Course Syllabus

CSCE 1010 Discovering Computer Science

Instructor Information

- Name: Rubenia Borge
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Class Meetings Information:

- Section 001 – TuTh 8:00 AM – 9:20 AM, BLB 155
- Section 002 – TuTh 2:30 PM – 3:50 PM, Env 155
- Section 003 – MoWe 5:00 PM – 6:20 PM, Env 110
- Section 004 – MoWe 2:30 PM – 3:50 PM, Env 125

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:

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Textbook/Material

- **No textbook** will be used in this class. The material to study will be provided during class lectures and laboratory tutorials. The class lectures can be found on Canvas.
- **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 a complex computing problem 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 a complex computing problem 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:

- 20% - Hands-on Practice in Labs, Attendance graded.
- 20% - Homework
- 25% - Small Projects
- 5% - Quizzes in Lecture Time, Attendance graded.
- 15% - First Exam
- 15% - Second Exam

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.

Semester Schedule

Date	Topic	Important Dates
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	**Exam 1**	

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	Fractals	
Week 14	**Exam 2**	
Week 15	Recursion	
Week 16	End of the Course	Reading Day - No class

Final Exam Schedule: https://registrar.unt.edu/exams/final-exam-schedule/fall.html

Location of Final Exam will be announced closer to the exam date.

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.

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.

● 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.

Emergencies

By definition, 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](#)