Chapter 0:
Introduction to 1336

Stephen Huang

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CS 1306

- Title: Computer Science and Programming
- Course Number: COSC 1336
- Section Number: 13875
- Instructor: [Stephen Huang](), PGH-219, [shuang@cs.uh.edu](), 713-743-3338
- Office Hours:
  - Monday & Wednesday 4:00-5:00 pm (Hybrid)
  - Tuesday & Thursday 2:00–3:00 pm (Zoom only)
  - by appointment (email me for an appointment)

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Course Sequence

COSC 1336 - Computer Science and Programming

Overview of basic hardware and software concepts of a computer with design, analysis and programming of efficient algorithms to solve computational problems.
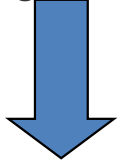
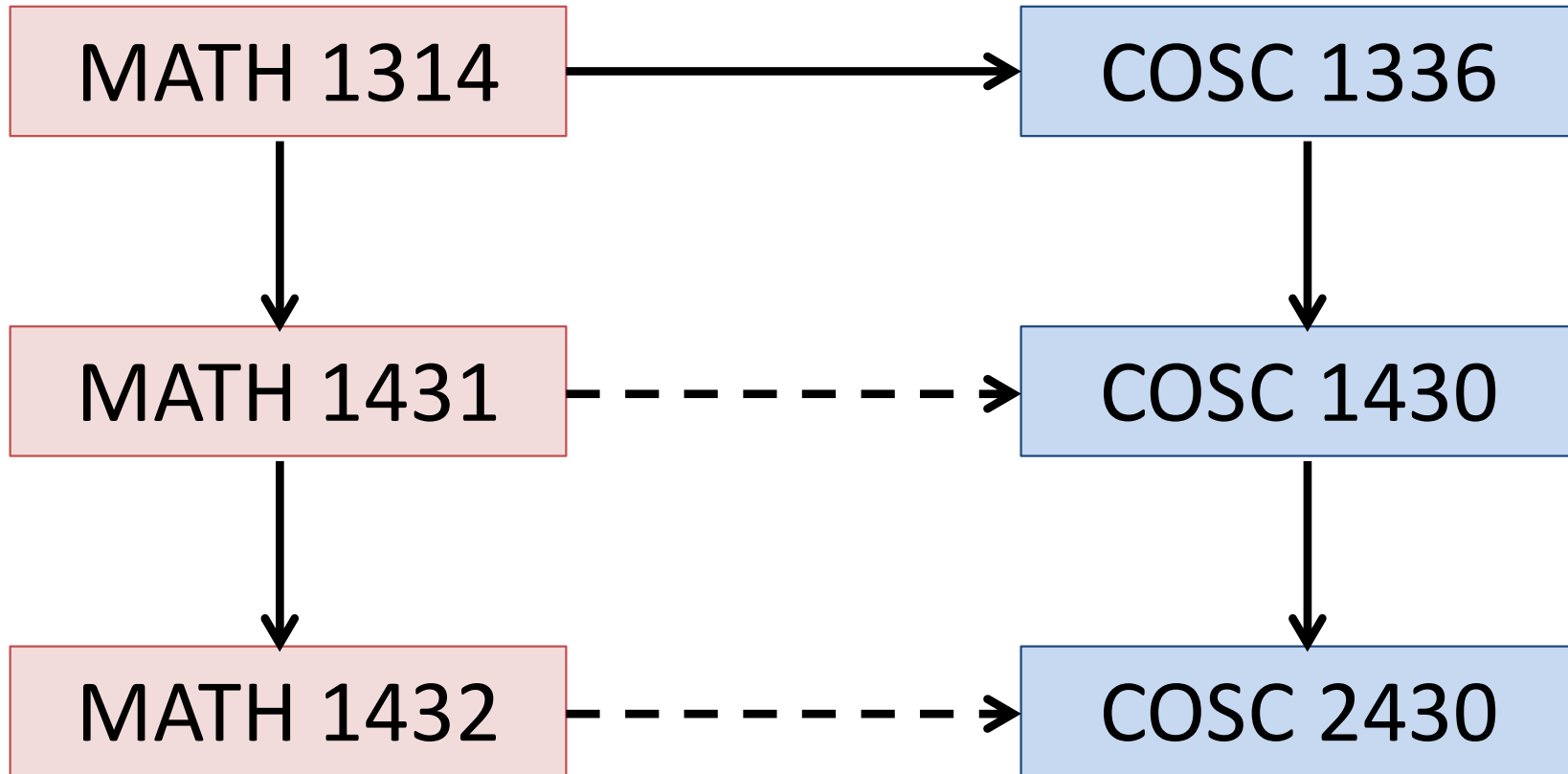## COSC 1430 - Introduction to Programming

Fundamental concepts of structured programming; procedures and elementary data structures with a focus on problem solving strategies and implementation; computer organization, structured procedural programming, C/C++ programming language, and algorithm design.
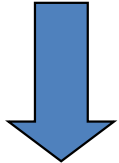
COSC 2430 - Programming and Data Structures

Object-oriented programming, programming using class derivation, inheritance, and dynamic polymorphism; Introduction to specifications, simple unity testing, and debugging; building and using canonical and advanced data structures; algorithm analysis and reasoning techniques such as assertions and invariants.

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Prerequisites

MATH 1314 → COSC 1336

MATH 1431 ⇢ COSC 1430

MATH 1432 ⇢ COSC 2430

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More Info

- Classroom: GAR-205
- Credit: Cr. 3. (3-0)
- Teaching Assistants: TBA
- Course Website: http://www.cs.uh.edu/~acl/cs1336/

(Applied Computing Lab)

- Prerequisites: MATH 1314 (Algebra) or equivalent.

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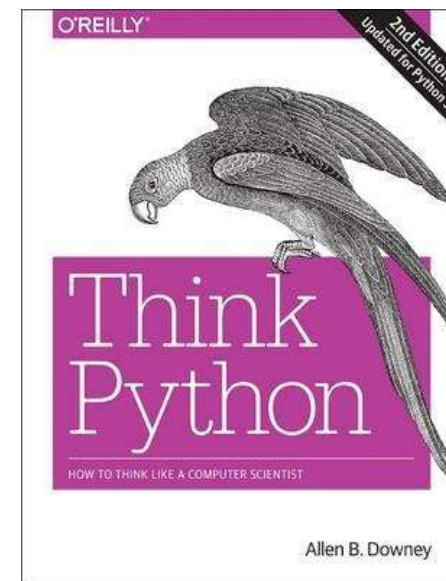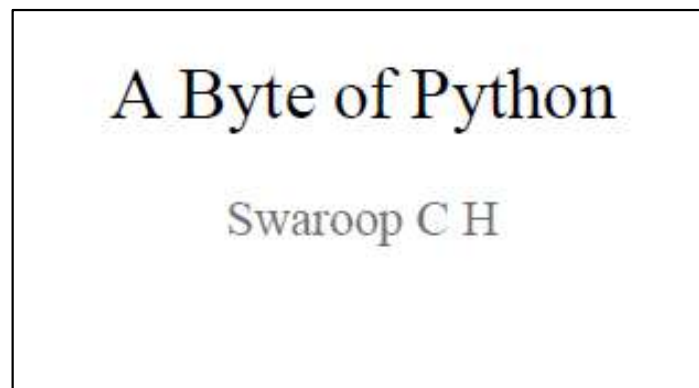
Attendance and Grading

- Attendance: Attendance is required for the lectures. A portion of your grade may depend on your attendance.

- Grading: (Tentative, Subject to change)
  - Programming Assignments (~20%)
  - Weekly Quizzes (~10%)
  - 2 Tests (~40% combined)
  - Final Exam (~30%)
  - Attendance and Quizzes

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Textbooks

- There is a wealth of resources on the web for Python. Please take advantages of the resources.

- It is recommended that you have one textbook on Python (version 3.0+).

- A suggested textbooks are listed on the next page. It can be downloaded for free.

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Resources

- Python Website
  - (www.python.org)
- Think Python
  - (http://greenteapress.com/wp/think-python-2e/)
- A Byte of Python
  - http://files.swaroopch.com/python/byte_of_python.pdf

A Byte of Python

Swaroop C H

O'REILLY
2nd Edition
Updated for Python 3

Think Python

HOW TO THINK LIKE A COMPUTER SCIENTIST

Allen B. Downey

Runestone Interactive Textbook

- "How to Think Like a Computer Scientist: Interactive Edition",
  - https://runestone.academy/runestone/books/published/thinkcspy/index.html

Academic Honesty

- You are expected to maintain the utmost level of academic integrity in the course.

- Any violation of the honesty code will be penalized severely.

- You are not allowed to collaborate on the homework assignments with other students in the class and the Labs.

- You are not allowed to use any solutions, public or not, as your own.

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Academic Honesty

- You are not allowed to share code or any other (written or electronic) material with other students.

- "Helping" other students with their homework is a violation of the academic honesty code.

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About the Course

- This is a programming course, and you are expected to write programs.
  - Limit to <100 lines of codes.
- This is more than just a programming course.
  - Some introductory material at the beginning of the semester.
- Ask yourself if you are ready and prepared to take the course.
  - Drop rate of the beginning CS courses are high.

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What I Expect from You

- Attend all lectures.

- Study the course material (typical recommendation is 9 hours/week outside the class for a 3-credit course)

- Do all the <u>required</u> and recommended programming assignments.
  - You may fail the course without completing at least 60% of the programming assignments.

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What You can Expect from Me

- Post my slides. So, you don't need to spend time to copy.

- Post my examples.

- Make my time available to you. You can always make an appointment to see me.

- Give tough but fair tests and grading.

- Curve the grade at the end of the semester if necessary.

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Problem Solving

- The single most important skill for a computer scientist is problem solving.

- Problem solving means the ability to formulate problems, think creatively about solutions, and express a solution clearly and accurately.

- The process of learning to program is an excellent opportunity to practice problem-solving skills.

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Advice

- It is not enough to learn the syntax of Python (or any other language), you must DO it.

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