

DTSC 3020

**INTRODUCTION TO COMPUTATION WITH
PYTHON**

Section: 501

SYLLABUS

Fall 2025

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COURSE INFORMATION

- DTSC 3020, Section 501, 3 Credit Hours
- Title: Introduction to Computation with Python
- Course schedule: See Table 1
- Face-to-face classes:
 - Time:
 - Tuesday 2:00 pm – 4:50 pm (CT)
 - Location: Frisco Campus, FRLD 460

Instructor Contact Information

- **Kate Kargozari**
- Email address: katekargozari@my.unt.edu
- Office hours:
 - By appointment
 - [Via Zoom](#)
 - Passcode: 2131451

Communicating with Your Instructor

This course will have a website in [UNT Canvas](#) for online discussion, assignment submissions, and sharing of reading materials. Students are welcome to make an appointment with the instructor and/or the teaching assistant (TA) to discuss course-related questions. If you need to schedule an individual meeting with the instructor or the TA, please send her/him an email via the course website in Canvas Course Messages. We will also use a discussion forum in Canvas where you can ask questions and get answers from the instructor, TA, and other students.

Course Pre-requisites, Co-requisites, and/or Other Restrictions

- Pre-requisite: None
- Students are recommended to prepare their own laptops. If anyone does not have a laptop, she/he can borrow one from [UNT library](#).

Course Format

DTSC 3020, Section will hold face-to-face lectures by the instructor. The course uses Canvas, UNT's learning management system. ALL course materials will be available at the course site on Canvas that is accessible to all students. Students will submit all assignments through the tools available on Canvas. Attending classes is mandatory and attendance will be checked.

Course Description

Python is a language with a simple syntax and a powerful set of libraries. It is an interpreted language, with a rich programming environment, including a robust debugger and profiler. While it is easy for beginners to learn, it is widely used in many scientific areas for data exploration. This course is an introduction to the Python programming language for students without prior

programming experience. Data types, control flow, function, and class are covered. Real-world data from various areas are used as examples to demonstrate how to process and analyze these data with Python.

Course Goals, Learning Objectives

- Identify basic concepts and components of a computer program
- Recognize the functions and application areas of Python
- Employ the basic procedure and skill of Python programming
- Recognize and apply basic data types, functions, controls, loops, and recursion of Python
- Recognize and apply advanced data types such as List, Set, Tuple, and Dictionary
- Write Python programs to access and process data sets and local files
- Write hundreds of lines of Python code, including multiple classes and functions
- Construct basic knowledge and skills to use Python for more advanced topics such as data mining and data visualization

Materials

Textbook information (required):

1. Matthes, Eric. (2019). [Python Crash Course: a Hands-on, project-based introduction to programming](#), 2nd Edition. No Starch Press, ISBN-13: 978-1-593-27928-8.

Supplementary materials and/or readings (recommended):

2. [Python Documentation](#)

Teaching Philosophy

The instructor will take a problem-solving approach and work together with students in understanding how computer programs work. The individual assignments, as a whole, are designed to solve one big real-world problem and to learn how to solve the problem. Learning by doing is another teaching philosophy in this course. Practicing is the most important part in learning programming. He will monitor the progress of students and is open to suggestions from students. Students are expected to study 12-15 hours per week, and to submit their assignments on time to achieve satisfactory class performance. Interactions with the instructor are strongly encouraged.

TECHNICAL REQUIREMENTS/ASSISTANCE

[IT Help Desk](#)

The University of North Texas provides student technical support in the use of Canvas and supported resources. The student help desk may be reached at:

Email [Help Desk](#)

Phone: 940.565-2324

In Person: Sage Hall, Room 330

Hours are:

- Monday-Thursday 8am-midnight
- Friday 8am-8pm
- Saturday 9am-5p
- Sunday 8am-midnight
- [Canvas technical requirements](#)

Minimum Technical Skills Needed

Using the Internet and the learning management system Canvas, using email with attachments, creating and submitting files in commonly used word processing program formats, downloading and installing software.

Student Academic Support Services

- [Code of Student Conduct](#): provides Code of Student Conduct along with other useful links
- [Office of Disability Access](#): exists to prevent discrimination based on disability and to help students reach a higher level of independence
- [Counseling and Testing Services](#): provides counseling services to the UNT community, as well as testing services; such as admissions testing, computer-based testing, career testing, and other tests
- [UNT Libraries](#)
- [UNT Learning Center](#): provides a variety of services, including tutoring, to enhance the student academic experience
- [UNT Writing Center](#): offers free writing tutoring to all UNT students, undergraduate and graduate, including online tutoring
- [Succeed at UNT](#): information regarding how to be a successful student at UNT

ASSESSMENT & GRADING

Assessments

A student's grade is composed of the following:

- Attendance & Participation (10%)
- Assignments (50%)
- Quizzes (10%)
- Mid-term Exam (10%)
- Final Exam (20%)

Grading

Class Attendance and Participation (10%). Students are required to attend each class. Your activities in the classes and Canvas discussion forum will be counted as participation. At the end of the semester, if you have missing attendances, one of them will be dropped.

Assignments (50%)

The class will have **seven assignments**. The assignments are designed to help students understand important concepts and gain hands-on experience in Python programming, and problem solving. In the

beginning, assignments should be typewritten in PyCharm and saved as py file for submission. Assignments will due on 11:59 pm of the due date. If students have any questions, they could ask instructor for help. At the end of the semester your lowest grade will be dropped.

Quizzes (10%)

There will be **ten quizzes** for this course. These quizzes are designed to help students to review course materials on a schedule. At the end of the semester your lowest grade will be dropped.

Mid-term Exam (10%)

There will be a mid-term exam at about the 9th week.

Final Exam (20%)

There will be a final exam at the last week of the class. Students need to complete the exam in 3 hours.

Total Points Possible for Semester/Grading Scale = 100

1000-900 = A	899-800 = B
799-700 = C	699-600 = D
599 and below = F	

Grading Table

Assignment	Points Possible	Percentage of Final Grade
Attendance & Participation (in-person)	100 points	10%
Assignment 1 –	20 points	2%
Assignment 2 –	30 points	3%
Assignment 3 –	50 points	5%
Assignment 4 –	100 points	10%
Assignment 5 –	100 points	10%
Assignment 6 –	100 points	10%
Assignment 7 –	100 points	10%
Quizzes (online participation) • 10 quizzes @ 10 points ea.	100 points	10%
Mid-term Exam	100 points	10%
Final Exam	200 points	20%
Total Points Possible	1000 points	100%

COURSE CALENDAR

The contents of the course are organized into 16 weeks. Please refer to Table 1 for topics, readings materials, and assignments due dates. Assignments will due on **11:59 pm of the day** of the specified week. Quizzes will be due on **11:59 pm on the due date**.

Table 1. Study Schedule and Due Dates

Week	Topics	Readings	Due
Week 1 (8/18-8/24)	Orientation; Python Basic (Types, Variables, and Operators)	Chapter 1; Chapter 2,	Nothing Due
Week 2 (8/25-8/31)	Python Basic (cont...); Custom Printing	Chapter 7 (p.113-117)	Academic Honesty Statement due 11:59 PM 8/31 Assignment 1 due 11:59 PM 8/31 Introduce Yourself due 11:59 PM 8/31 Quiz 1 due 11:59 PM 8/31
Week 3 (9/1-9/7)	Software Development Process; Program Flow	Chapter 5 (p.71 - p.85)	Quiz 2 due 11:59 PM 9/7 Assignment 2 due 11:59 PM 9/7
Week 4 (9/8-9/14)	Repetition	Chapter 7 (p.118-123), Chapter 4 (p.49-65)	Quiz 3 due 11:59 PM 9/14
Week 5 (9/15-9/21)	Functions	Chapter 8	Quiz 4 due 11:59 PM 9/21 Assignment 3 due 11:59 PM 9/21
Week 6 (9/22-9/28)	Modules; Files	Chapter 10 (p.183-193)	Quiz 5 due 11:59 PM 9/28
Week 7 (9/29-10/5)	List; Exception	Chapter 3, 4 (p.49-65), Chapter 7 (p.124-128),	Nothing Due
Week 8 (10/6-10/12)	Exception (cont...)	Chapter 10 (p.194-202)	Quiz 6 due 11:59 PM 10/12 Assignment 4 due 11:59 PM 10/12
Week 9 (10/13-10/19)	Middle Term		10/14 (in the class time)
Week 10 (10/20-10/26)	Tuple; String	Chapter 4 (p.65-70)	Quiz 7 due 11:59 PM 10/26
Week 11 (10/27-11/2)	Dictionary; Set	Chapter 6	Assignment 5 due 11:59 PM 11/2 Quiz 8 due 11:59 PM 11/2
Week 12 (11/3-11/9)	Object-Oriented Programming	Chapter 9	Quiz 9 due 11:59 PM 11/9
Week 13 (11/10-11/16)	Object-Oriented Programming (cont...)		Assignment 6 due 11:59 PM 11/16 Quiz 10 due 11:59 PM 11/16
Week 14 (11/17-11/23)	Computation and Data Visualization	Project 2	Nothing Due
Week 15 (11/24-11/30)	Thanksgiving Break (No Class)		Nothing Due
Week 16 (12/1-12/7)	Computation and Data Visualization (cont...)		Assignment 7 due 11:59 PM 12/7
Week 17 (12/8-12/12)	Final Exam		Time & Location: TBD

Lesson Related Materials

- MOOC courses:
 - ✓ [Python for Everybody Specialization on Coursera](#)
 - ✓ [Tutorials of PyCharm](#)
- To get help:
 - ✓ [Python Docs](#)
 - ✓ [Python Forums](#)
 - ✓ [Stackoverflow](#)

COURSE EVALUATION

Student Evaluation Administration Dates

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via [IASystem Notification](#)" with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey they will receive a confirmation email that the survey has been submitted. For additional information, please visit the [SPOT website](#) or email [Spot](#).

COURSE POLICIES

Assignment Policy

Most of assignments are coding work. Students should write their own codes either in PyCharm. Any kind of copy is forbidden. If it is found, this assignment will get 0 point. Students are required to sign an Academic Honesty Statement.

Examination Policy

There are a Mid-term exam and a Final exam, which they will be face-to-face in the class. You need to attend the Mid-term exam and a Final exam in person. These exams require the usage of Lockdown Browser.

Instructor Responsibilities and Feedback

- Helping students grow and learn
- Providing clear instructions for assessments
- Answering questions about assignments
- Identifying additional resources as necessary
- Providing grading rubrics
- Reviewing and updating course content
- The instructor and TA will respond to students' emails and questions posted to the discussion boards within two or three days except for the weekends
- Assignments grades and feedbacks will be returned to the students within one week after the submission deadline.

Late Work and Missed Work

Students are expected to submit assignments on time in Canvas. **The due are 11:59 pm of the due date specified in Table 1.** If an extenuating circumstance such as a medically diagnosed illness or family emergency arises, which prevents you from submitting your assignments, you should contact the instructor as soon as possible before the due date. Late assignments will not be accepted in this course. All work turned in after the deadline will receive a grade of zero unless the student has a [university-excused absence](#) and provides documentation with 48 hours of the missed deadline. A student who is having trouble with assignments is strongly encouraged to contact the instructor and the TA as early as possible for personal advising.

Syllabus Change Policy

The instructor(s) may, at his/her/their discretion, change any part of the course before or during the term, including assignments, grade breakdowns, due dates, and schedule. Such changes will be communicated to students via either email or Canvas announcement.

Course Incomplete Grade

The [UNT Undergraduate Catalog](#) describes and explains grading policies. A grade of Incomplete (I) will be given only for a justifiable reason and only if the student is passing the course. The student is responsible for meeting with the instructor to request an incomplete and discuss requirements for completing the course. If an incomplete is not removed within the time frame agreed to by instructor and student, the instructor may assign a grade of F.

Withdrawal

The [UNT Undergraduate Catalog](#) describes and explains withdrawal policies and deadlines. The UNT semester course schedule lists specific deadlines regarding withdrawal. A grade of Withdraw (W) or Withdraw-Failing (WF) will be given depending on a student's attendance record and grade earned. Please note that a student who simply stops attending class and does not file a withdrawal form may receive an F.

Attendance Policy

Students are required to attend all classes. Prior to the meeting, please read pre-assigned chapters for the class and prepare your questions for discussion. You will miss class work and activities if you do not attend the class. Research has shown that students who attend class are more likely to be successful. You should attend every class unless you have a university excused absence such as active military service, a religious holy day, or an official university function as stated in the [Student Attendance and Authorized Absences Policy \(PDF\)](#). If you cannot attend a class due to an emergency, please let me know. Your safety and well-being are important to me.

Students' Responsibility for Their Learning

The students are required to follow course schedule and finish the class work, assignments, and exams. Students are expected to study 12-15 hours per week to achieve satisfactory class performance. Students do not have programming experience are encouraged to find extra materials to study.

UNT POLICIES

Academic Integrity Policy

Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

According to the UNT catalog, the term "cheating" includes, but is not limited to: a. use of any unauthorized assistance in taking quizzes, tests, or examinations; b. dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; c. the acquisition, without permission, of tests or other academic material belonging to a faculty or staff member of the university; d. dual submission of a paper or project, or resubmission of a paper or project to a different class without express permission from the instructor(s); or e. any other act designed to give a student an unfair advantage.

The term "plagiarism" includes, but is not limited to: a. the knowing or negligent use by paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgment; and b. the knowing or negligent unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials.

Americans with Disabilities Act Compliance Statement

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time; however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website at disability.unt.edu.

Emergency Notification & Procedures

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Blackboard for contingency plans for covering course materials.

Retention of Student Records

Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Course work completed via the Canvas online system, including grading information and comments, is also stored in a safe electronic environment for one year. Students have the right to view their individual record; however, information about student's records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public Information Policy and the Family Educational

Rights and Privacy Act (FERPA) laws and the University's policy. See UNT Policy 10.10, Records Management and Retention for additional information.

Acceptable Student Behavior

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the [Code of Student Conduct](#). The University's expectations for student conduct apply to all instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc.

Access to Information - Eagle Connect

Students' access point for business and academic services at UNT is located at: my.unt.edu. All official communication from the University will be delivered to a student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward e-mail: eagleconnect.unt.edu/.

Sexual Assault Prevention

UNT is committed to providing a safe learning environment free of all forms of sexual misconduct, including sexual harassment sexual assault, domestic violence, dating violence, and stalking. Federal laws (Title IX and the Violence Against Women Act) and UNT policies prohibit discrimination on the basis of sex, and therefore prohibit sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking, and/or sexual assault, there are campus resources available to provide support and assistance. [UNT's Survivor Advocates](#) can assist a student who has been impacted by violence by filing protective orders, completing crime victim's compensation applications, contacting professors for absences related to an assault, working with housing to facilitate a room change where appropriate, and connecting students to other resources available both on and off campus. The Survivor Advocates can be reached at [in this link](#) or by calling the Dean of Students Office at 940-565- 2648. Additionally, alleged sexual misconduct can be non-confidentially reported to the [Title IX Coordinator](#) or to (940) 565 2759.

Important Notice for F-1 Students taking Distance Education Courses

Federal Regulation

To read detailed Immigration and Customs Enforcement regulations for F-1 students taking online courses, please go to the [Electronic Code of Federal Regulations website](#). The specific portion concerning distance education courses is located at Title 8 CFR 214.2 Paragraph (f)(6)(i)(G).

The paragraph reads:

(G) For F-1 students enrolled in classes for credit or classroom hours, no more than the equivalent of one class or three credits per session, term, semester, trimester, or quarter may be counted toward the full course of study requirement if the class is taken on-line or through distance education and does not require the student's physical attendance for classes, examination or other purposes integral to completion of the class. An on-line or distance education course is a course that is offered principally through the use of television, audio, or computer transmission including open broadcast, closed circuit, cable, microwave, or satellite, audio conferencing, or computer conferencing. If the F-1 student's course

of study is in a language study program, no on-line or distance education classes may be considered to count toward a student's full course of study requirement.

University of North Texas Compliance

To comply with immigration regulations, an F-1 visa holder within the United States may need to engage in an on-campus experiential component for this course. This component (which must be approved in advance by the instructor) can include activities such as taking an on-campus exam, participating in an on-campus lecture or lab activity, or other on-campus experience integral to the completion of this course.

If such an on-campus activity is required, it is the student's responsibility to do the following:

(1) Submit a written request to the instructor for an on-campus experiential component within one week of the start of the course.

(2) Ensure that the activity on campus takes place and the instructor documents it in writing with a notice sent to the International Student and Scholar Services Office. ISSS has a form available that you may use for this purpose.

Because the decision may have serious immigration consequences, if an F-1 student is unsure about his or her need to participate in an on-campus experiential component for this course, s/he should contact the UNT International Student and Scholar Services Office, telephone 940-565-2195 or email [International Advising](#), to get clarification before the one-week deadline.

Student Verification

UNT takes measures to protect the integrity of educational credentials awarded to students enrolled in distance education courses by verifying student identity, protecting student privacy, and notifying students of any special meeting times/locations or additional charges associated with student identity verification in distance education courses.

See [UNT Policy 07-002 Student Identity Verification, Privacy, and Notification and Distance Education Courses](#).

Use of Student Work

A student owns the copyright for all work (e.g. software, photographs, reports, presentations, and email postings) he or she creates within a class and the University is not entitled to use any student work without the student's permission unless all of the following criteria are met:

- The work is used only once.
- The work is not used in its entirety.
- Use of the work does not affect any potential profits from the work.
- The student is not identified.
- The work is identified as student work.

If the use of the work does not meet all of the above criteria, then the University office or department using the work must obtain the student's written permission.