Computer Science 1324
Introduction to Computer Programming for Non-Programmers
Spring 2020

Class Time: 10:30 – 11:20 AM on Monday, Wednesday, and Friday
Location: Dale Hall 218
Instructors: Prof. Dean Hougen / Prof. Deborah Trytten hougen@ou.edu / dtrytten@ou.edu

Teaching Assistants (TAs):

Sai Priyanka Balusu (Priya) saipriyanka@ou.edu
Keerthi Teja Alapati (Keerthi) keerthi.teja.alapati@ou.edu
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Canvas Learning Management System: https://canvas.ou.edu
Log in with your OUNetID (the first 4 letters of your last name followed by a 4-digit number). All assignments, deadlines, grades, announcements, and course documents will be posted to the CS 1324 Canvas page. It is your responsibility to regularly check for updates. (You can configure Canvas to email you notifications.)

Office Hours: This class will have assignments due almost every week. If you need help on any of them, please attend some office hours. You may attend any of the hours listed below (not just those held by your laboratory TA). Note that Aditya Narasimhan (Adi) is the instructor for CS 1321 and Sudhindra Gopal Krishna (Sudhi) is the instructor for CS 1323.

Day	Time	Location	Person
Monday *	11:30 am – 12:00 pm	Dale Hall	Prof Trytten
Monday	2:00 pm – 4:00 pm	DEH 115	Priya
Monday	3:00 pm – 5:00 pm	DEH 115	Sudhi
Monday	3:00 pm – 4:00 pm	DEH 252	Prof Trytten
Monday	4:00 pm – 5:00 pm	DEH 115	Keerthi
Tuesday	11:00 am – 12:00 pm	DEH 252	Prof Trytten
Tuesday	2:30 pm – 4:30 pm	DEH 115	Adi
Tuesday	5:00 pm – 6:00 pm	DEH 115	Keerthi
Wednesday *	11:30 am – 12:00 pm	Dale Hall	Prof Trytten
Wednesday	2:00 pm – 4:00 pm	DEH 115	Priya
Wednesday	4:00 pm- 5:00 pm	DEH 252	Prof Trytten
Thursday	1:00 pm -2:00 pm	DEH 252	Prof Trytten
Thursday	1:30 pm – 2:30 pm	DEH 115	Olivia
Thursday	2:30 pm – 4:30 pm	DEH 115	Adi
Friday *	11:30 am – 12:00 pm	Dale Hall	Prof Trytten
Friday	3:00 pm – 4:00 pm	DEH 115	Olivia
Friday	3:00 pm – 5:00 pm	DEH 115	Sudhi

* These times are immediately after class. I will stay outside the classroom (usually on the benches at the east end of the second floor) as long as there are students around who want to talk or need help.

Most of these hours are held in Devon Energy Hall (DEH) 115, the computer lab on the first floor. The entrance to this room has a keycard lock that can be opened with a student ID card (i.e., Sooner Card). If your card does not unlock the door, you can request access on the following page: https://bit.ly/csaccess.

Free Tutoring: In addition to our office hours, the both Dean's Leadership Council (DLC) of the Gallogly College of Engineering and the School of Computer Science through the William Kerber Foundation Teaching Scholars offer free weekly tutoring at the times shown below.

Melissa Wilson, Nathan Huffman, and Jennifer Pham are the William Kerber Foundation Teaching Scholars who provide help to any students taking computer science classes.

Day	Time	Location	Person
Monday	9:30 am – 3:00 pm	DEH 115	Kerber Scholar(s)
Tuesday	9:30 am – 12:00 pm	DEH 115	Kerber Scholar(s)
Tuesday	12:30 pm – 4:00 pm	DEH 115	Kerber Scholar(s)
Wednesday	9:30 am – 3:00 pm	DEH 115	Kerber Scholar(s)
Thursday	9:30 am – 12:00 pm	DEH 115	Kerber Scholar(s)
Thursday	12:30 pm – 4:00 pm	DEH 115	Kerber Scholar(s)
Friday	12:30 pm – 2:30 pm	DEH 115	Kerber Scholar(s)

The schedule for DLC tutors, and a list of the topics they tutor is here:
http://www.ou.edu/content/dam/CoE/D&I/spring%202020%20schedule.pdf

Prerequisites:

1. Math 1523 (precalculus and trigonometry), equivalent, or concurrent enrollment.
2. Basic computer literacy such as the ability to install software and navigate folder structures. A list of specific expectations is available on Canvas.
3. Little or no prior programming experience. (If you've taken a programming course before, you must enroll in CS 1323 instead.)

Topics Covered: programs, Java, input and output, identifiers, variables, assignment statements, constants, memory diagrams, primitive data types, operations on primitive data, conditional statements, repetition, methods, parameters, arguments, return values, passing by value, passing by sharing, nested control statements, one dimensional arrays, objects, user defined classes, and classes from the Java Application Programmers Interface (API) (including Arrays, ArrayList, Character, Collections, Double, Integer, Float, Math, Scanner, String, and StringBuilder).

Students will increase their ability to meet the following ABET outcomes:
Outcome 1: Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.
Outcome 2: Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.

Required Materials: Please purchase the following items as soon as possible. Each is required to complete a different type of assignment.

1. Zyante online textbook (zyBook) with labs (zyLabs).
   - Click on the first reading assignment in Canvas, which has the title "Ch. 1: Introduction to Programming."
   - Click the link at the bottom of the assignment page to open the Zyante website in a new window.
   - Subscribe to the book.
2. Turing's Craft CodeLab

- Click on the first interactive tutoring assignment in Canvas, which has the title "TC 1: Storing and Changing Primitive Data."
- Click the link at the bottom of the assignment page to open the Turing's Craft website in a new window.
- Click the upgrade link at the top of the page to open a page of payment options.
- Use a credit card or activation code (from the bookstore) to purchase the CodeLab.

3. Laptop computer with wireless network access
   - For instructions on connecting to the WIFI@OU wireless network, see the following page: http://askit.ou.edu/customer/en/portal/articles/2943699-connecting-to-wifi-ou
   - Our classroom has enough electrical outlets for everyone to charge their laptops. In your Tuesday lab section, however, expect to be on battery power for about 2 hours. Make sure your battery can last this long on a full charge.
   - You are responsible for having a working laptop available for every class. This includes finding a replacement with the necessary software installed if your laptop requires repairs during the semester.

Midterm Exams:

1. 10:30–11:20 AM on Monday, February 10
2. 10:30–11:20 AM on Friday, March 13
3. 10:30–11:20 AM on Friday, April 17

Makeup exams are only available when required by University policy. Missing an exam without a previously approved excuse will result in a grade of zero.

Final Exam: 8:00–10:00 AM on Tuesday, May 5
The final exam is in our usual classroom, but it starts at an earlier time and is 2 hours long. The College of Engineering requires this exam to be comprehensive. No final exam will be given early except as required by University policy.

Study Advice: In technical fields like computer science, the only way to really learn the subject matter is to practice. Learning to program is like learning to play a musical instrument. You can read a hundred books on playing the piano, but if you don't sit down in front of a keyboard and practice, you won't be able to produce any interesting music. Similarly, if you only attend lectures or read the textbook, you're going to find it difficult to write functioning computer programs of any complexity.

To facilitate your practice, this course has different types of assignments, which are described in the following section. My advice is to take these assignments seriously. Start each assignment as early as you can and get help from me, a teaching assistant, or a tutor if you get stuck. (Programming can be challenging, which is why we have so many office hours.) If you work hard on and understand the assignments, you'll do well on the exams, earn a good grade in the class, and generally have a rewarding semester.

Assignments: This course has 5 different assignment types. Each is designed to help you learn the material in a different way. All assignments are due at 11:59 PM on their posted due dates, other than instant quizzes and TPS assignments, which are due in class.

1. Zyante (zyBook): The online textbook will introduce you to new topics before I cover them in class.
   - Each section contains activities to reinforce the ideas in the text. Activities come in two types: participation and challenge. You are only required to complete participation activities, although you are welcome to complete challenge activities for extra practice.
   - Each question can be attempted an unlimited number of times without a penalty. You earn 1 point for each question answered correctly before the deadline.
   - Some sections are marked as optional. You are not required to complete these sections.
2. Instant quizzes and Think-Pair-Share (TPS): These assignments are given in class to keep you engaged and determine which topics need additional clarification.
   - Instant quiz questions are multiple choice and are answered with your device (laptop, tablet, or phone) via Canvas.
   - You earn 1 point for each class where you answer half or more of the instant quiz questions correctly. The first question answered each day is a freebie: you receive credit whether you answer correctly or not.
   - TPS questions are free response and are answered on paper.
   - Each TPS question is graded on a scale from 0 to 3. You earn 1 point for each question on which you receive a 2 or 3.
3. Turing's Craft (TC) and CodingBat (CB): Interactive tutoring assignments reinforce topics after they are discussed in class.
   - TC exercises and CB problems are answered in a web browser and provide immediate feedback on your code. Answers are given in the form of code fragments, rather than complete programs.
   - Each assignment is due two days after the last class on the corresponding topic.
   - As with zyBook assignments, there is no penalty for incorrect answers. You earn 1 point for each TC exercise and 2 points for each CB problem answered correctly by the deadline.
4. Homework: These assignments consist of questions that are similar to those on the exams.
   - Each homework will be posted as a PDF file with fillable fields. You can read and answer the questions using Acrobat Reader: https://get.adobe.com/reader.
   - Homework is submitted through Gradescope, which can be accessed from the link on the left side of the course Canvas page.
5. Laboratory Projects: These assignments require you to solve a problem in a less structured environment by writing a complete program.

- Projects are assigned in lab each Tuesday and are due via zyLabs and submitted to Canvas the following Monday.
- You and another student will be paired together to work as a team. This is known as "pair programming," and it has a number of benefits: https://en.wikipedia.org/wiki/Pair_programming.

All assignments must be completed *individually* unless otherwise stated. (Lab projects are an exception, since you will collaborate with your partner.) Please carefully read the sections at the end of this document on academic integrity violations. I take cheating, improper collaboration, and plagiarism very seriously, and I expect you to do the same.

Laboratory Sections: All labs are held on Tuesdays in Devon Energy Hall. Below are the meeting times and instructors for each section:

Section	Time	Location	Instructors
11	8:30 AM – 10:20 AM	DEH 270	Priya and Olivia
12	10:30 AM – 12:20 PM	DEH 130	Olivia and Keerthi
13	12:30 AM – 2:20 PM	DEH 130	Keerthi and Priya

The following are answers to frequently asked questions about the labs, along with a few things worth noting:

- You must attend lab to receive credit on a project. Missing lab will result in a grade of zero, even if you complete the project independently and submit it before the deadline. (If you strongly believe you will learn better by completing the projects on your own, consider switching to CS 1323.)
- If you are late to lab, you may be asked to leave. In this case, you will receive a zero on the project. Please respect your partner and arrive on time.
- New lab partners will be assigned after each midterm exam.
- Although you and your partner will collaborate on each project, you *both* must submit a copy of your source code (the .java file, not the .class file). Make sure you each have a copy before leaving lab!
- Projects are graded according to a rubric included in each project handout. Review this rubric before submitting your code so you don't lose points. If you understand the rubric and you test your code, you should be able to accurately predict your grade.
- Incomplete projects can be submitted for partial credit, but source code that does not compile generally receives no credit.
- Each exam will have a final problem that requires you to write most of a complete program. This question is typically worth 30–40% of the exam points. Projects are the assignments most similar to these questions. Thoroughly understanding and completing each project is thus an excellent way to prepare for exams.

Grading: Your final course grade is calculated from your average grade on each type of assignment, your average midterm grade, and your final exam grade. These averages are combined using the weights in the table below. The weights applied to the Zyante, instant quiz & Think-Pair-Share, and Turing's Craft & CodingBat grades are intentionally low. This allows you

to learn from mistakes with only small penalties. Note that completing these assignments is how most students develop the conceptual understanding needed to do well on the homework, projects, and exams.

Assignment	Weight (%)	Forgiveness Policy
Zyante	5	100 free points (not to exceed 100%)
instant quiz & Think-Pair-Share	5	5 lowest assignments
Turing's Craft & CodingBat	10	100 free points (not to exceed 100%)
Homework	10	lowest assignment
Lab Projects	20	lowest assignment
Midterm Exams	30	none
Final Exam	20	none

The table also lists the forgiveness policy for each assignment type. At the end of the semester, these adjustments are applied when calculating average assignment grades. For example, your lowest homework grade will be dropped when calculating your average homework grade. (Note that Zyante questions and Turing's Craft exercises are each worth 1 point, and CodingBat problems are each worth 2 points.)

Letter Grades: Your course grade will be converted into a letter using a scale no higher than the following:

Letter	Percentage
A	90+
B	80–89
C	70–79
D	40–69
F	<40

The scale may be lowered at the end of the semester at my discretion.

Borderline Grades: It would be nice if all course grades fell cleanly into the ranges shown above. Most semesters, however, a handful of letter grades are decided by only a few points. In these difficult cases, I may elect to use the following algorithm:

1. A course grade is considered "borderline" if it is within two points of the next higher letter. For example, 68 and 79 are borderline course grades, but 81 and 92 are not.
2. For borderline grades, if the grade on the final exam is above the threshold for the higher letter, the higher letter will be given.
3. Otherwise, the lower letter will be given.

Grade Checking: Canvas has a grade book that stores the raw data used to calculate your course grade. It is your responsibility to periodically check that your grades are recorded properly. If you find an error, bring the grading document to me as soon as possible, and I will correct it. The grade summary on Canvas is not 100% accurate, although it generally gives a reasonable approximation. In general, grades on Canvas are lower than those actually assigned.

Late Work: I do not accept late work. Flat tires, parking problems, vacations, alarm clock failures, minor illness, internet outages, and non-urgent doctor's appointments are not acceptable excuses for submitting late work. The forgiveness policies listed above are designed to allow you to miss one full week of class without a grade penalty.

Backup Copies of Homework and Projects: No deadline extensions will be given as a result of lost files, unless there is a massive, network-wide problem that affects the entire class. It is your responsibility to back up your files appropriately. (Dropbox and other cloud services are useful for this, assuming you have reliable internet access.) It is particularly important to save a backup copy of any homework or lab project that is submitted. This backup version should not be opened or edited after submission in case something goes wrong (e.g., see below).

Submission and Formatting Failures: Submitting files on Canvas is a two-step process. First the file is uploaded, then it is submitted. You will be forgiven for failing to click the submit button once during the semester. You will also be forgiven once for submitting assignments in the wrong format (usually a .class file instead of a .java file). Canvas only accepts documents in the proper format, so if your files are being rejected, this is likely the problem. If you are unable to submit after double checking the format, email your files to me.

Excused Absences: There will generally be no excused absences for any event shorter than a week, unless for a sanctioned University activity (student organization activities are not included), military obligation, documented illness, jury duty, or obligation of similar magnitude. If you have a properly documented absence that is longer than a week, work will be excused. Makeup work is never available.

Religious Observances: It is University policy to excuse absences that result from religious observances and to reschedule exams and assignment deadlines that fall on religious holidays. Please check the schedule and inform me of conflicts as soon as possible.

Incomplete Grades: A letter grade of I (incomplete) is intended for the rare circumstance when a student, who has been successful in class, has an unexpected event occur shortly before the end of the semester. I generally will not consider giving an incomplete grade unless three conditions are met:

1. It is within two weeks of the end of the semester. (There is some flexibility with this condition in unusual cases.)
2. You have a grade of C or better in the class.
3. The reason you are unable to complete the class is properly documented and compelling.

Accommodation of Disabilities: The University of Oklahoma and I are both fully committed to providing reasonable accommodations for all students with disabilities. If you require accommodations, please speak with me as early in the semester as possible. Additionally, you must register with the Disability Resource Center: https://www.ou.edu/drc.

Adjustments for Pregnancy/Childbirth Related Issues: Should you need modifications or adjustments to your course requirements because of documented pregnancy-related or childbirth-related issues, please contact me as possible to discuss. Generally, modifications will be made where medically necessary that are similar in scope to accommodations based on temporary disability. Please see the following site for answers to commonly asked questions: https://www.ou.edu/eoo/faqs/pregnancy-faqs.

Title IX Resources: For any concerns regarding gender-based discrimination, sexual harassment, sexual misconduct, stalking, or intimate partner violence, the University offers a variety of resources, including advocates on-call 24/7, counseling services, mutual no-contact orders, scheduling adjustments, and disciplinary sanctions against the perpetrator. Please contact the Sexual Misconduct Office at 405-325-2215 (8 AM–5 PM) or the Sexual Assault Response Team at 405-615-0013 (24/7) to learn more or report an incident.

Disruptive Electronic Devices: You may use laptops, tablets, cell phones, and other electronic devices in class in ways that enhance your learning. These devices should not be used in ways that distract other students (e.g., playing games, watching videos, or making noise).

Academic Integrity Violations: The Student's Guide to Academic Integrity defines academic misconduct as "any act that improperly affects the evaluation of a student's academic performance or achievement," including cheating on exams, improper collaboration on assignments, and plagiarism (https://www.ou.edu/integrity/students).

The most common violation in this course is plagiarism, usually on homework and projects. Plagiarism is "an act or instance of using or closely imitating the language and thoughts of another author without authorization and the representation of that author's work as one's own" (https://www.dictionary.com/browse/plagiarism). When completing assignments in this class, please keep the following in mind:

- Solutions should not be copied from internet sources, including cheat sites and paid professional programmers.
- Do not show, give, or email another student a copy of your work before the submission deadline.
- The penalties for permitting your work to be copied are usually the same as the penalties for copying someone else's work, since it is not possible to distinguish the person who copied from the person who allowed their work to be copied.

Proper and Improper Collaboration: When you pass this class with a grade of C or better, I am certifying to the world that you are a competent Java programmer. I cannot make this certification without seeing work that you complete on your own. Interactive programming tutors, homework, and examinations should be the work of a single individual, not their friends and not their tutor.

It is permissible to talk to other students in the class for help completing or improving your work, however, this help must not interfere with my ability to evaluate the quality and quantity of your understanding of computer programming. To understand this distinction,

please review the examples in the table below. (Note that this is not a comprehensive list of all the ways in which academic integrity can or cannot be violated.)

Situation	**Integrity Violation?**
Students A and B meet and work on their homework together. Neither student prepared anything in advance.	**Yes**
Students A and B create drafts of their homework assignment independently and meet to compare answers and discuss their understanding of the material. Each student decides independently whether to make changes that are discussed.	No
Students A and B agree to prepare drafts of their homework assignment independently, but only Student A does. Student A shares his draft with Student B who reviews it and offers suggestions for improvement.	**Yes**
Students A and B agree that student A will work the even problems and student B will work the odd problems. They share their work.	**Yes**
Student A has completed a project and is helping student B complete the same project. Student A explains to student B what student B's code actually does, which is different than what student B thinks the code does. Student B determines how to modify the code independently.	No
Student A has completed a project and is helping student B complete the same project. Student B is having trouble getting one part of the program to work, so student A texts student B three lines of their solution.	**Yes**
Student A has completed a project and is helping student B complete the same project. Student B is having difficulty getting the program to work, so student A tells student B exactly what to type for several lines.	**Yes**
Student A has completed a project and is helping student B complete the same project. Student B is having difficulty getting the program to work, so student A suggests that student B use a specific debugging strategy (e.g., "Print out the contents of the variable").	No
Student A has completed a project and is helping student B complete the same project. Student A shows student B an example program in the online textbook that will be helpful in figuring out the solution to the problem.	No
Students A and B work on a project together. After they have finished it, student A takes the code and modifies it so the programs do not appear to be identical.*	**Yes**

*Be aware that I have software at my disposal that can detect these kinds of changes.

If you collaborate with another student in one of the permissible ways described above, **you must include that person's name on the submitted work**. Failure to do so is a violation of academic integrity.

Academic Integrity Process: Upon the first documented occurrence of academic misconduct, I will report the violation to the Campus Judicial Coordinator. If you are found guilty by this process, the minimum penalty is usually failing the class and being suspended from college for a semester. If you have committed academic misconduct previously, the sanctions can be more severe, including expulsion from OU. The procedure to be followed is documented in the University of Oklahoma Academic Misconduct Code. In the event that I elect to admonish you, the appeals process is described here: https://www.ou.edu/integrity/students.

Tutors and Academic Integrity: Before you hire a private tutor, please take advantage of the many staff who support this class. (See the list of TA and tutoring hours at the beginning of this document.) These people are trained to tutor properly. Private tutors can be a source of support if you are struggling in the class, but only if the tutor is aware of the distinction between teaching you the material so that you can do your own work and completing assignments for you. Tutors who simply complete your assignments are not only failing to help you learn, they are committing academic misconduct. Each of the situations listed above in the table of collaboration scenarios applies when student A is a tutor.

Ownership of Course Materials: All original content used in this course is owned by Dr. Deborah Trytten and/or Dr. Dean Hougen. This includes but is not limited to exams, lectures, quizzes, handouts, protocols, electronic documents, and syllabi. Original or transcribed content may not be copied, recorded, retransmitted, posted online, or sold without her and/or her expressed, written consent.