Course Syllabus

CSCE 1010 Discovering Computer Science

Instructor Information

- Name: Rubenia Borge
- Email: RubeniaBorgeFlores@my.unt.edu
- Office Hours: Mondays and Wednesdays 3:30 PM to 4:45 PM at Willis Library First Floor.
- The method of delivery of this course is Face to Face. Communication with the instructor is to be conducted before and after lectures, during lectures and during office hours. Communication over email will be limited and at the discretion of the instructor. Information that was given in other communication channels such as lectures, canvas announcements, canvas discussions, and labs will not be repeated over email. Please follow the proper channels for effective communication and to avoid misunderstandings.

Teaching Assistant Information:

Teaching Assistant Office Hours are by appointment. Please email your teaching assistant to request either an in-person meeting or a virtual (zoom) meeting. Teaching Assistants are Computer Science PhD Students who are responsible for the Labs and Office Hours to help students understand the course material. Contact your Teaching assistant when you need help understanding material of this course.
Teaching Assistants Emails:

Teaching Assistant

- **Rubayet Tonmoy – 11800754** TonmoyTonmoy@my.unt.edu **(Email TA to make an appointment)**

Required Textbook/Material

- We will use ZyBooks. You will receive instructions in the classroom about ZyBooks.
- For Snap! Programming Language: https://bjc.edc.org/bjc-r/course/bjc4nyc.html
- For Python Programming Language: https://www.py4e.com/
- **Technology requirements for courses with digital materials:**

  This course has digital components. To fully participate in this class, students will need internet access to reference content on the Canvas Learning Management System. If circumstances change, you will be informed of other technical needs to access course content. Information on how to be successful in a digital learning environment can be found at Learn Anywhere (https://online.unt.edu/learn).

Course Description

CSCE 1010 is an introduction to computer science course. As such, CSCE 1010 is available to all UNT students no matter their major or year in school. **CSCE 1010 has no course prerequisites.**

Course Catalog Description/CS Principles Big Ideas

A breadth-first introduction to computer science based upon 7 "Big Ideas," namely:

1. Computing is a creative activity,
2. Abstraction reduces information and detail to facilitate focus on relevant concepts,
3. Data and information facilitate the creation of knowledge,
4. Algorithms are used to develop and express solutions to computational problems,
5. Programming enables problem-solving, human expression, and creation of knowledge, 6. The Internet pervades modern computing and
7. Computing has global impacts.

Course Objectives

By the end of the term, each student should meet the following objectives:

- Students will practice and enhance their creative abilities within the development of software.
- Students will use abstraction to reduce information and detail in order to facilitate focus on relevant topics. In software, this typically occurs both in designing algorithms and creating modules within their programs.
- Students will access and summarize available data to create information and evaluate information to create knowledge.
- Students will develop, evaluate, and use algorithms in defining solutions to computational problems.
- Students will create software that enables problem-solving, human expression, and the creation of knowledge.
- Students will both describe how the internet pervades modern computing and make effective and ethical use of the internet in solving problems.
- Students will recognize, discuss, and describe the global impacts of computing.
  We'll talk about objectives and the use of them in class. This particular set of objectives for CS Principles comes from the National Science Foundation (NSF) and the College Board, the folks who bring us Advanced Placement (AP) exams.

Expected Student Outcomes (ABET)

Computer Engineering Students

- An ability to acquire and apply new knowledge as needed, using appropriate learning strategies
- An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions an ability to function effectively on a team whose

members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives Computer Science Students:

- Analyze complex computing problems and apply principles of computing and other relevant disciplines to identify solutions.
- Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- Communicate effectively in a variety of professional contexts.

Information Technology Students

- Analyze complex computing problems and apply principles of computing and other relevant disciplines to identify solutions.
- Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- Communicate effectively in a variety of professional contexts.

All Students (any major)

All students will achieve competence in three general education categories with specific outcomes as indicated:

- Communications – students will develop and express ideas through effective written, oral, and visual communication in various professional and academic contexts.
- The student will identify a central idea.
- The student will use relevant content to convey understanding in a cohesive fashion. ● The student will use disciplinary conventions for organizing and presenting content.
- The student will use communication tools appropriately and skillfully in academic and professional contexts.
- Critical Thinking – Students will use inquiry and analysis, evaluation and synthesis of information, and innovation and critical thinking.
- Students will pose vital questions and identify problems, formulating them clearly and precisely.
- Students will show evidence of source selection and evaluation, clearly separating facts from opinions.
- Students will consider alternative viewpoints, recognize and assess assumptions, and identify possible consequences.
- Students will develop well-reasoned conclusions and solutions.
- Students will apply creative ideas or approaches to achieving solutions or complete projects.
- Empirical and Quantitative Skills – Students will apply scientific and mathematical concepts to analyze and solve problems and investigate hypotheses.
- Students will identify problems or hypotheses and related quantitative approaches in a clear fashion.
- The students will gather and identify relevant information and select appropriate quantitative approaches to analyze problems and investigate hypotheses.
- The students will correctly apply quantitative approaches to analyze and solve problems and investigate hypotheses.

- Students will summarize their analysis and conclusions and reflect on their learning experiences.

Grading Policy

Your grade will be determined by a combination of written exams, minor Assignments, major assignments, class participation, and quizzes. The breakdown of the grading weights is:

- 30% - Hands-on Practice in Labs, Attendance graded.
- 20% - Class Activity
- 20% - Homework
- 10% - Quizzes in Lecture Time, Attendance graded.
- 5% - Test 1 on Week 5, February 9 – February 15
- 5% - Test 2 on Week 8, March 2 – March 8
- 5% - Test 3 on Week 11, March 30 – April 5
- 5% - Test 4 on Week 14, April 20 – April 26

Grades are based on mastery of the content. As a rule, I do not grade on a "curve" because that is a comparison of your outcomes to others. I do, however, encourage you to find opportunities to learn with and through others. Explore Navigate's Study Buddy (https://navigate.unt.edu) tool to join study groups. Maximize your learning with our coaching staff at the Learning Center. Focus on areas where you are struggling in this course by attending scheduled study group sessions with me the week before each exam. Forward together!

Collaboration and Cheating

Every student in my class can improve by doing their own work and trying their hardest with access to appropriate resources. Students who use other people's work without citations will be violating UNT's Academic Integrity Policy. Please read and follow this important set of guidelines for your academic success (Student Academic Integrity | University Policy Office). If you have questions about this or any UNT policy, please email me or come discuss this with me during my office hours.

Course Topics

Date	Topic
Week 1	Course Introduction
Week 2	Intro to Programming Part 1
Week 3	Intro to Programming Part 2

Week 4	Introduction to Abstraction Part 1
Week 5	Abstraction Part 2
Week 6	Data Processing and Lists Part 1
Week 7	Software Development Life Cycle
Week 7	Data Processing and Lists Part 2
Week 8	The Internet Part 1
Week 9	The Internet Part 2
Week 10	Algorithms and Simulation Part 1
Week 11	Algorithms and Simulation Part 2
Week 12	How Computers Work Part 1
Week 13	How Computers Work Part 2
Week 14	Artificial Intelligence
Week 15	Fractals
Week 16	Recursion

Instructions for all tests will be given in the classroom during lecture time and will be provided in the Canvas course.

ADA

UNT complies with all federal and state laws and regulations regarding discrimination, including the **Americans with Disability Act of 1990 (ADA).** If you have a disability and need reasonable accommodation for equal access to education or services, please contact the Office of Disability Accommodation.

The University of North Texas makes reasonable accommodation for students with disabilities. Students needing reasonable academic accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the student will request a letter of accommodation. ODA will provide faculty with a reasonable accommodation letter via email to begin a private discussion regarding a student's specific needs in a course. Students may request reasonable accommodation 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 meet with faculty regarding their accommodation during 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.

The Office of Disability Access website: Office of Disability Access | University of North Texas

SPOT

The **Student Perception of Teaching (SPOT)** survey is a requirement for all organized undergraduate classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider SPOT to be an important part of your participation in this class.

ACADEMIC INTEGRITY

We work under the UNT Academic Integrity Policies.

"All department policies on Academic Integrity and Student Conduct apply for this course – these are available at the following link: https://engineering.unt.edu/cse/students/resources/academic-integrity.html Any exceptions to these guidelines are noted explicitly in the syllabus"

Useful Links:

https://policy.unt.edu/sites/policy.unt.edu/files/06.003%20Student%20Academic%20Integrity.pdf

https://engineering.unt.edu/cse/students/resources/academic-integrity.html

https://vpaa.unt.edu/ss/integrity/index.html

Other Course Policies

● Attendance

Because this course involves collaboration and exploring coding and programming practices, participation is essential to learning. Our lecture and laboratory activities require you to be actively engaged in discussions and in-class work. I understand tardiness and absence may occur. An absence may be excused in situations such as emergencies, religious holy days, active military service, participation in an official university function, or when the University is officially closed.

● Attendance to Lectures

This is a hands-on course. We will study and practice different topics and work on them in class. If any emergency happens and you cannot attend lectures you will have the opportunities to miss a class because of an emergency with no penalty. You don't need to email the instructor or the teaching assistant. What you need to do is to go to Modules in the Lecture Canvas Tile and study on your own the material presented in class.

● Attendance to Labs

This is a hands-on course. We will study and practice different topics and work on them in the lab sessions. If any emergency happens and you cannot attend labs you will have an opportunity to miss a lab session because of an emergency with no penalty. You don't need to email the instructor or the teaching assistant. Automatically, the system will drop your lowest grade. You are responsible for studying on your own the content covered in the labs you miss.

● Late Policy

We do not accept late work, and we do not reopen assignments at students' requests. For cases authorized by the Office of the Dean of Students, we follow UNT policies for Attendance and Authorized Absences.

Useful Links:

https://policy.unt.edu/sites/policy.unt.edu/files/06.039%20Student%20Attendance%20and%20Authorized%20Absences.pdf

We will only excuse assignments or allow make up for cases that are listed in the UNT policy for Attendance and Authorized Absences after the Office of the Dean of Students confirms all the documentation and evidence regarding the authorized absence. **We will have two times in the semester in which we will process make up work, Week 8: March 2 – March 8 and Week 14: April 20 – April 26. Other than those two periods, no make up work or excused work will be processed. Please talk to the instructor after lectures or during office hours to explain your situation and build a solution for your case together.**

The Office of the Dean of Students website:

https://studentaffairs.unt.edu/dean-of-students/index.html

- ## Artificial Intelligence Tools Use Policy

Based on the Student Academic Integrity Policy (UNT Policy 6.003) and AI, Plagiarism, and Academic Integrity at UNT Policy (https://guides.library.unt.edu/plagiarism/at-unt), any form of "unauthorized assistance" constitutes cheating. If the use of AI is not explicitly requested/authorized in a question, the violation is "cheating". Therefore, the use of AI in assignments is NOT welcomed unless it is asked in question. Such cheating can result in the failure of the class (F) as follows:

- The assignments will be evaluated using AI detection tools, e.g., Turnitin.
- If a submission exceeds the soft threshold (i.e., 10% similarity), a deduction of two times the similarity will be applied (e.g., if you have a similarity of 11%, 2x11%=22% deduction for that assignment will occur).
- If a submission exceeds the hard threshold (i.e., 25% similarity), the assignment will be graded as 0 (zero).
- For the second time exceeding the hard threshold, the student will automatically get an F (fail) from the class and may be reported to the university.
- Similarities in exams and the project will not be tolerated. For the project, if the similarity exceeds the hard threshold, the entire group will receive a zero (even if it is the first time).
- Automatic F in course if caught cheating on exams
- Potential expulsion from program if caught cheating twice under certain conditions
- Examples of misconduct and consequences, and unprofessional behavior: Copying and pasting the solution of your classmate and submitting it as your solution.
- The only authorized use of AI tools is to use the tools as study assistants. Using the AI tool to learn new concepts, practice, and see examples. However, AI tools make mistakes, this is why they can only be used for exploratory studying and as a support for the textbook and the class material.

- Eagle Alert

Eagle Alert is UNT's official, campus-wide emergency notification system for emergency events, inclement winter weather closures, or Tornado Warnings. Eagle Alert allows UNT administrators to quickly contact campus community members by phone, text, and email. Eagle Alert will also post to the Eagle Alert Twitter.

In the event of extreme weather conditions UNT might cancel classes or the instructor can move lectures or labs over zoom temporarily when the weather conditions can be unsafe or very stressful for students.

Emergencies

Emergencies cannot be planned for. Your instructor attempts to make accommodation in these instances that allow for making up missed work and completion of the course in a timely manner. Among these emergencies are:

- A death in your immediate family.
- An accident or illness requiring immediate medical treatment and where a doctor has indicated attending class is impossible or inadvisable.
- Employees who are on call 24/7 fall in this category but must document that they were called during a scheduled class.

Laboratory Safety Procedures and Guidelines

While working in laboratory sessions, students enrolled in CSCE 1010 are required to follow proper safety procedures and guidelines in all activities requiring lifting, climbing, walking on slippery surfaces, using equipment and tools, and handling chemical solutions and hot and cold products. Students should be aware that 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 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.

COVID-19 Addendum

- COVID-19 Impact on Attendance

While attendance is expected as outlined above, it is important for all of us to be mindful of the health and safety of everyone in our community, especially given concerns about COVID-19. Please contact me if

you are unable to attend class because you are ill, or unable to attend class due to a related issue regarding COVID-19. It is important that you communicate with me prior to being absent so I may make a decision about accommodating your request to be excused from class.

If you are experiencing any symptoms of COVID-19 Links to an external site.(https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html) please seek medical attention from the Student Health and Wellness Center (940-565-2333 or askSHWC@unt.edu) or your health care provider PRIOR to coming to campus. UNT also requires you to contact the UNT COVID Hotline at 844-366-5892 or COVID@unt.edu for guidance on actions to take due to symptoms, pending or positive test results, or potential exposure. While attendance is an important part of succeeding in this class, your own health, and that of others in the community, is more important.

- Face Coverings

UNT encourages everyone to wear a face covering when indoors, regardless of vaccination status, to protect yourself and others from COVID-19 infection, as recommended by current CDC guidelines. Face-covering guidelines could change based on community health conditions.

References

- UNT Syllabus Template | University of North Texas
- Office of Disability Access | University of North Texas
- Course Syllabi Requirements | University Policy Office
- Syllabus Statement | University of North Texas
- ODA Faculty Guide | University of North Texas

Useful Links

- Student Attendance and Authorized Absences | University Policy Office
- Student Academic Integrity | University Policy Office
- Navigate@unt.edu