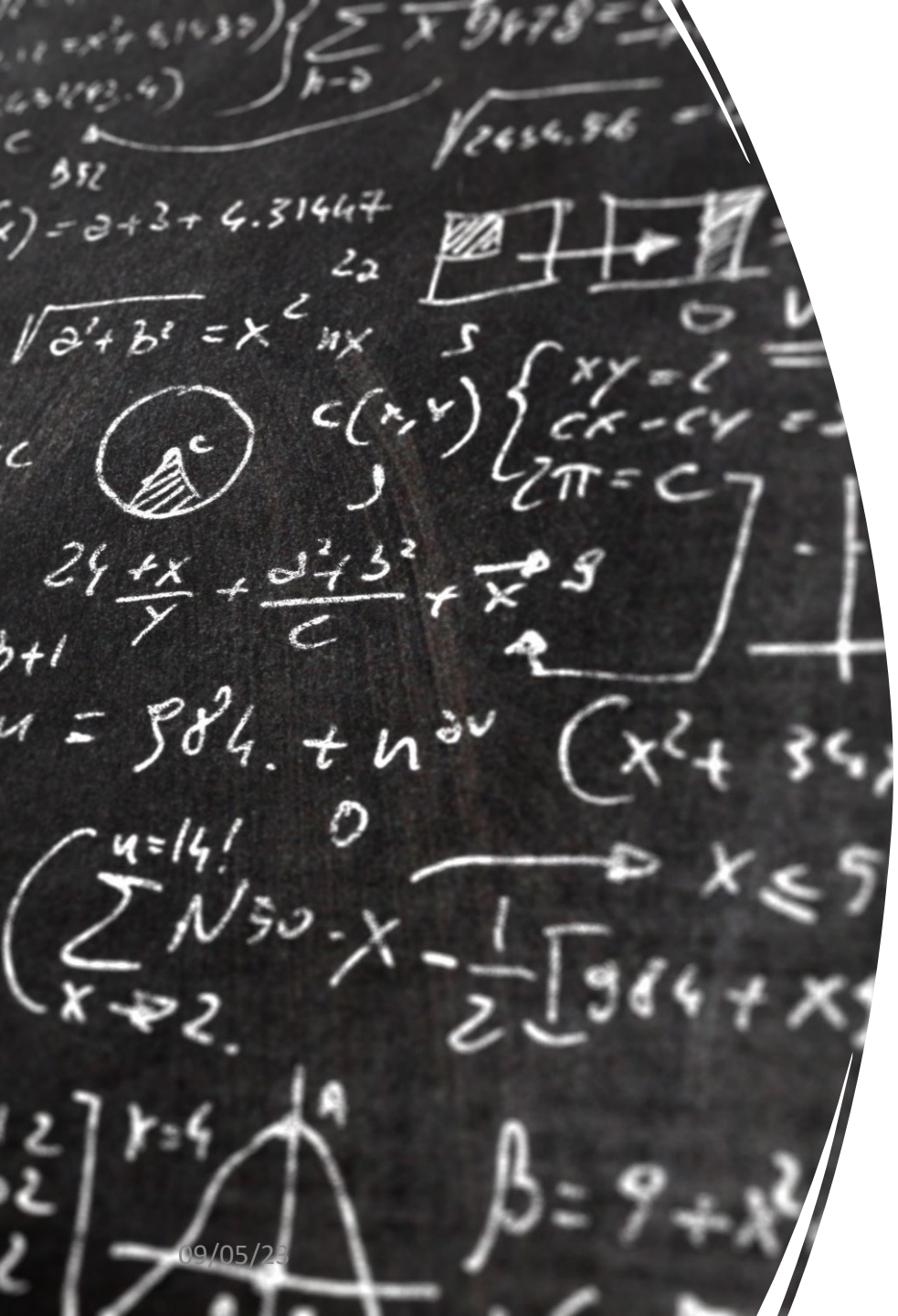

CS 113 – Computer Science I

Lecture 01

Tuesday 09/05/2023

What is Computer Science?

Computer Science in this course

- Break down problems into solvable components
- Learn how to instruct and command a computer to solve a complex problem

Algorithms ! = Programs

- Programs: implementation of algorithm that a computer understands
  - Unambiguous
  - Expressive
    - Communicate a lot of ideas

Semester goals/objectives

- Be able to break down a problem into simple steps
- Instruct a computer how to solve those steps in Java
- Debug confidently & independently
  - Trace execution flow (line by line, trace how variables update)
  - Understanding error messages
- Read and understand documentation (java docs)

Workload

- At least 10 hours a week
- Weekly homework assignments:
  - This is where learning happens!
- Weekly labs: prep for homeworks
- Daily reading
- 100-level class != lighter workload

Logistics

- Course webpage:
  - https://BMC-CS-113.github.io

- Gradescope:
  - Submitting assignments

- Piazza:
  - Course communication
  - Useful links will be posted there

Assignments

Learning by doing!

- Homeworks
- Labs

Assesments

- Midterms
  - October 12th (Thursday before Fall break)
  - November 16th (Tuesday before Thanksgiving)
  - flexible grading policy

- Final Exam

Course Staff

Prof. Adam Poliak

- 2nd year at BMC,
- spent 2 years at Barnard as Prof
- Taught CS113 in Fall 2022, Spring 2023
- Office Hours: TBD
- Research:
  - Natural Language Processing
  - Computational Text Analysis
  - Data Science

Course staff

- Teaching Assistants:
  - Maha Attique (BMC ‘25)
  - Lily Davoren (BMC ‘24)
  - Juno Bartsch (BMC ‘25)
  - Yiling Hou (BMC’ 26)
  - Kripa Lamichhane (BMC ‘26)
  - Grace Tsai (BMC ‘26) – lab TA
  - Alison Teske (BMC ‘26) – lab TA

Teaching Assistants

- Office hours: Sunday – Thursday 7-10 PM EST (Park 231)

- All of them have taken CS 113, and other CS courses

Our job is to help you succeed!

```
1 // A java program to print a message
2 public class HelloWorld {
3
4    public static void main(String[] args) {
5       // Prints out message to standard output
6       System.out.println("Hello World!");
7    }
8 }
```

Compiling

- Converting java file (.java) to a file that the computer understands (.class, this is called a binary file)

```
javac filename.java
```

- Compiler is your friend, will tell you when there are errors

Running

```
java filename
```

- Don’t include the *.class

What are the errors here?

```
public clas SyntaxErrors {

        public static void main(String args) {
                System.out.println(“Hello World);

        }
```

Linux Directory Structure

Folders & Directories

- Computer is structured as a folder-system.
  - Folders (directories) can contain files and other directories
- Organizing programs in directories
- special directories:
  - .. (double dot) - parent directory

Navigating Linux Directory

Terminal commands

- List files
  - `ls`
- Move directories
  - `cd`
- Print the path to working directory
  - `pwd`
- Compile a java program
  - `javac <java file>`
- Run a java program
  - `java <class name>`

Before next lecture

- Read chapter 01

- Complete Lab00:
  - Set up linux account on the CS lab machines
  - Learn how to use the command line
  - Create folder structure on the CS lab machines

- Sign up on:
  - Piazza
  - Gradescope