

# CS 1342 – 001 - PROG FOR SCIENTISTS & ENGINEER

## Fall 2023 - Class Syllabus

### **Course Description:**

An introduction to computer science and problem-solving techniques with applications in engineering and the physical sciences. Topics include an introduction to computer organization, data representation, algorithm development, and computer programming in a high-level language. This course is not intended for Computer Science or Electrical Engineering majors.

### **Course Goals and Objectives:**

- Describe the physical elements of a computer, including the central processing unit (CPU),
- Discuss the numbering system used by computers,
- Explain the similarities and differences between system and application software,
- Discuss database systems and computer networks
- Discuss the various data types, data values, and variables common with computer languages,
- Explain how expressions and arithmetic equations are programmed, and
- Write functional Python programs to compute, iterate, list, search, sort, or perform some other programmable task.

## **Brief Course Outline:**

1. What is a Computer & Building the CPU / Numbering systems / Gates
2. Software ( System Software / Application Software ) / Algorithms and Analysis
3. Database Systems / Computer Networks
4. Computer Security & Cryptography Artificial Intelligence / Social Issues
5. Introduction to Python? Software / Development
6. Data Types, Values and Variables
7. Expressions and Arithmetic
8. Conditional Execution
9. Iterations
10. Functions
11. More Functions
12. Sorting / Searching Large data
13. Arrays
14. Exception Handling
15. Sequences: Strings and Files
16. Lists
17. Introduction to Object Oriented Programming

## Lecture Scheduled Type :

- **Unless the university's rules change, this class is being taught through as face-to-face mode. Nevertheless, I may apply zoom from the classroom, and it will be up to the discretion of students on whether to use Zoom or to be present in class. Regardless, attendance is required.**
- We will be using a combination of **ZOOM, Canvas** and **my personal web site** for course content delivery, announcements , most assessments, and/or assignment submission .
- Successfully completing the requirements of the course places more responsibility on the shoulders of the student. Staying engaged is vital to the learning process. Practice is especially important when learning to write efficient, readable code that is easily maintainable.
- **Should you attend the class through zoom, you are required to have a working camera and a working microphone. You will be required to leave your camera on during Zoom lecture meetings.**
- **Should you attend the class face-to-face, it is highly recommended that you wear mask that covers both your mouth and nose the entire class time. This is to protect you and everyone's health in the class and around. You are not allowed to use a cell phone during the lectures.**

**Instructor:**        **Husain Gholoom**

**E-mail:**                [hag10@txstate.edu](mailto:hag10@txstate.edu)

**Office:**                CMAL    301 F

**CLASS TIME:**        MW 3:30 p.m. – 4:50 p.m.    IGRM 3104  
                              *Face to Face*

**OFFICE HRS ( Via ZOOM ):**

MW 11:15 am - 12:30 pm &  
MW 2:00 pm - 3:15 pm or by appt.

**Other times by appointment.**  
**(Appointments need not be made during regularly  
scheduled office hours. Must have the camera on when  
attending office hours)**

Other times by appointment only.

**WEB PAGE:**            <http://husaingholoom.com/classes.html>

**Text Book:**            Fundamentals of Python: First Programs, 1st Edition  
                              Kenneth A. Lambert  
  
                              ISBN – 13 : 978-1-111-82270-5  
                              ISBN – 10 : 1-111-82270-0

## GRADING POLICY:

**Attendance : Required ( *face-to-face* / virtual )**

**Homework / Programming Assignments 15 %**

**Exam - 1      20 %    ( 9 / 27   –   2023   *face-to-face* )**

**Exam - 2      20 %    ( 10 / 30 – 2023 *face-to-face* )**

**Programming Project      15 %**

**Final Exam : 30 % ( Comprehensive over programming concepts - *face-to-face* )**

**Final Exam Date & Time :**

**Note:** You are ***required*** to show your Texas State student (photo) ID to your instructor on exam days. A driver's license is not adequate. Exam scores will be recorded as zeros until your Texas State student ID is presented.

**Major exams** will be announced at least one week in advance. They are typically scheduled in the sixth and eleventh weeks of the semester; however, the actual dates may be adjusted to benefit the students. **Major exams are *face-to-face*.**

## **FINAL EXAM SCHEDULE:**

**C.S. 1342.001      Will be on: Wednesday December 6<sup>th</sup> / 2023**  
**Exam Time:    5:00 p.m. - 7:30 p.m.**

**Final exams will be administered *only* on the day and at the time indicated in the university exam schedule.**

**Exams** will be announced at least one week in advance. They are typically scheduled in the sixth and eleventh weeks of the semester; however, the actual dates may be adjusted to benefit the students. Look at the website for the exact dates.

If you are absent at the time of *a test*, a grade of **zero** will be recorded. If you are absent at the time of *final exam*, a final letter grade of **F or U** will be recorded.

**Makeup Exams policy : There will be NO Makeup Exams.**

**No cell phones, recording/storage retrieval devices, or calculators are allowed during exams. A grade of zero will be recorded when any such device is determined to be in a student's possession during major exams.**

## **GRADING SCALE:**

**Determination of letter grade in the course :**

**semester average  $\geq 89.5$  A**

**$79.5 \leq$  semester average  $< 89.5$  B**

**$69.5 \leq$  semester average  $< 79.5$  C**

**$59.5 \leq$  semester average  $< 69.5$  D**

**semester average  $< 59.5$  F or U**

**Programs** are very important to this course. Therefore, **ALL** programs **MUST** be turned in. A '*good faith*' effort must be demonstrated for each program that turned in. ***Programs that contain compilation errors will automatically receive a 75% penalty.*** To receive *any* credit for a programming assignment, the source code (along with appropriate support files) must be submitted ***electronically on or before the due date.*** If the electronic copy is not available to the grader on the date and the time the programming assignment is due, a grade of **zero** will be assigned. There will be between six to eight homework assignments. The lowest homework grade will automatically be dropped and will not be counted towards your course grade. Hence, you can miss one of the homework assignments without it affecting your grade.

You are required to install **Python IDE** on your personal device, the IDE used in the course for lecture assignments. Make sure to install the same version as the one installed in our labs.

**All programs are going to be tested using : Python IDE 3.11.4**

You can use any IDE that is installed on your personal computer, **however**, you are responsible for making any adjustments to accommodate differences between IDE requirements before submitting your projects since **programming assignments will be graded using Python IDE 3.11.4**

**LATE POLICY:** Assignments should be uploaded *via canvas* on the specified date and time. Regardless of the deadline set, there will always be people who want it extended. **Regardless of any reason, no time extension will be given, and no late assignments will be accepted. So, please do not ask for any extensions or submitting late assignments.**

**ALLOW FOR NATURAL DISASTERS!** The computer system used may ‘go down’, lost internet service ...etc. These types of events do **NOT** excuse late work.

**Alert:** Time permitting programs will be run through an Internet service designed for detecting plagiarism in software code such as Moss.

Now that the deadline *for full credit* has been established, ***please respect this deadline, and plan accordingly.***

**GRADE DISPUTES:** For complete discussion and possible resolution, grade disputes must be handled in a ZOOM meeting during regularly scheduled office hours or by appointment when all records are readily available to your instructor. Disputes over grades ***must*** be discussed within ***five days*** from when grades are posted. For example, you must discuss programming assignment grades within five days of when feedback is posted. This means within ***five days*** from the date the assignment feedback is ***posted***.

It ***DOES NOT*** mean five days from the date you decide to review the feedback.

**ACADEMIC OFFENSES:** All assignments submitted for a grade should reflect the work of the ***individual*** student unless otherwise established in writing by your instructor. Violations will be dealt with according to Academic Procedures and Policies as outlined in the **Texas State Student Handbook**. Violations will be **reported** to the university.

Go to **<http://www.dos.txstate.edu/handbook.html>** and click on **Academic Honor Code** to review **Academic Offenses** and the **Penalties for Academic Dishonesty**.

**ATTENDANCE POLICY:** Class attendance ***is required***. You will be held responsible for material covered in the lectures. Some of the material covered in lectures may not be available elsewhere.



**E-MAIL:** Notifications, inquiries, questions ... etc. that are related to this class will be sent and received **only** via **Texas State e-mail account**. Do not expect a response if the question has been answered in syllabus, Canvas, announcements, or in the class. Please do not expect a rapid response especially over weekends, holidays, or at night. I do not guarantee any response to messages or email inquiries sent during the last 24 hours before homework due date, exam, or project due date. This policy exists to encourage timely work. **Don't** attempt to send any message via Canvas inbox.

**ABSENCE POLICY:** If you are absent at the time of the *midterm exam*, a grade of zero will be recorded. If you are absent at the time of the *final exam*, a final letter grade of *U* will be assigned. There will be NO make-up exams.

**Extra Credit:** There will be **no** opportunities for extra credit. So, please do not ask for any form of extra credit.

**DROP POLICY: (Refer to the Academic Calendar).**

- Official 12th Class Day / Last Day to Drop with **100% Refund - Wednesday , September 6<sup>th</sup> , 2023.**
- Automatic “W” deadline and last day to drop a class is on **Monday, October 23<sup>rd</sup> , 2023.**
- Last opportunity to *withdraw* from the University on **Thursday , November 16<sup>th</sup> , 2023 .**
- Students who withdraw from the University after the automatic “W” date will be assigned a “W” or an “F” or an “U” based on class performance up to that point in the semester. A “W” will be assigned **only** if the class average is *passing* on the day the withdrawal procedure is **officially completed.**

**Note:** Contact the Registrar's Office as to the proper procedure to follow in order to successfully complete the drop/withdrawal process. If you decide to withdraw from the University *after* the automatic "W" date previously mentioned, be sure to check with your instructor *prior* to completing the withdrawal procedure in order to verify whether you will be receiving a "W" or an "F". Contact the Registrar if you have any further questions.

It is *your* responsibility to make sure the drop/withdrawal process is complete. Do *not* come to me later and say that you "thought" you had dropped but the process did not "go through" expecting me to change a grade of 'F' to a 'W'. Be sure to check your revised schedule to make sure the course dropped is no longer listed.

**ADA Compliance:** Students with special needs as documented by the Office of Disability Services who require accommodations should identify themselves to the instructor as soon as possible but no later than the **12th class** meeting in a long session and no later than the 4th class meeting during a regular summer session. Students with special needs who have not already done so will be required to contact the Office of Disability Services to establish accommodations. Every effort will be made to secure the necessary accommodations to facilitate students with special needs/disabilities to enhance their performance in the classroom.

### **Links to share :**

Office of Disability Services (ODS): <https://www.ods.txstate.edu/> (includes step-by-step instructions on how a student registers with ODS for 'academic accommodations' .