



University of North Texas
College of Applied and Collaborative Studies
INDS 3030.501
Industrial Computer Science and Informatics

WELCOME TO UNT

As members of the UNT community, we have all made a commitment to be part of an institution that respects and values the identities of the students and employees with whom we interact. UNT does not tolerate identity-based discrimination, harassment, and retaliation. UNT's full Non-Discrimination Policy can be found in the UNT Policies section of the syllabus.

INSTRUCTOR CONTACT INFORMATION

- **Name:** Sammer M. Tekarli
- **Office location:** Online via Zoom
- **Office hours:** by appointment.
- **Email address:** Sammer.Tekarli@unt.edu
- **Communication expectation:** It is best to reach me through email with any personal concerns or personal questions. Response to email is usually within 48 hours on weekdays and by the next business day on weekends. If I am away, response to email is usually within 48 hours of my return. Grades of (exams, homework, quizzes) will be posted and or updated withing a week after all students complete the exam. For example, grades of all material of exam 1 which includes all homework and quiz assignments of exam 1 will be posted after the last student submit exam 1.

COURSE INFORMATION

Course Name: Industrial Computer Science and Informatics

Course Description: Industrial Computer Science and Informatics. 3 hours. Introduces concepts, tools, techniques, and applications of informatics in computer science. Includes an overview of programming, data management, visualization, modeling, and social implications with an emphasis on current trends. Students will use computer technology to gather, synthesize, store, visualize and interpret information to apply capabilities and technologies of informatics as they apply to industrial problems.

Course Structure: this course will meet in-person during its regular scheduled time. There will be a midterm and a final. Assignment will be available on canvas. Attendance will be required during the regular scheduled time.

Prerequisite(s): None.

Required Materials



Required: Textbook or e-book:

Introduction to Python Programming 2024, Open Stax)

<https://openstax.org/books/introduction-python-programming>

TECHNICAL REQUIREMENTS/ASSISTANCE

UIT Help Desk: <http://www.unt.edu/helpdesk/index.htm>

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: helpdesk@unt.edu

Phone: 940.565-2324

In Person: Sage Hall, Room 130

Hours are Monday-Thursday 8am-midnight, Friday 8am-8pm, Saturday 9am-5p, Sunday 8am-midnight

- Hardware and software necessary to use CANVAS: <http://www.unt.edu/helpdesk/canvas/>
- Browser requirements: <https://clear.unt.edu/supported-technologies/canvas/requirements>
- Computer and Internet Literacy: http://clt.odu.edu/oso/index.php?src=pe_comp_lit
- Other related hardware or software necessary for the course: such as headset/microphone for synchronous chats, word processor, etc.

Minimum Technical Skills Needed

Using the learning management system - CANVAS, using email with attachments, creating and submitting files in commonly used word processing program formats, downloading and installing software, using spreadsheet programs, etc.

Student Academic Support Services

- [Academic Resources](#): where to buy textbooks and supplies, access academic catalogs and programs, register for classes, and more
- [Code of Student Conduct](#): provides Code of Student Conduct along with other useful links
- [Office of Disability Accommodation](#): 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](#): library services
- [UNT Learning Center](#): provides a variety of services, including tutoring, to enhance student academic experience

- [UNT Writing Center](#): offers free writing tutoring to all UNT students, undergraduate and graduate
- [Succeed at UNT](#): information regarding how to be a successful student at UNT

HOW TO SUCCEED IN THIS COURSE

Ask questions. To succeed in this course, you should read/review the material on a regular basis. Once a chapter has been completed in class, go back and read the lecture notes and the textbook. The key is to review the material on a regular basis.

If you feel lost at any point in the course, please see me as soon as possible. I encourage you to set up an appointment to meet during office hours (or a mutually decided convenient time). Do not wait until the last minute to get help. The time to be concerned about your grade is now and every day after today. Do NOT wait until the last week of the semester to start thinking about how you can improve in the course.

ASSESSMENT & GRADING

Assessments

Exams (45% of course grade): three exams will be given during the semester. Each exam will consist of multiple-choice and will be closed-book. The exam will be administered online on Canvas. Missing an exam for any reason will result in a score of zero.

Homework (15% of course grade): Homework will be assigned on Canvas online. The score of each homework assignment will be converted to a score out of 15%. Homework total grade will be based on the total percent accumulated divided by the maximum total percent of all homework assignments.

Exercises (30% of course grade): Exercises will be assigned on Canvas online. The score of each exercise assignment will be converted to a score out of 30%. Exercise total grade will be based on the total percent accumulated divided by the maximum total percent of all exercise assignments.

Attendance (10% of course grade): Attendance grade will be assessed as the percent of lectures attended. The student attendance will be taken at the beginning or during the class meeting and must participate in in-class team-based assignments when administered.

Grading

Assignment	Points Possible	Percentage of Final Grade
Exam 1, 2, and 3 (15% each)	450 points	45%
Homework	150 points	15%
Exercises	300 points	30%
Attendance	100 points	10%
Total Points Possible	1000 points	100%

Letter grades will be based upon the following grading scale:

90 – 100 % of the total points	900 – 1000 Points	Grade = A
80 – 89 % of the total points	800 – 899 Points	Grade = B
70 – 79 % of the total points	700 – 799 Points	Grade = C
60 – 69 % of the total points	600 – 699 Points	Grade = D
Below 60 %	0 – 599 Points	Grade = F

There will be no curving of the grades. However, the professor reserves the right to alter the above grading scale to reflect student / class achievement accurately and fairly. Please remember that grades represent the accumulation of your performance during the semester not as your potential as a person or a student.

Graded work and discussion of your grades: Every effort will be made by the professor to return any graded work by the next class meeting. If you have any question about your grade on a particular Exam / Assignment or any other question related to your grades, please discuss it with the professor in person (either during office hours or at a mutually decided convenient time). This is for your own privacy. You have a week from the time that a particular graded Exam / Assignment is returned to discuss any grading issues on that particular assignment. After that time, the grade will stay unchanged. Exam Grades will be regularly posted on Canvas. Please bring any clerical errors to my attention at the earliest. These clerical errors will be fixed at any time.

TENTATIVE COURSE CALENDAR:

The dates for tests are tentative and may be later than scheduled.

Week of	Chapter	Topics
Jan. 13	•••	Syllabus
Jan. 15	Chapter 1	Statements
Jan. 19 MLK Day (no classes; university closed)		
Jan. 20	Chapter 1	Statements
Jan. 22	Chapter 2	Expressions
Jan. 27	Chapter 2	Expressions
Feb. 3	Chapter 3	Objects
Feb. 5	Chapter 3	Objects
EXAM 1 Feb. 6 to 9		
Feb. 9 Last Day to Complete Homework + Quiz + Exam 1 For chapter 1, 2, and 3 by midnight		
Feb. 10	Chapter 4	Decisions
Feb. 12	Chapter 4	Decisions
Feb. 17	Chapter 5	Loops
Feb. 19	Chapter 6	Functions
Feb. 24	Chapter 6	Functions

Week of	Chapter	Topics
Feb. 26	Chapter 10	Dictionaries
EXAM 2 Feb. 27 to Mar. 2		
Mar. 2 Last Day to Complete Homework + Quiz + Exam 2 For chapter 4, 5, and 6 by midnight		
Mar. 3	Chapter 10	Dictionaries
Mar. 5	Chapter 14	Files
Mar. 9 – Mar. 15 Spring Break (no classes; university closed)		
Mar. 17	Chapter 15	Data Science
Mar. 19	Chapter 15	Data Science
EXAM 3 Mar. 20 - 23		
Mar. 23 Last Day to Complete Homework + Quiz + Exam 3 For chapter 10, 14, and 15 by midnight		
Mar. 24	PT Ch. 2	Chapter 2 – Project 2.1: Button and LED._updatedpptx
Mar. 26	PT Ch. 4	Chapter 4 – Project 4.1: Breathing LED
Mar. 31	PT Ch. 7	Chapter 7 – Project 7.1: Doorbell
Apr. 2	PT Ch. 10	Chapter 10 – Project 10.1 and 10.2: Soft Light & Soft Colorful Light
Apr. 7	PT Ch. 12	Chapter 12 – Project 12.1: Thermometer
Apr. 9	PT Ch. 13	Chapter 13 – Project 13.1: Joystick

Week of	Chapter	Topics
Apr. 10 Last Day to Withdraw		
Apr. 14	PT Ch. 17	Chapter 17 – Project 17.1: Relay & Motor
Apr. 16	PT Ch. 20	Chapter 20 – Project 20.1: Stepper Motor
Apr. 21	PT Ch. 26	Chapter 26 – Project 26.1: Infrared Motion Detector with LED Indicator
Apr. 23	PT Ch. 28	Chapter 28 – Project 28.1: RFID read UID
Apr. 28	PT Ch. 31	Chapter 31 – Project 31.1: Control LED Through Web
Apr. 30		
Final Exam Tuesday May 5		

COURSE POLICIES

- **Assignment Policy**

All assignments will be completed on Canvas.

The University is committed to providing a reliable online course system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will extend the time windows and provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and contact the UNT Student Help Desk: helpdesk@unt.edu or 940.565.2324. The instructor and the UNT Student Help Desk will work with the student to resolve any issues at the earliest possible time.

- **Examination Policy**

- *All exams will be completed online*
- *All Exams will only have one attempt.*

- **Late Work**

Late work of any kind will not be accepted beyond the deadlines. There will be no makeup exams for missed exams. The Final will replace the lowest exam grade if it is higher than the exam grade.

- **It is the student's responsibility to check their e-mail, Canvas often for any posted assignments, homework, or announcements.**
- Pay close attention to assignment instructions and daily due dates. No late work will be accepted without approval **prior** to deadline.
- I will communicate with you by e-mail **only** through UNT email.
- You are expected to behave in a manner that is respectful to everyone in the session meeting and is conducive to a learning environment.
- Academic dishonesty will be prosecuted to the fullest extent according to college policy.

TESTING POLICIES

- A student missing a test will be given a zero regardless of the reason for missing the exam.
- Students are responsible to have all necessary materials for examination.
- Testing materials remain the property of the instructor.

WITHDRAWAL INFORMATION

April 10, 2026	Last day to drop a course
April 10, 2026	Last day to withdraw from the semester. Process must be completed by 5 p.m. in the Dean of Students Office.

***Detailed Academic Calendar can be found at:**

<http://catalog.unt.edu/content.php?catoid=24&navoid=2609>

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.

ADA Policy

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time; however, ODA notices of reasonable 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 reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information, refer to the Office of Disability Access website at <http://www.unt.edu/oda>. You may also contact ODA by phone at (940) 565-4323.

Course Safety Procedures (for Laboratory Courses)

Students enrolled in CHEM 1430 are required to use proper safety procedures and guidelines as outlined in UNT Policy 06.038 Safety in Instructional Activities. While working in laboratory sessions, students are expected and required to identify and use proper safety guidelines in all activities requiring lifting, climbing, walking on slippery surfaces, using equipment and tools, handling chemical solutions and hot and cold products. Students should be aware that the UNT is not liable for injuries incurred while students are participating in class activities. All students are encouraged to secure adequate insurance

coverage in the event of accidental injury. Students who do not have insurance coverage should consider Standard Syllabus Statements Related Policy 06.049 Course Syllabi Requirements obtaining Student Health Insurance. Brochures for student insurance are available in the UNT Student Health and Wellness Center. Students who are injured during class activities may seek medical attention at the Student Health and Wellness Center at rates that are reduced compared to other medical facilities. If students have an insurance plan other than Student Health Insurance at UNT, they should be sure that the plan covers treatment at this facility. If students choose not to go to the UNT Student Health and Wellness Center, they may be transported to an emergency room at a local hospital. Students are responsible for expenses incurred there.

Prohibition of Discrimination, Harassment, and Retaliation (Policy 16.004)

The University of North Texas (UNT) prohibits discrimination and harassment because of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law in its application and admission processes; educational programs and activities; employment policies, procedures, and processes; and university facilities. The University takes active measures to prevent such conduct and investigates and takes remedial action when appropriate.

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 Blackboard 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. Visit UNT's Code of Student Conduct (<https://deanofstudents.unt.edu/conduct>) to learn more.

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/

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 [insert administration dates] 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" (no-reply@iasystem.org) 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 at <http://spot.unt.edu/> or email spot@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 SurvivorAdvocate@unt.edu 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 at oeo@unt.edu or at (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 at <http://www.ecfr.gov/>. 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, 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 internationaladvising@unt.edu) 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.

Download the UNT System Permission, Waiver and Release Form

Transmission and Recording of Student Images in Electronically-Delivered Courses

1. No permission is needed from a student for his or her image or voice to be transmitted live via videoconference or streaming media, but all students should be informed when courses are to be conducted using either method of delivery.
2. In the event an instructor records student presentations, he or she must obtain permission from the student using a signed release in order to use the recording for future classes in accordance with the Use of Student-Created Work guidelines above.
3. Instructors who video-record their class lectures with the intention of re-using some or all of recordings for future class offerings must notify students on the course syllabus if students' images may appear on video. Instructors are also advised to provide accommodation for students who do not wish to appear in class recordings.

Example: This course employs lecture capture technology to record class sessions. Students may occasionally appear on video. The lecture recordings will be available to you for study purposes and may also be reused in future course offerings.

No notification is needed if only audio and slide capture is used or if the video only records the instructor's image. However, the instructor is encouraged to let students know the recordings will be available to them for study purposes.

Class Recordings & Student Likenesses

Synchronous (live) sessions in this course will be recorded for students enrolled in this class section to refer to throughout the semester. Class recordings are the intellectual property of the university or instructor and are reserved for use only by students in this class and only for educational purposes. Students may not post or otherwise share the recordings outside the class, or outside the Canvas Learning Management System, in any form. Failing to follow this restriction is a violation of the UNT Code of Student Conduct and could lead to disciplinary action.

ACADEMIC SUPPORT & STUDENT SERVICES

Student Support Services

Mental Health

UNT provides mental health resources to students to help ensure there are numerous outlets to turn to that wholeheartedly care for and are there for students in need, regardless of the nature of an issue or its severity. Listed below are several resources on campus that can support your academic success and mental well-being:

- [Student Health and Wellness Center](https://studentaffairs.unt.edu/student-health-and-wellness-center) (<https://studentaffairs.unt.edu/student-health-and-wellness-center>)
- [Counseling and Testing Services](https://studentaffairs.unt.edu/counseling-and-testing-services) (<https://studentaffairs.unt.edu/counseling-and-testing-services>)
- [UNT Care Team](https://studentaffairs.unt.edu/care) (<https://studentaffairs.unt.edu/care>)
- [UNT Psychiatric Services](https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry) (<https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry>)
- [Individual Counseling](https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling) (<https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling>)

Chosen Names

A chosen name is a name that a person goes by that may or may not match their legal name. If you have a chosen name that is different from your legal name and would like that to be used in class, please let the instructor know. Below is a list of resources for updating your chosen name at UNT.

- [UNT Records](#)
- [UNT ID Card](#)
- [UNT Email Address](#)
- [Legal Name](#)

**UNT EUIDs cannot be changed at this time. The collaborating offices are working on a process to make this option accessible to UNT community members.*

Pronouns

Pronouns (she/her, they/them, he/him, etc.) are a public way for people to address you, much like your name, and can be shared with a name when making an introduction, both virtually and in-person. Just as we ask and do not assume someone's name, we should also ask and not assume someone's pronouns.

You can [add your pronouns to your Canvas account](#) so that they follow your name when posting to discussion boards, submitting assignments, etc.

Below is a list of additional resources regarding pronouns and their usage:

- [What are pronouns and why are they important?](#)
- [How do I use pronouns?](#)
- [How do I share my pronouns?](#)
- [How do I ask for another person's pronouns?](#)
- [How do I correct myself or others when the wrong pronoun is used?](#)

Additional Student Support Services

- [Registrar](https://registrar.unt.edu/registration) (<https://registrar.unt.edu/registration>)
- [Financial Aid](https://financialaid.unt.edu/) (<https://financialaid.unt.edu/>)
- [Student Legal Services](https://studentaffairs.unt.edu/student-legal-services) (<https://studentaffairs.unt.edu/student-legal-services>)
- [Career Center](https://studentaffairs.unt.edu/career-center) (<https://studentaffairs.unt.edu/career-center>)
- [Multicultural Center](https://edo.unt.edu/multicultural-center) (<https://edo.unt.edu/multicultural-center>)
- [Counseling and Testing Services](https://studentaffairs.unt.edu/counseling-and-testing-services) (<https://studentaffairs.unt.edu/counseling-and-testing-services>)
- [Pride Alliance](https://edo.unt.edu/pridealliance) (<https://edo.unt.edu/pridealliance>)
- [UNT Food Pantry](https://deanofstudents.unt.edu/resources/food-pantry) (<https://deanofstudents.unt.edu/resources/food-pantry>)

Academic Support Services

- [Academic Resource Center](https://clear.unt.edu/canvas/student-resources) (<https://clear.unt.edu/canvas/student-resources>)
- [Academic Success Center](https://success.unt.edu/asc) (<https://success.unt.edu/asc>)
- [UNT Libraries](https://library.unt.edu/) (<https://library.unt.edu/>)
- [Writing Lab](http://writingcenter.unt.edu/) (<http://writingcenter.unt.edu/>)