

Syllabus

CSED 1310, Programming Environments for Elementary Education Fall 2023

Course Information

Time and Place: MWF, 9:00-9:50, Lang 222

Instructor: Dr. Ben Schafer

Email: ben.schafer@uni.edu

Office Location: Lang 221

Student Hours:

My regularly scheduled student hours this fall will be:

- MWF, 10-11 AM – Drop in or by reservation.
- M F, 12-1 PM – Drop in or by reservation.
- MTWTh, 3:00-4:00 – Advanced reservations only.

If you would like to meet with me face-to-face you can just stop by my office during those times.

If you would like to meet with me over zoom you should first reserve an appointment using my online calendar at least one day in advance.

- <https://bit.ly/SchaferScheduler>

Then at the appropriate time, you can log on to the following Zoom room:

- <https://uni.zoom.us/j/3192732187> [Using the 3-letter name for our campus as the password]

If those times don't work for you, please send me an email and propose a specific alternative. I want to meet with you at a time/place that works for both of us, and I am very willing to work things out.

Credit Hours: Three (3). This course meets the Credit Hour Expectations outlined in the Course Catalog. Students should expect to work approximately 2 hours per week outside of class for every course credit hour.

Class Websites:

- <https://www.cs.uni.edu/~schafer/1320/> (most lesson materials)
- Blackboard (Grades and Competency Demos)

Textbook

No textbook adequately fits our needs. Instead, all required readings and other materials will be selected from legally available resources on the internet or from instructor produced materials.

Computer Use

All of the learning materials and programming environments for this course are available from any computer with a web browser and internet access. You will need access to a computer with Internet access while off-campus and when in the classroom. If you do not have access to a device for daily use, please reach out to me and we will discuss how you might check one out from the university.

Course Description

Introduction to computational thinking and computer programming. Taught as a survey of programming environments used by elementary education teachers. Topics include structure of programming and the study of several programming environments used by students at a variety of age/ability levels.

Course Learning Outcomes

By the end of this semester students taking this course should be able to meet the following outcomes/standards:

Programming-Oriented Outcomes. Students should be able to:

- create appropriate algorithms (select and sequence action statements) to accomplish a wide variety of given tasks. [Standard P1]
- appropriately use iteration (loop) structures (e.g., for, while, repeat-until, etc.) to control the repetition of actions. [Standard P2]
- modify a provided piece of code to accomplish a given task. Includes debugging non-functioning code. [Standard P3]
- appropriately use events to coordinate the actions of multiple “actors” (threads of execution) in programs. [Standard P4]
- create and use variables (both single value and lists) to store data necessary for the appropriate execution of programs. [Standard P5]
- appropriately use conditionals and selection statements (e.g. if-then, if-then-else, etc.) to control the choice between several actions. [Standard P6]
- appropriately use functions, both with and without parameters, to simplify the code in programs. [Standard P7]
- trace a segment of code to determine the result produced or state achieved by given code. [Standard P8]

Teaching-Oriented Outcomes. Students should be able to:

- define computer science and explain its relationship to the K-5 classroom [Standard T1]
- define the concepts of sequence/algorithm, loops, conditionals, events, variables, and functions within the context of a K-5 classroom [Standard T2]
- explain and provide age-appropriate examples of the concepts of sequence, loops, events, conditionals, operators, variables, and lists within the context of a K-5 classroom [Standard T3]
- explain and discuss the use of a CS Framework within a K-5 classroom [Standard T4]
- explain and discuss the Iowa Computer Science Standards within a K-5 classroom [Standard T5]
- create an age-appropriate and standards-aligned lesson plan integrating computer science with another common discipline [Standard T6]

How Student Performance Will Be Evaluated

Course Grading

I use a grading system that is a combination of "standards-based grading" and "grading for equity" (<https://gradingforequity.org/>). The main ideas behind this are:

- Your job, as a student, is to show me (sometimes multiple times) that you can meet the course outcomes
- My job, as the teacher, should be to make sure that you are given plenty of opportunities to learn and practice what you need to demonstrate the course outcomes.
- Your final grade in the class should indicate your ability to meet the course outcomes and, for the most part, nothing else.

I WANT you to succeed in the course and that means giving you multiple opportunities to show me that you have learned the necessary material. In most cases, if you can't do this the first time, you will be able to re-study and try again.

You will earn multiple "grades" in this course. Each of these is a category of understanding that, for simplicity, is recorded as a score from 1-4 with the following meaning:

Score	Meaning
1	UNASSESSABLE - You submitted deliverables for the standard but what you submitted shows little understanding of the standards of the activity.
2	NEEDS WORK - You have made significant progress towards demonstrating competency but there are limited items that remain unsatisfied.
3	SATISFACTORY - You have "met" the standards of the activity.
4	EXCELLENT - You have "exceeded" the standards of the activity. [You have met the standards of competency and shown considerable understanding/knowledge of the material.

While it might be tempting to view these categories as similar to GPA categories (which is also a 4-point scale) that is not the way they are used or interpreted.

Final course grades will be determined using the following evaluation criteria.

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Grade Earned	Score	Additional Conditions
A	50 – 56	All scores 3-4
A-	50 – 56	All scores 2-4
B	43 – 49	All scores 3-4
B-	43 – 49	All scores 1-4
C	36 – 42	All scores 2-4
C- *	36 – 42	All scores 1-4
D *	28 – 35	All scores 2-4
D- *	28 – 35	All scores 1-4
F *	0 - 27	

NOTES:

- Because I allow – and encourage – retakes, most students do just fine in this course. It is VERY rare that a student who has been an active participant in the class is unable to earn at least a C for a final grade.
- If I feel there are specific and individual circumstances where "mathematically" you earned a grade slightly lower than I feel your overall competence has demonstrated than I reserve the right to raise your grade one level from that published above.
- I reserve the right to "adjust" your course grade if your performance on the Final CD deviates significantly from your overall performance in the course.
 - If your Final CD grades are lower than your overall course grade, I reserve the right to lower your grade one level from that published above.
 - If your Final CD grades are higher than your overall course grade, I reserve the right to raise your grade one level from that published above.

Please note, to be responsive to your needs I reserve the right to modify the structure of this course as we are in progress. If there is significant deviation from the policies described above, this new policy will be clearly discussed with you and in a timeframe that gives you a time to plan accordingly.

Final Thoughts

If you are having trouble with a topic in the class, please reach out to me **early**. Do not wait until the situation is out of control. I am very willing to help. However, I have to know you need and want that help.

Additional Policies and Statements

Scholastic Conduct

You are responsible for being familiar with the University's Academic Ethics Policies:

<https://www.uni.edu/policies/301>

Copying from other students is expressly forbidden. Doing so on CDs will be penalized every time it is discovered. The penalty can vary from zero credit for the copied items (first offense) up to a failing grade for the course. If an assignment makes you realize you do not understand the material, ask a fellow student a question designed to improve your understanding, *not* one designed to get the assignment done. Your final submission for assignments should be **individual, original** work unless otherwise specified. Any substantive contribution to your solution by another person or taken from a publication should be properly acknowledged in writing. Failure to do so is plagiarism and will necessitate disciplinary action. In addition to the activities we can all agree are cheating (plagiarism, bringing notes to a closed book exam, etc.), assisting or collaborating on cheating is cheating. Cheating can result in failing the course and/or more severe disciplinary actions. Remember: Discussing assignments is fine and even encouraged. Copying code or answers is not.

Accessibility

The University of Northern Iowa (UNI) complies with the Americans with Disabilities Act Amendments Act of 2008 (ADAAA), Section 504 of the Rehabilitation Act of 1973, the Fair Housing Act, and other applicable federal and state laws and regulations that prohibit discrimination on the basis of disability. Students with disabilities experiencing a barrier to access should connect with Student Accessibility Services (SAS) to request accommodations. For more information about the accommodation process, please contact SAS at (319) 273-2677 Relay 711, accessibilityservices@uni.edu, or GIL 118. Additional information is also available at sas.uni.edu.

The Learning Center

The Learning Center @ Rod Library provides free tutoring for a variety of different areas (i.e. writing, math, science, business, Spanish, college reading and learning strategies). The Learning Center @ Rod Library is open for walk-in assistance Monday-Thursday 10am-10pm and is free of charge for all UNI students. If you are unavailable during normal tutoring hours, online tutoring is also available through Smarthinking. You will need your CATID and passphrase to gain access. To access the Smarthinking platform go to <https://tlc.uni.edu/online>. For more information, go to <https://tlc.uni.edu>, email TheLearningCenter@uni.edu, call 319-273-6023, or visit the TLC desk located on the main floor of Rod Library.

Free Speech

The University of Northern Iowa supports and upholds the First Amendment protection of freedom of speech and the principles of academic and artistic freedom. We encourage the free and responsible exchange of diverse ideas on our campus. The University is committed to open inquiry and the spirited and thoughtful debate of such ideas.

Office of Compliance and Equity Management Non-discrimination in Employment or Education

Content in this class has the potential to be disturbing to some individuals based on life experiences. If you ever feel the need to step out of the classroom or decline participation in an activity, please request an alternative learning experience.

UNI Policy 13.02 Discrimination, Harassment, and Sexual Misconduct states: "The University is committed to providing a workplace and educational environment, as well as other benefits, programs, and activities, that are free from discrimination and harassment based on a protected class, as well as retaliation."

Policy 13.02 outlines prohibited conduct and reporting processes. All University employees who are aware of or witness discrimination, harassment, sexual misconduct, or retaliation are required to promptly report to the Title IX Officer or Title IX Deputy Coordinator.

- Title IX Officer Leah Gutknecht, Assistant to the President for Compliance and Equity Management, 117 Gilchrist, 319.273.2846, leah.gutknecht@uni.edu
- Title IX deputy coordinator: Christina Roybal, Sr. Associate Athletic Director Athletics Administration, North DOME 319.273.2556, christina.roybal@uni.edu

If you or someone you know has been harassed or assaulted, you can find the appropriate resources at safety.uni.edu and equity.uni.edu. Resources that provide free, confidential counseling are also detailed at safety.uni.edu.

For additional information, contact the Office of Compliance and Equity Management, 117 Gilchrist Hall, 273-2846, equity@uni.edu.