

# COURSE SYLLABUS

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**YEAR COURSE OFFERED:** 2023

**SEMESTER COURSE OFFERED:** FALL

**DEPARTMENT:** COMPUTER SCIENCE

**COURSE NUMBER:** COSC 1336

**NAME OF COURSE:** COMPUTER SCIENCE & PROGRAMMING

**NAME OF INSTRUCTOR:** JASPAL SUBHLOK

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**The information contained in this class syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.**

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## **Course Description**

Computer Science and Programming is an introduction to the art of solving problems using computer programming. Students will learn how to analyze computational problems, develop solutions to them as algorithms (or recipes) for a computer to follow, and implement the solution in a modern programming language.

## **Learning Objectives**

Upon completion of this course, students will be able to:

- Understand the basic organization of a computer system and the process of solving problems with a computer
- Understand a verbal description of a problem and translate it into a computation problem.
- Identify solutions to the problem and express them as computer algorithms
- Write Python programs to implement simple algorithms
- Test and Debug Python programs
- Employ Python data structures including Strings, Lists, Files and Dictionaries
- Employ Python control flow including control and loop statements.
- Employ Python Modules and Functions.

## **Prerequisites**

MATH 1310 or equivalent

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## Assignments, Exams and Grade

*The Final grade cannot be more than a full grade point higher than the grade obtained on the examinations.*

## Required Reading

*How to Think Like a Computer Scientist: Interactive Edition.* Free eBook by Runestone Academy

## List of discussion/lecture topics

1. Intro to Computer Science and Computer Organization
2. Intro to problem solving methods: abstraction, modularity, testing, debugging
3. Intro to programming with Python: Variables, Assignments, Input/Output.
4. Modules and Functions
5. Control Flow: IF, FOR, and WHILE statements
6. Data structures: Strings, Lists, Dictionaries
7. File I/O
8. Example algorithms and applications

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## Mental Health and Wellness Resources

The University of Houston has a number of resources to support students' mental health and overall wellness, including [CoogsCARE](#) and the [UH Go App](#). UH [Counseling and Psychological Services \(CAPS\)](#) offers 24/7 mental health support for all students, addressing various concerns like stress, college adjustment and sadness. CAPS provides individual and couples counseling, group therapy, workshops and connections to other support services on and off-campus. For assistance visit [uh.edu/caps](http://uh.edu/caps), call 713-743-5454, or visit a [Let's Talk](#) location in-person or virtually. [Let's Talk](#) are daily, informal confidential consultations with CAPS therapists where no appointment or paperwork is needed.

The [Student Health Center](#) offers a Psychiatry Clinic for enrolled UH students. Call 713-743-5149 during clinic hours, Monday through Friday 8 a.m. - 4:30 p.m. to schedule an appointment.

The [A.D. Bruce Religion Center](#) offers spiritual support and a variety of programs centered on well-being.

## **Need Support Now?**

**If you or someone you know is struggling or in crisis, help is available. Call CAPS crisis support 24/7 at 713-743-5454, or the National Suicide and Crisis Lifeline: call or text [988](tel:988), or chat [988lifeline.org](https://988lifeline.org).**

## Academic Honesty Policy

High ethical standards are critical to the integrity of any institution, and bear directly on the ultimate value of conferred degrees. All UH community members are expected to contribute to an atmosphere of the highest possible ethical standards. Maintaining such an atmosphere requires that any instances of academic dishonesty be recognized and addressed. The [UH Academic Honesty Policy](#) is designed to handle those instances with fairness to all parties involved: the students, the instructors, and the University itself. All students and faculty of the University of Houston are responsible for being familiar with this policy.

## Title IX/Sexual Misconduct

Per the UHS Sexual Misconduct Policy, your instructor is a “responsible employee” for reporting purposes under Title IX regulations and state law and must report incidents of sexual misconduct (sexual harassment, non-consensual sexual contact, sexual assault, sexual exploitation, sexual intimidation, intimate partner violence, or stalking) about which they become aware to the Title IX office. Please know there are places on campus where you can make a report in confidence. You can find more information about resources on the Title IX website at <https://uh.edu/equal-opportunity/title-ix-sexual-misconduct/resources/>.

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## Reasonable Academic Adjustments/Auxiliary Aids

The University of Houston is committed to providing an academic environment and educational programs that are accessible for its students. Any student with a disability who is experiencing barriers to learning, assessment or participation is encouraged to contact the Justin Dart, Jr. Student Accessibility Center (Dart Center) to learn more about academic accommodations and support that may be available to them. Students seeking academic accommodations will need to register with the Dart Center as soon as possible to ensure timely implementation of approved accommodations. Please contact the Dart Center by visiting the website: <https://uh.edu/accessibility/>, calling (713) 743-5400, or emailing [jdcenter@Central.UH.EDU](mailto:jdcenter@Central.UH.EDU).

## Excused Absence Policy

Regular class attendance, participation, and engagement in coursework are important contributors to student success. Absences may be excused as provided in the University of Houston [Undergraduate Excused Absence Policy](#) and [Graduate Excused Absence Policy](#) for reasons including: medical illness of student or close relative, death of a close family member, legal or government proceeding that a student is obligated to attend, recognized professional and educational activities where the student is presenting, and University-sponsored activity or athletic competition. Under these policies, students with excused absences will be provided with an opportunity to make up any quiz, exam or other work that contributes to the course grade or a satisfactory alternative. Please read the full policy for details regarding reasons for excused absences, the approval process, and extended absences. Additional policies address absences related to [military service](#), [religious holy days](#), [pregnancy and related conditions](#), and [disability](#).

## Recording of Class

Students may not record all or part of class, livestream all or part of class, or make/distribute screen captures, without advanced written consent of the instructor. If you have or think you may have a disability such that you need to record class-related activities, please contact the [Justin Dart, Jr. Student Accessibility Center](#). If you have an accommodation to record class-related activities, those recordings may not be shared with any other student, whether in this course or not, or with any other person or on any other platform. Classes may be recorded by the instructor. Students may use instructor's recordings for their own studying and notetaking. Instructor's recordings are not authorized to be shared with anyone without the prior written approval of the instructor. Failure to comply with requirements regarding recordings will result in a disciplinary referral to the Dean of Students Office and may result in disciplinary action.

## **Recommended Language and Guidance**

### UH Email

Please check and use your Cougarnet email for communications related to this course. Faculty use the Cougarnet email to respond to course-related inquiries such as grade queries or progress reports for reasons of FERPA. To access your Cougarnet email, [login](#) to your Microsoft 365 account with your Cougarnet

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credentials. Visit [University Information Technology \(UIT\)](#) for instructions on how to connect your CougarNet e-mail on a mobile device.

### Security Escorts and Cougar Ride

UHPD continually works with the University community to make the campus a safe place to learn, work, and live. The security escort service is designed for the community members who have safety concerns and would like to have a Security Officer walk with them, for their safety, as they make their way across campus. Based on availability either a UHPD Security Officer or Police Officer will escort students, faculty, and staff to locations beginning and ending on campus. If you feel that you need a Security Officer to walk with you for your safety, please call [713-743-3333](tel:713-743-3333). Arrangements may be made for special needs.

Parking and Transportation Services also offers a late-night, on-demand shuttle service called “Cougar Ride” that provides rides to and from all on-campus shuttle stops, as well as the MD Anderson Library, Cougar Village/Moody Towers and the UH Technology Bridge. Rides can be requested through the UH Go app.

Days and hours of operation can be found at <https://uh.edu/af-university-services/parking/cougar-ride/>.