CSCE 2100 Computing Foundations I

Instructor: Dr. Yuan Li
Email: yuan.li2@unt.edu
Office Location: Discovery Park, E250B
Meeting Time & Location: 003: 4:00 pm – 5:20 pm, Monday/Wednesday Wh222

Teaching Assistants & Instructional Assistant:
TA: Donger Chen  Email: dongerchen@my.unt.edu
Office hours: Tuesday 1: 00 pm - 2: 30 pm F268

Bailu Zhang  Email: bailuzhang@my.unt.edu
Office hours: Friday 12:30 pm - 3:30 pm F296

Course Description:
Introduces students to both data structures and formalisms used in computer science, such as asymptotic behavior of algorithms. Data structures and the formalisms used to both describe and evaluate those data structures simultaneously. By the end of the two-semester sequence of which this course is the first part, each student will have a solid foundation in conceptual and formal models, efficiency, and levels of abstraction as used in the field of computer science.

Communication Expectations:
This course will use the Canvas Learning Management system (LMS) to distribute course materials, post grades, and submit assignments. You are responsible for checking the Canvas course site regularly for class work and announcements. You may find the Online Communication Tips (https://clear.unt.edu/online-communication-tips) helpful. Should you have any questions about the course or material in general, you may attend your instructor’s office hours or use your UNT e-mail address to e-mail your instructor directly at the e-mail address listed above with CSCE 2100-00X (or your specific course section) in the subject line. Every attempt will be made to answer e-mails within 24-48 hours, but if no reply is received within this time frame, please follow up with your instructor again to ensure a response. Please do not expect a response over the weekend.

For assistance with assignments or questions about grading of a particular assignment, you may also contact the TAs or IAs assigned to this directly via e-mail or their office hours. This information will be available on Canvas under modules Start Here.

Grading Policy:
Any works turned in late for the 0-24 hours will receive a 25% penalty and 25-48 hours will receive 75% penalty, and it will not be accepted after 48 hours. According to department policy, we are unable to accept submissions via email. Furthermore, submissions will not be accepted once solutions have been posted.

Grades will be posted on Canvas throughout the semester to provide an ongoing assessment of student progress, but typically about 10-15 calendar days after the assignment was due. Grading discussion should first go to the TA or IA graded your assignment in 5 calendar days after grades posted, but if a resolution cannot be reached between the student and the grader, then you should go to the instructor who will have the final decision on the grade. After 5 calendar days, barring an exceptional circumstance, grades will not be altered. It is the student's responsibility to check any given grade and make complaints within at most 5 calendar days after the grades are announced. Grades will not be changed afterwards. Make-ups must need the instructor's special permission. In most cases, they are not allowed.

The final exam grading discussion will only be provided at a specific time, which does not follow the grading discussion policy mentioned above.

The final letter grade will be determined based on the following criteria: (It may be adjusted at the discretion of the instructors) A 90 – 100; B 80 – 89; C 70 – 79; D 60 – 69; F 59 and below.
Required Textbook:
We will be using an online textbook this semester through zyBook.

zyBook: CSCE 2100: Foundations of Computing
zyBook code: UNTCSCE2100LiSpring2023
zyBook ISBN: 979-8-203-26536-4

Welcome to your class zyBook

Instructions for your students

☑ Students will access zyBooks directly.
☒ Students will access zyBooks through links in an LMS (Blackboard, Canvas, etc.)

Please provide the following instructions to your students: Copy into your syllabus, discussion board, etc.

- 1. Click any zyBooks assignment link in your learning management system (Do not go to the zyBooks website and create a new account)
- 2. Unsubscribe

A subscription is $99. Students may begin subscribing Dec 31, 2023 and the cutoff to subscribe is Apr 27, 2024. Subscriptions will last until May 26, 2024.

Optional Reference Textbook:
The Foundations of Computer Science, by Alfred Aho & Jeffrey Ullman
http://infolab.stanford.edu/~ullman/focs.html

Expected Course Outcomes:
Course Outcomes are measurable achievements to be accomplished by the completion of the course. These outcomes are evaluated as part of our ABET accreditation process.

1. Define and use the basic operations of sets, functions, and relations.
2. Define and demonstrate the basic properties of trees and graphs.
3. Use elementary graph and tree algorithms including traversals and searches.
4. Describe assertions in propositional logic form.
5. Describe simple circuits, I/O, and satisfiability using Boolean logic.
6. Use combinatorics and conditional probability in solving real-world problems.
7. Demonstrate a solid foundation in conceptual and formal models by describing loop structures in summation and/or product notation.
8. Demonstrate an introductory knowledge of finite state machines.

Attendance Policy:
Lecture Section: Attendance is mandatory and will check in class. Students are encouraged to attend all lectures on time in order to gain the full benefit of the course. 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) (https://policy.unt.edu/sites/default/files/05.053%20Time%20and%20Attendance%20Leave%20Records.pdf). While I will be posting my slides before class, they will not contain all of the content discussed during class, nor all of the examples presented. If you cannot attend a class due to an emergency, please let me know. Your safety and well-being are important to me.

Recitation Section: Attendance is mandatory and will check. Students are expected to attend and be on time for their assigned weekly recitation section for the respective section. If you anticipate being unable to attend your regular recitation section with a valid excuse, please contact your instructor in advance of your recitation section to see if an alternate lab section is available that may be scheduled.
Students are expected to attend lectures and recitations regularly and to abide by the attendance policy established for the course. Any student who misses a class over two absences without informing the instructor of valid reasons, and obtaining approval, will lose the chance for the bonus credit.

**Make-up Work Policy:**
For most situations there will be no make-up work for any assessment in this course. However, in the event of an unavoidable absence for one of the reasons below, email me as soon as possible so we can work out a solution. The following events are grounds for make-up work: being a participant in a conference in which you are presenting; being in an athletic or other UNT associated event in which you are an active participant; a family emergency; a severe illness; military duty; or in certain cases and with some restrictions a religious event. Additionally, in the case of a missed assignment due to illness, make-up work will only be allowed by the instructor to receive further notification from the Dean of Students. Student are responsible to send email to the Dean of Students with a physical copy of a signed doctor’s note. See the UNT Attendance Policy for more information.

A student is responsible for requesting an excused absence in writing, providing satisfactory evidence to the Dean of Students (deanofstudents@unt.edu) to substantiate excused absence, and the Dean of Students will send the notification to the faculty member assigned to the course for which the student will be absent. When an absence is excused, the faculty member will provide a reasonable time after the absence for the student to complete an assignment, for an examination missed will duplicate the highest exam grade that the student had. Any student who misses a class over two absences without informing the instructor of valid reasons, and obtaining approval, will lose the chance for the bonus credit.

**Content Responsibility Policy:**
Students are responsible for all content presented during class and required readings from the textbook. While attendance will be taken in class, you will be expected to know and understand the requisite topics and concepts. If you are confused or unsure about anything, please ask me or the TAs/IA's.

**ODA:**
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 Accommodation (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 see the Office of Disability Accommodation website at http://www.unt.edu/oda. You may also contact them by phone at 940.565.4323.

**Academic Integrity and Collaboration:**
UNT policy 06.003 defines the following breaches of academic integrity:

1. **Cheating.** “Cheating” means the use of unauthorized assistance in an academic exercise, including but not limited to:
   a. use of any unauthorized assistance to take exams, tests, quizzes or other assessments;
   b. use of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments;
   c. use, without permission, of tests, notes, or other academic materials belonging to instructors, staff members, or other students 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;
e. any other act designed to give a student an unfair advantage on an academic assignment.

2. Fabrication. “Fabrication” means falsifying or inventing any information, data, or research outside of a defined academic exercise.

3. Facilitating Academic Dishonesty. “Facilitating academic dishonesty” means helping or assisting another in the commission of academic dishonesty.

4. Forgery. “Forgery” means intentionally falsifying or altering a score, grade, or official academic University record or the signature of another.

5. Plagiarism. “Plagiarism” means use of another’s thoughts or words without proper attribution in any academic exercise, regardless of the student’s intent, including but 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 acknowledgement, or citation, or
   b. the knowing or negligent unacknowledged use of materials prepared by another person or by an agency engaged in selling term papers or other academic materials

6. Sabotage. “Sabotage” means acting to prevent others from completing their work or willfully disrupting the academic work of others.

Cheating of any sort will not be tolerated in this course. Failure to adhere to these strict standards will be cause for disciplinary action that could be as severe as expulsion from the university. If it is determined a student cheated on any assignment in this course, they will receive an F for their final course grade and an academic integrity report will be filed with the Office of Academic Integrity. Further, UNT is now maintaining a database recording any acts of academic dishonesty that is available to employers. For more information see the UNT Student Academic Integrity Policy.

Collaboration Policy:
For each assignment, exam, and quiz, all work is expected to be your own and no collaboration is allowed. However, for the weekly practice problems and any non-graded, practice assignments, students are encouraged to work together to solve problems.

Syllabus Revisions:
This syllabus may be modified as the course progresses should the instructor deem it necessary. Notice of changes to the syllabus shall be made through Canvas and/or in-class announcements.

Assessment Policy:
For each graded exam and quiz, you are not allowed to use your cell phones for any reason during an exam or quiz. For exams, a note sheet will be allowed, and the specifics of this will be discussed during the exam review.

Grading Breakdown:

<table>
<thead>
<tr>
<th>Assignments &amp; Examinations</th>
<th>Total Percentage</th>
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<tbody>
<tr>
<td>zyBook Activities</td>
<td>10%</td>
</tr>
<tr>
<td>Recitation Problems</td>
<td>10%</td>
</tr>
<tr>
<td>Assignment (drop lowest one)</td>
<td>20%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Midterm Exam 1 &amp; 2</td>
<td>25%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25%</td>
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</tbody>
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**Important Dates:** please find the detail in the following link:

[https://registrar.unt.edu/registration/spring-registration-guide.html](https://registrar.unt.edu/registration/spring-registration-guide.html)

**Tentative Course Schedule:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Topics</th>
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<tbody>
<tr>
<td>1</td>
<td>Intro; Abstraction &amp; Data Models</td>
</tr>
<tr>
<td>2</td>
<td>Abstraction &amp; Data Models; Sets</td>
</tr>
<tr>
<td>3</td>
<td>Relations</td>
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<tr>
<td>4</td>
<td>Relations</td>
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<tr>
<td>5</td>
<td>Graphs</td>
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<tr>
<td>6</td>
<td>Graphs; Trees; Review Exam 1</td>
</tr>
<tr>
<td>7</td>
<td>Trees</td>
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<tr>
<td>8</td>
<td>Midterm Exam 1(week 5)</td>
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<tr>
<td>10</td>
<td>Propositional Logic</td>
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<tr>
<td>11</td>
<td>Propositional Logic</td>
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<tr>
<td>12</td>
<td>Boolean Logic; Review Exam 2</td>
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<tr>
<td>13</td>
<td>Midterm Exam 2(week 13)</td>
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<tr>
<td>14</td>
<td>Automata Theory</td>
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<tr>
<td>15</td>
<td>Combinatorics and Counting</td>
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<tr>
<td>16</td>
<td>Summation and Series</td>
</tr>
<tr>
<td>17</td>
<td>Final Exam 04/29 4:00 pm – 5:20 pm Wh222</td>
</tr>
</tbody>
</table>