

CSE/ISE 337, Spring 2023, Department of Computer Science, Stony Brook University  
**Scripting Languages**

**Instructor:** Christopher Kane, christopher.kane@stonybrook.edu

**Office:** New Computer Science, Rm. 107

**Office Hours:** Thursday: 4:00–6:00 PM, Friday: 3:30–5:00 PM, or by appointment – On Zoom

**Class:** Monday/Wednesday, 4:25 – 4:45 PM

**Course Description:**

Scripting languages are widely used in the IT industry. Programming with scripting languages, also known as scripting, has several advantages compared to programming with other types of languages in that scripts facilitate rapid program development; can automate high-level jobs or tasks very effectively; and can be used to compose various software components, even binaries, into more complex and powerful applications. This course introduces the principles of scripting, covers one or two selected scripting languages in depth, and illustrates the advanced use of scripting by extensive case studies in application areas such as system administration, web application development, graphical user interface development, and text processing.

(<https://www.cs.stonybrook.edu/students/Undergraduate-Studies/courses/CSE337>)

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**Credits:** 3; **Pre-requisite:** CSE 114 or ISE 208; CSE or ISE major; U3 or U4 standing

**Course Outcomes:**

The following are the official course goals agreed upon by the faculty for this course:

- can read and maintain existing scripting programs
- can effectively utilize and compose common command-line utilities
- can effectively utilize scripting to new situations, namely:
  - can identify and determine if scripting is suitable given a software requirement specification
  - can analyze the requirement specification, design, and implement moderately-sized scripting programs

**Textbook:**

- There is no required textbook for the course.
- Recommended Texts for Reference:
  - *Python Crash Course*, 2e. Eric Matthes. No Starch Press. 2019.  
[https://ehmatthes.github.io/pcc\\_2e/regular\\_index/](https://ehmatthes.github.io/pcc_2e/regular_index/)
  - *Automate the Boring Stuff with Python*, 2e. Al Sweigart. No Starch Press. 2019.  
<https://automatetheboringstuff.com/>
  - *Dive Into Python 3*. Mark Pilgrim. APress. 2009.  
<https://diveintopython3.problemsolving.io/>
  - *Unix Power Tools*, 3e. Jerry Peek, Shelley Powers, Tim O' Reilly, and Mike Loukides. O'Reilly Media. 2002.

### **Course Format:**

This course will be conducted in a live, in-person format.

- Exams will be conducted during class-time through Blackboard. I am planning (or hoping) we can do this in person with laptops, but, for students without a laptop, the exam may be taken remotely using the Respondus Lockdown browser and Monitor.
- Assignments will be posted and submitted through Blackboard as usual.
- I will attempt to broadcast and record lectures (probably through Zoom). Recordings of the lectures will be made available through Blackboard to assist students who miss lectures for technical or other reasons. However, the room is not equipped for recording lectures, so no guarantees for audio quality can be made.

### **Technical Requirements:**

Taking the class remotely imposes the following requirements:

- A reliable, broadband connection to the Internet
- A desktop or laptop computer
- A webcam
- A microphone
- The latest version of the Respondus Lockdown browser downloaded through Stonybrook: <https://download.respondus.com/lockdown/download.php?id=772113517>
- Zoom, 5.01+ (students should be regularly checking for updates to their Zoom client)

### **Course Online Resources:**

- Course Homepage: <https://www3.cs.stonybrook.edu/~ckane/spring2023/cse337/>
- Blackboard: <https://blackboard.stonybrook.edu>  
Blackboard will be used for most other course materials such as slides, assignments, grades, etc. These sites must be monitored and read regularly.
- PIAZZA: <https://www.piazza.com/stonybrook/spring2023/cse337>  
This term we will be using PIAZZA for class discussion. The system is highly catered to getting you help fast and efficiently from classmates, the TAs, and Professors. All non-personal course-related communication should be posted to the discussion board. If you have questions about assignments, technical problems that need troubleshooting, or other questions that might be of interest to other students, they must be posted to PIAZZA and not emailed to the instructor or TA. If you have any problems or feedback for the developers, email [team@piazza.com](mailto:team@piazza.com).

**Course Announcements:** Course announcements will be posted to Blackboard. You are expected to be aware of all announcements.

### **Course Outline:**

The following topics will be covered in the lectures:

- Scripting Languages: Features and Uses
- Python
- Regular Expressions
- Unix Shell Commands
- Unix Shell Scripting (including sed and awk)

- Windows Shell Commands and Shell Scripting
- Application Case Studies for Scripting Languages (not exhaustive, may include):
  - Text Processing using regex, Python, and Shell Scripting
  - GUI Programming
  - Server-Side Scripting
  - Rapid Prototyping for Proof of Concept

A more detailed schedule of lectures, readings, assignments, and exams will be posted to the course homepage.

**Final Exam:** Tuesday, May 16<sup>th</sup>, 2023, 2:15 – 5:00 PM

**Grade Distribution:**

- Assignments: 40%
- Midterm Exams: 30%
- Final Exam: 30%

**Course Grade Cutoffs:**

A [93 – 100], A- [90 – 93),  
 B+ [87 – 90), B [83 – 87), B- [80 – 83),  
 C+ [77 – 80), C [73 – 77), C- [70 – 73),  
 D+ [67 – 70), D [63 – 67),  
 F [0 – 63)

**Course Policies:**

- Attendance is expected and highly encouraged.
- Students are responsible for all missed work, regardless of the reason for the absence. It is also the absent student's responsibility to obtain all missed notes or materials.
- Students are expected to work independently. Offering and accepting solutions from others is an act of plagiarism, which is a serious offense, and all involved parties will be penalized according to the Academic Honesty Policy. Discussion amongst students is encouraged, but when in doubt, direct your questions to the professor or TA.
- Assignments must be turned in on the day they are due. Students are urged to plan ahead to avoid problems such as congestion or failure of computer facilities at the last minute. If your assignment is incomplete or is not working by the due date, turn in whatever you have.
- **Grading Issues:** All issues with grading must be emailed to the relevant TA/Grader or Instructor within 1 week of the return of the graded assignment or exam. Any requests/concerns after this date will not be considered. The email must include a detailed explanation of the specific grading issues and reason/correction. We believe students often learn by investigating and understanding their mistakes. Therefore, it is the responsibility of the student to determine the issues, not the grader/instructor/TA.
- Exams are closed book, closed notes.
- **Makeup exams will be given only for reasons outlined in the Undergraduate Bulletin, or at the discretion of the instructor.** Please inform the instructor as soon as you know or suspect you will not be able to attend the exam as scheduled.

**Etiquette:**

**PIAZZA:** PIAZZA is a forum for additional learning and assistance. It is not the place for cyber-bullying, memes, grade complaints, concerns/comments/criticisms about the course, or in general, anything unrelated to the course material and your learning. Improper behavior will result in the deactivation of PIAZZA and reporting of the individual's behavior to University Office of Community Standards.

Therefore, students are expected to use the PIAZZA forum for all non-personal course-related communication. If you have questions about assignments, technical problems that need troubleshooting, or other questions that might be of interest to other students, they must be posted to PIAZZA and not emailed to the instructor or TA.

**Email:** Almost all questions concerning the course should be posted to PIAZZA. The following list gives exceptions for which students should email me directly:

- If you cannot come to office hours and need to set up an appointment to meet at another time; in this case, you must include your availability for the upcoming week.
- Making arrangements for disability accommodations.
- To discuss private, personal matters that are impacting your coursework, such as physical or mental illness, death in the family, etc.
- If the instructor asks you to email them something relating to a previous conversation.

When emailing, please use the following guidelines to ensure a timely response:

- Use your official Stony Brook (@stonybrook.edu) email account.
- Use a descriptive subject line that includes “CSE/ISE 337”, identifies the item you are emailing about, and a brief description of the topic of your email.
- E.g., “CSE/ISE 337: A1 Submission error”, “CSE/ISE 337: A2 Blackboard Grade”
- Begin with a proper greeting, “Hello Prof. Kane,”
- Please be direct and concise in explaining the issue.
- End with a proper salutation that includes your full name, netid, and SBU ID number.

**Course Attendance and Engagement**

Students are expected to attend every class, report for examinations and submit major graded coursework as scheduled. If a student is unable to attend lecture(s), report for any exams or complete major graded coursework as scheduled due to extenuating circumstances, the student must contact the instructor as soon as possible. Students may be requested to provide documentation to support their absence and/or may be referred to the Student Support Team for assistance. Students will be provided reasonable accommodations for missed exams, assignments or projects due to significant illness, tragedy or other personal emergencies. In the instance of missed lectures or labs, the student is responsible for: **reviewing posted slides, reviewing recorded lectures, seeking notes from a classmate, and checking Blackboard and Piazza for course announcements.** Please note, all students must follow Stony Brook, local, state and Centers for Disease Control and Prevention (CDC) guidelines to reduce the risk of transmission of COVID. For questions or more information click [here](#).

### **Student Accessibility Support Center Statement**

If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact the Student Accessibility Support Center, Stony Brook Union Suite 107, (631) 632-6748, or at [sasc@stonybrook.edu](mailto:sasc@stonybrook.edu). They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

### **Academic Integrity Statement**

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Professions, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at [http://www.stonybrook.edu/commcms/academic\\_integrity/index.html](http://www.stonybrook.edu/commcms/academic_integrity/index.html)

### **Critical Incident Management**

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of University Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.