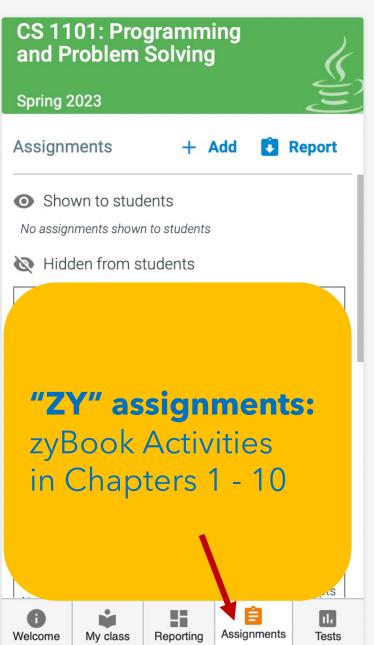2. Enter zyBook code:
    VANDERBILTCS1101Spring2023

3. Subscribe

    Use your **VUnetID** for Student ID

    Use your registered **Brightspace name and email**

    Select Section 1 or 2

Table of contents 🗐
About this material

1. Introduction to Java ⌄

2. Identifiers / Variables / Expressions ⌄

3. Introduction to Methods ⌄

4. Branches and Decisions ⌄

5. Loops ⌄

6. Input / Output ⌄

7. Arrays ⌄

8. Methods Revisited

9. Objects and Classes

10. Inheritance

11. Programming Assignments (PAs) | zyLabs   Empty ⌄

CS 1101: Programming and Problem Solving

Spring 2023

Assignments   + Add   📥 Report

👁 Shown to students
No assignments shown to students

🚫👁 Hidden from students

"ZY" assignments:
zyBook Activities
in Chapters 1 - 10

"PA" assignments:
Programming Assignments
Each consists of 2-4 subproblems

ℹ Welcome   👤 My class   ▦ Reporting   📋 Assignments   📊 Tests

Course Grading

- **Assignments**
  - zyBook Activities (Participation & Challenge) – **10%**
    - "ZY"s, ~10 in total
    - Graded based on **completion**
      - To receive 100% of the grade, you must complete at least **90%** of all zyBook activities

  - Programming Assignments – **45%**
    - "PA"s, ~11 in total
    - Graded based on **correctness**

Late Work Policy

- zyBook Activities
  - **No late submissions** are accepted without a Dean's Notification

- Programming Assignments
  - Penalty
    - 20% for (0, 24] hours late
    - 50% for (24, 48] hours late
  - Assignments will be accepted late **up to 48 hours**

Late Work Policy

FOUR *free* late days for **Programming Assignments** ("PA")

- One late day extends a deadline by 24 hours

- Regardless of the use of free late days or not, **no submissions** will be accepted **48 hours after** the due date
  - That is, we only allow **UP TO TWO late days per assignment**

- Two free late days are given at the beginning, the remaining two will be given at the start of Week 8

Additional Support – Optional Recitation Sessions

- **Starting from the week of Feb 5th**
  - Tuesdays and Wednesdays | 4:15 – 5:15pm, 5:30 – 6:30pm
  - Stevenson 5306
  - More info to come in late January

- They are **NOT "TA office hours"**
  - Will be led by TAs
  - Smaller groups & hands-on experience
    - Debugging, problem-solving…
  - Review, discuss, practice, and Q&A

Exams & Course Grading

- Exams
  - Midterm 1 – **10%**
    - Wednesday, **Feb 08**, In-Class

  - Midterm 2 – **15%**
    - Wednesday, **March 22**, In-Class

  - Final – **15%**
    - Friday, **April 28**, 7-10pm, Common Exam

Exam Make-up Policy

- Midterms
  - Makeups only for *serious* (**documented**) reasons
  - A student sending an email does not constitute permission
  - Otherwise, 20% - 100% penalty may be assessed

- Final
  - NO alternate dates

Course Resources – Required

codePost

Assignment grading

Gradescope

Exam grading

Grading Disputes

- Regrade requests MUST be submitted **within TWO weeks** after grades are released
  - **Where** do I find the grades?
    - For assignments, visit **codePost**
    - For exams, visit **Gradescope**
  - **Who** do I contact about the grading disputes?
    - For assignments, contact **TAs**
    - For exams, contact your **instructor**

Academic Integrity

ALL violations will be reported to the Honor Council

Read the **Academic Honesty Policy** (Brightspace | Content | Course Documents) carefully for examples of academic misconduct in CS1101

- Cheating
- Plagiarism
- Aiding & Abetting
- Destruction of Academic Materials

Protect yourself

- Do not leave your workstation and/or laptop unattended or forget to log yourself out

- Do not email, ftp, or post your code on the Internet, message boards, etc.

- Do not discuss implementation details of individual assignments with your peers

- …

- Ask the instructor for clarification of any questions or concerns about academic integrity policies before submitting an assignment

TODOs After Class

- Purchase your **zyBook subscription** – We start this week!
  - Sign in or create an account at **learn.zybooks.com**
  - Enter zyBook code: **VANDERBILTCS1101Spring2023**
  - Subscribe

TODOs After Class

- Complete *Homework 0-A and 0-B* by **Friday, 01/13, at 11:59pm**
  - On **Brightspace | Content | First Week**
  - HW0-A
    - Read the **Academic Honesty Policy** (under **Content | Course Documents**)
    - Must receive *all 10 pts* to be considered for completing the quiz
  - HW0-B
    - An informal student survey

Assignments will not be graded if you haven't completed Homework 0-A and 0-B