UTSA | ALVAREZ College of Business

# IS 2053 – PROGRAMMING LANGUAGES 1 WITH SCRIPTING – Summer 2022

*Last Updated: May 17, 2022*

## Course Roadmap

This syllabus is organized in the sections below. You may click on any link to move to that section.



**Note: This class will take place fully on-line. Since this is a 10-week course, you will be expected to complete the same amount of content that students are exposed to in 16-weeks. As a result, there are 5 occasions which require you to submit two modules in a single week. Do not procrastinate or you will fall behind very quickly. We will be using DISCORD for most communications.**

## Public Health Considerations for Summer 2022

The health and safety of our campus community is a shared responsibility of all Roadrunners. It is important to note that none of us can guarantee a COVID-19 free environment. We all must, however, follow the guidelines outlined in the UTSA Public Health Task Force Report ("Report") and any other applicable policies as may be communicated by the University from time to time. This will include regulating behaviors outlined in the Report including:

- Encouraging the use of face coverings,
- Self-monitoring for symptoms using the Daily Health Check before coming to campus,
- Getting tested for COVID-19 if showing symptoms or after a close contact with a COVID-19 positive individual (if you are not already fully vaccinated and are not symptomatic),
- Following proper hygiene practices, including frequent hand sanitization, using cleansing wipes to disinfect surfaces, and minimizing the use of shared devices, tools and equipment,
- Avoid congregating (i.e. bottlenecking) near the entrances and exits before and after class – keeping your distance to reduce possible transmission from symptomatic or asymptomatic individuals.

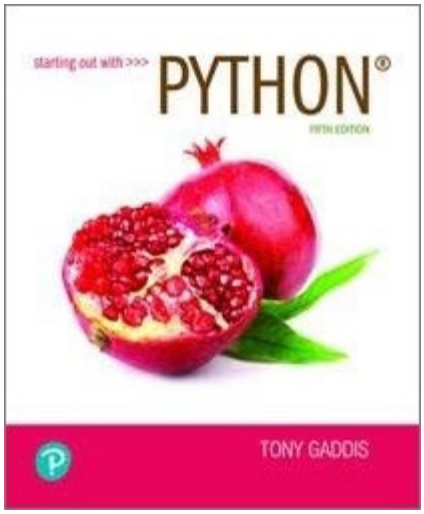
- Communicating any COVID-19 related health concern to your supervisor or professor, and
- Submitting a self-report to report your positive test results or exposure (if not fully vaccinated and are also symptomatic for COVID-19 infection).

In turn, faculty members or supervisors will submit a COVID Case Referral to alert the COVID Response Team about positive COVID-19 cases for operational action. Failure to abide by these guidelines and requirements may result in disciplinary action in accordance with the Student Code of Conduct or applicable employment policies and procedures. Violations should be reported to the Office of Institutional Compliance via the UTSA Hotline for appropriate action.

### For Face-to-Face Classroom and Other Academic Sessions

Face coverings/masks are recommended in indoor public and common spaces, especially for those individuals who are high risk and/or not vaccinated. For the latest information, please review the Roadrunner Roadmap.

## Textbook & Software




**Author:** Tony Gaddis
**Book:** Starting Out with Python, 5th
**Publisher:** Pearson
**ISBN:** 9780136719199

**CodeGrade:** You are required to use this software, which comes with the course. 29.00 one-time purchase.
**FYI:** The eText is available directly from the publisher for $9.99/month -- minimum 4 month subscription (So basically $40), but you may purchase the book however you prefer.

https://www.pearson.com/store/p/starting-out-with-python/P100002991999/9780136912330

## Course Logistics

This course will be offered fully on-line. There are no face-to-face meetings, though there are instructional videos for each lesson. You will also be required to purchase and use CodeGrade.

## About Your Instructor

My name is Ian Burres and I'll be your instructor for this section of **IS 2053 Programming Languages I with Scripting**. [I have a more detailed introduction on Blackboard, so please look at that when you have time]. I'm looking forward to working with all of you! You can communicate with me during this course in several ways. [I will respond within 24 hours, though I usually respond in just a few hours.]

| | |
|---|---|
| Email: | Please email me at **ian.burres@utsa.edu** from your ***my.utsa.edu*** address. *Note: Course Messages will not receive a reply.* |
| Cell Phone: | I provide my personal cell phone for students in case of emergencies and/or if you are unable to get a hold of me fast enough using email. 954-415-9538. **Please send a text message first telling me who you are and the name of the course.** |
| Student Hours: | My office hours are virtual only for on-line courses. We will be using Discord, so you should be able to get a hold of me on there. |
| Conference: | Schedule a one-on-one Discord meeting with me anytime (details in Blackboard). |

## About This Course

Prerequisites: IS 1003 with a grade of "C-" or better OR instructor override. This course introduces programming logic and constructs in Python and basic command line scripting in Linux and Windows environments. Control structures, arithmetic and logical operators, functions, arrays, regular expressions, classes/objects, and exception handling are covered in Python. Students will also write Bash and PowerShell scripts to execute basic processes and tasks. The emphasis will be on building problem solving and coding skills that apply to any language.

## Course Objectives

- Develop an understanding of common syntax rules used in most programming languages.
- Develop an understanding of how computers operate at a fundamental level.
- Apply sound logic to avoid errors and bugs when creating programs.
- Understand how to solve problems with computer programs.
- Learn to write scripts to solve routine, often mundane, tasks.
- Develop competency with the Python programming language.
- Understand the difference between object-oriented programming (OOP), procedural programming, and functional programming.
- Learn how to write secure programs and apply the knowledge gained in this course to the field of cyber security.

## Course Materials

- Recommended: A Windows 10/11 computer with an Education/Pro operating system and at least 8 GB RAM (16 GB preferable). Review the Alvarez College of Business Technology Requirements. Please email me at or before the start of the semester to discuss your computer specs if you have questions or concerns. These resources may be helpful:

  - The college's Technology Software and Resources provides discount purchasing options.
  - The UTSA library provides a limited number of "loaner" laptops each semester through their Laptop Borrowing Policy page.
- You will need to download Spyder IDE or Visual Studio Code (Recommended).

## Grading Policy **I DO NOT accept late work, except for students with military obligations**

This course operates on a 1000-point scale. You may determine your current progress as a percentage of 1000 points by looking at the TOTAL column grade at any time and dividing by 10.

| Total Pts | Total % | Grade | GPA |
|---|---|---|---|
| > 980 | 98.0 – 100 | A+ | 4.00 |
| 920 – 979 | 92.0 – 97.9 | A | 4.00 |
| 900 – 919 | 90.0 – 91.9 | A- | 3.67 |
| 880 – 899 | 88.0 – 89.9 | B+ | 3.33 |
| 820 – 879 | 82.0 – 87.9 | B | 3.00 |
| 800 – 819 | 80.0 – 81.9 | B- | 2.67 |
| 780 – 799 | 78.0 – 79.9 | C+ | 2.33 |
| 720 – 779 | 72.0 – 77.9 | C | 2.00 |
| 700 – 719 | 70.0 – 71.9 | C- | 1.67 |
| 680 – 699 | 68.0 – 69.9 | D+ | 1.33 |
| 620 – 679 | 62.0 – 67.9 | D | 1.00 |
| 600 – 619 | 60.0 – 61.9 | D- | 0.67 |
| < 600 | < 60.0 | F | 0.00 |

| Deliverables (#) | Total Points (Pts Each) | % Grade |
|---|---|---|
| Quizzes (12) | 180 pts (15 pts each) | 17% |
| Programming Challenges (11) | 220 pts (20 pts each | 21% |
| Labs (4) | 400 pts (100 pts each) | 38% |
| Miscellaneous Syllabus, etc. | 50 pts | 5% |
| Discussion (10) | 100 pts (10 pts each) | 9.5% |
| Final Exam | 100 pts | 9.5% |
| **Total** | **1050 pts** | **100%** |

## Teaching Philosophy/Course Code

My teaching style is very hands-on. For instance, at the beginning of each new lesson I will ask you to write a small Python program that demonstrates the programming concept we learned in the previous lesson. These hands-on programming challenges are preceded by several multiple-choice questions designed to ensure you have learned the syntax associated with each section of instruction. Labs are larger programs designed to test your understanding of cumulative lessons, which is why you will be given several weeks to complete them. The final exam will consist of several multiple-choice questions and a programming challenge that will incorporate many different concepts you have learned throughout the course. I will provide a review for the exam to better help you prepare for the final.

I should also like to mention that I enjoy interacting with my students. I want each of you to succeed, and I really do mean that, so it's important that you know I am not out to fail you; my job is to ensure you learn the material well enough to start writing your own programs and scripts (we will talk about the differences) and continue you studies with an intermediate course, should you so desire.

## UTSA Policies and Resources

Please review UTSA's Inclusivity Statement and the Provost's Common Syllabus for institutional information. A few of these policies and resources are highlighted below. Visit the Student Policies A-Z Index for a full listing.

### Academic Integrity

#### *The Roadrunner Creed*

The University of Texas at San Antonio is a community of scholars, where integrity, excellence, inclusiveness, respect, collaboration, and innovation are fostered.

As a Roadrunner, I will:

- Uphold the highest standards of academic and personal integrity by practicing and expecting fair and ethical conduct;
- Respect and accept individual differences, recognizing the inherent dignity of each person;
- Contribute to campus life and the larger community through my active engagement; and
- Support the fearless exploration of dreams and ideas in the advancement of ingenuity, creativity, and discovery.

*Guided by these principles now and forever, I am a Roadrunner!*

#### *Student Code of Conduct*

- Please carefully read the Student Code of Conduct (Section B of the Appendices in the Student Information Bulletin).
- For more information on the Student Code of Conduct, contact the Student Conduct and Community Standards team. Specific guidelines for this course are listed below.

#### *Lab Expectations*

- *Submissions*: Please write your own programs when you submit your labs. Your work will be checked for uniqueness. That includes Stack Overflow and other similar sites.
- *Collaboration*: You may collaborate on Slack and research online. Please explicitly cite any references and collaborations at the end of your lab reports, including your peers, Slack posts, online forums, and other textbooks/sites. In addition, please note when you have assisted a peer.
- *Second Chances*: Under certain circumstances, assuming your initial attempt shows a significant effort, you will be allowed to submit one revision of your labs/discussions. Details will be shared in Blackboard for each assignment.

#### *Test/Quiz Expectations:*

- *Submissions*: Please study and take notes on before your quizzes. I will inspect each of your programs to ensure they compile and execute correctly in class, after the allotted time has expired.
- *Collaboration*: Please complete your quizzes and exams *independently*, without any assistance from peers.
- *Second Chances*: You will have one attempt at each quiz. This is due to the fact that quizzes are comprised of multiple choice questions and a small programming challenge.
- *Unauthorized Distribution*

- You are expressly prohibited from publishing, reproducing, or sharing reports, quizzes, and exams in any form (hard copy or electronic) with other students or third-party vendors (including but not limited to online homework/study platforms).
- You are expressly prohibited from recording any part of this course, and from publishing, reproducing, or sharing with those not in the class (except to implement an approved Student Disability Service accommodation), or uploading to other online environments.

*Student Consent*

- For the use of recordings outside this course, consent of the students identifiable in any recordings is required prior to such use unless an exception is allowed by law.
- For more information on your privacy and class recordings, review Student Privacy (FERPA) in Virtual Classrooms and Other Educational Recordings.

## Well-Being and Safety

UTSA is committed to providing a safe campus environment for students, faculty, staff, and visitors. In addition to the **Public Health Considerations** mentioned above, please take advantage of the following resources.

- UTSA Alerts
- LiveSafe App
- Counseling Services ((210) 458-4140 (Main Campus) or (210) 458-2930 (Downtown Campus).
- Student Health Services
- Campus Recreation Center
- UTSA Campus Climate Team
- Equal Opportunity Services & Title IX Sexual Harassment and Sexual Misconduct
- PEACE Center - Prevention, Education, Advocacy, Consultation and Empowerment
- UTSA Police: Emergency: (210) 458-4911; Non-Emergency: (210) 458-4242
- Campus Carry

## Academic Support

- Student Disability Services (210) 458-4157): Contact SDS for accommodations requests for assessment/instructional assistance.
- UTSA Library: Find additional resources – in particular, on the Information Systems and Cybersecurity Database page.
- Academic Success Coaching: Up your study skills – see their YouTube channel.
- The Writing Center: Participate in workshops and Q and A sessions to improve your writing skills.
- Student Assistance Services: Ask about academic and non-academic matters related to enrollment.

## Technology Support

Please refer to the following support contacts when encountering technical issues.

- UTSA Blackboard: 24/7 Blackboard/Integrated Tools Support (email, live chat, phone, help desk)
- Blackboard Self Help Portal: Search bar for Blackboard questions
- UTS Tech Cafe: All Technical Support, Mon-Fri, 8 AM to 5 PM (email, phone: 210.458.5555)
- Student Guide to Online Learning: An Introduction to Online Courses
- Digital Tools Resources (complimentary licensing of Microsoft Office and Adobe Creative Cloud)
- UTSA Student Connect Computer Labs: Information on available computer lab and their hours.
- UTSA Laptop Borrowing Policy: Limited library laptops for semester loans.

*Tech Tips!*

- Save your work often – locally and in the cloud if possible!
- Make sure you have reliable Internet access before taking a test or working on an online assignment.
- Use **Google Chrome** or **Mozilla Firefox** as your browser. Other browsers may result in errors.
- *If you are having trouble accessing or submitting content, try clearing the cache and running the* Blackboard Browser Checker.
- If you have *cleared the cache* and tried a *different browser*, please submit a ticket to University Technology Solutions (UTS) Tech Café with your course ID/section, and a description of the issue.

## Course Schedule

All deliverables are due **11:59 PM Central Daylight Time (CDT)** according to the schedule below. Refer to the Academic Calendar for university-wide deadlines and be in touch *early* and *often* with any issues.

### Week 1 (Tue, May 31) | [Module 00] (Due Date: Mon, Jun 6)

1. Syllabus / Introduction
2. Complete "START HERE" section in Blackboard
3. Install Spyder IDE OR **Visual Studio Code** (Recommended) & Setup **CodeGrade** Account
4. Challenge 00

### Week 2 (Tue, Jun 07 | [Module 01] (Due Date: Mon, Jun 13)

1. Chapter 01 - Introduction to Computers and Programming
2. Quiz: Chapter 1
3. Discussion Board 1
4. Challenge 1

### Week 3 (Tue, Jun 14) | [Module 02] (Due Date: Mon, Jun 20)

1. Chapter 02 - Input, Processing, and Output
2. Quiz: Chapter 2
3. Programming Challenge 2

### Week 3 (Tue, Jun 14) | [Module 03] (Due Date: Mon, Jun 20)

1. Chapter 03 - Decision Structures and Boolean Logic
2. Quiz: Chapter 3
3. Programming Challenge 3
4. LAB 1 AVAILABLE

### Week 4 (Tue, Jun 21) | [Module 04] (Due Date: Mon, Jun 27)

1. Chapter 04 - Repetition Structures
2. Quiz: Chapter 4
3. Programming Challenge 4

### Week 4 (Tue, Jun 21) | [Module 05] (Due Date: Tue, Jun 27)

1. Chapter 05 – Functions
2. Introduction to Scripting
3. Quiz: Chapter 5
4. Programming Challenge 5
5. LAB 1 DUE

**Week 5 (Tue, Jun 28) | [Module 06] (Due Date: Tue, Jul 05)**

1. Chapter 06 - Files and Exceptions
2. Quiz: Chapter 6
3. Programming Challenge 6
4. LAB 2 AVAILABLE

*Week 9 – Fourth of July! Have a safe and happy Independence Day!!*
*Your assignments will be due on Tuesday this week as a result of the holiday.* ☺

**Week 6 (Tue, Jul 05) | [Module 07] (Due Date: Tue, Jul 11)**

1. Chapter 07 - Lists and Tuples
2. More examples of scripting
3. Quiz: Chapter 7
4. Programming Challenge 7

**Week 6 (Tue, Jul 05) | [Module 08] (Due Date: Tue, Jul 11)**

1. Chapter 08 - More About Strings
2. Quiz: Chapter 8
3. Programming Challenge 8
4. Lab 2 DUE

Drop Deadline: July 12th

**Week 7 (Tue, Jul 12) | [Module 09] (Due Date: Mon, Jul 18)**

1. Chapter 09 - Dictionaries and Sets
2. Quiz: Chapter 9
3. Programming Challenge 9
4. Lab 3 AVAILABLE

**Week 7 (Tue, Jul 19) | [Module 10] (Due Date: Mon, Jul 25)**

1. Chapter 10 - Classes and Object-Oriented Programming
2. Quiz: Chapter 10
3. Programming Challenge 10

**Week 8 (Tue, Jul 26) | [Module 11] (Due Date: Mon, Aug 1)**

1. Scripting lessons continued
2. LAB 3 DUE
3. LAB 4 AVAILABLE

**Week 9 (Tue, Aug 02) | [Module 12] (Due Date: Mon, Aug 08)**

1. Chapter 12 – Recursion
2. Quiz: Chapter 12
3. Programming Challenge 12
4. LAB 4 DUE - 08/08/2022

*Last Day of Class (Aug 9) and Study Day (Aug 8)*

## Week 10 (Tue, Aug 09 - Thur, Aug 11) | Final Exam ()

1. Final Exam DUE 08/11/2022 at 11:59PM
2. **Nothing will be accepted after Mon, AUG 9**