CS 1310, Spring 2021
Intro to Programming Environments
For Elementary Education

General Information
Time and Place: MWF 11:00-11:50, Wright 119
Class Website: http://www.cs.uni.edu/~schafer/1310/
Credit Hours: Three (3). This course meets the Course Credit Hour Expectation outlined in the Course Catalog.
Instructor: Dr. Ben Schafer
Email: schafer@cs.uni.edu
Office: 316 ITTC, phone 273-2187

Student/Office Hours: Due to Covid-19 restrictions, I will not be holding formal, face-to-face office hours. However, I am very willing and WANT to meet with you. To accomplish this we will use online office hours via Zoom.
- The easiest way is to use my Google Calendar to schedule an appointment during regular student hours which is MWF, 9:00-9:50 AM, 11:00-11:50 AM, 1:00-1:50 PM
- To set up an appointment use
- If those times don't work for you, PLEASE, send me an email and propose a specific alternative.

If you feel like we really need to be F2F reach out to me via email to set this up.

Course Information

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.

Student Learning Outcomes
By the end of this semester students taking this course should be able to meet the following objectives:

Programming Oriented Outcomes. Students should be able to:
- trace a segment of code to determine the result produced or state achieved by given code
- modify a provided piece of code to accomplish a given task
- choose and sequence action statements to accomplish a given task
- develop and use selection statements (if-then, if-then-else, etc.) to control selection between actions
- develop and use iteration statements (for, while) to control repetition of actions
- explain the concepts of sequence, loops, parallelism, events, conditionals, operators, variables, and lists within the context of computer science.

Teaching Oriented Outcomes. Students should be able to:
- discuss resources for learning about several programming environments
- discuss which of several programming environments would be appropriate in a given classroom
- explain the concepts of sequence, loops, parallelism, events, conditionals, operators, variables, and lists within the context of a K-12 classroom.
Course Requirements
Students in this course will rely heavily on the use of the computer. 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. There should be a limited number of laptops available for use in the classroom. [Recognize that these are shared among students and you should use caution when using them both for your physical and cyber safety.]

No single textbook 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.

Course Grading

NOTE: This description of course grading is based on the assumption that we complete the semester on-campus. If we move to a completely offline scenario, or if we have a significant disruption mid-semester, I may want/need to revise the grading scenario. In that case, I will clearly republish my expectations on the class website.

I use a grading system drawn from the philosophies of "standards-based grading" and "equitable grading" (https://gradingforequity.org/). The main idea is that I WANT you to succeed in the course by you showing 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 (12?) "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:

<table>
<thead>
<tr>
<th>Score</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>You submitted the deliverables or attempted the activity but you show little understanding of the standards of the activity.</td>
</tr>
<tr>
<td></td>
<td>[NOTE, you can not pass this course (grade of C or higher) with any 1s in your grades]</td>
</tr>
<tr>
<td>2</td>
<td>You have made significant progress towards demonstrating competency but there are limited items that remain unsatisfied.</td>
</tr>
<tr>
<td>3</td>
<td>You have &quot;met&quot; the standards of the activity.</td>
</tr>
<tr>
<td></td>
<td>[You have displayed minimum acceptable competency on this activity.]</td>
</tr>
<tr>
<td>4</td>
<td>You have &quot;exceeded&quot; the standards of the activity.</td>
</tr>
<tr>
<td></td>
<td>[You have met the standards of competency and shown considerable depth of knowledge, personal insight, or have demonstrated competency multiple times]</td>
</tr>
</tbody>
</table>
These grades will (likely) consist of:

- **8 Competency Activities (CA)** worth 1 grade each
  - You can think of these like "homework" assignments.
  - Most will be one activity for one grade.
    - However, some (specifically CA1 and CA7) will consist of several pieces evaluated as a group.
  - Most CAs will be given an initial evaluation based on the rubric published with the activity. If you do not earn the grade you would like to earn on the activity you will have an opportunity to revise and resubmit for a (hopefully) improved grade.

- **2 Competency Demos (CD)** worth 2 grades each
  - You can think of these like exams.
  - Each will be administered using Blackboard.
  - You will be expected to be present during the scheduled offering unless you have made previous arrangements.
  - In order to put a little more weight on the CDs each CD will be divided into two sections and separate grades can be earned on each section. Thus, each CD is worth 2 grades.
  - If you do not like the grade(s) you earned on the original CD, you will be provided an opportunity to ask questions, re-study the material, and attempt a second CD to improve your grade. Details on this will be provided when it becomes an option.

- **Final CD**
  - This is an optional activity.
  - It will be administered during the university scheduled exam period
  - Your grade on this activity will replace one grade of your choice on Saturday, November 21st
    - This is the only activity all semester for which you will not be given an opportunity to improve your grade.
  - Due to the nature of this CD there is not an opportunity to retake to improve your score.

The following criteria will be used when assigning end of semester grades

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>All 3s and 4s AND average ≥ 3.5</td>
<td>A*</td>
</tr>
<tr>
<td>No more than one 2 AND average ≥ 3</td>
<td>B*</td>
</tr>
<tr>
<td>No more than two 2s</td>
<td>C*</td>
</tr>
<tr>
<td>More 3s and 4s than 1s and 2s</td>
<td>D</td>
</tr>
<tr>
<td>Any Zeros</td>
<td>F</td>
</tr>
</tbody>
</table>

* This grade cannot be earned if you have any 0s or 1s in the gradebook.

In most situations, grades earned are straight letter grades – no plusses or minuses. Because you have multiple opportunities to retake and earn better grades this isn't as rough as it might sound. However, I DO reserve the right to raise grades slightly (take a B grade to a B+) if I feel there are specific and individual circumstances that warrant this change from the above criteria.
Course Structure and Policies

Please note that Covid-19 will have an impact on this class. It has changed how I am structuring class time and the kind of activities that we do in class. It is possible that we will have interruptions that may change the entire delivery and nature of this class. However, two of the most important rules I have put upon myself are "be flexible" and "always ask yourself what is best for your students." If you understand this and have a similar attitude, we should be fine.

As a side note, I DO think that it is completely possible to pass this course (with an A even) without ever setting foot in the classroom. If you have concerns about your health or safety, or if you need to miss class for some other legitimate reason, then you can (and should) stay home and make up the class from the materials posted on my website. Having said that, I think a lot of learning happens in the interaction that will take place in my classroom. Therefore, while attendance is not required it is encouraged if your health allows you to be here.

Scholastic Conduct

You are responsible for being familiar with the University’s Academic Ethics Policies - https://www.uni.edu/policies/301 The penalty for violating these policies will vary from zero credit on the CA/CD on the first offense up to a failing grade for the course. If an assignment makes you realize you don't 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 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.

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. To request accommodations please contact Student Accessibility Services (SAS), located at ITTC 007, for more information either at (319) 273-2677 or Email accessibilityservices@uni.edu. Visit https://sas.uni.edu/ for additional information.

Covid-19 Statement

Protecting our campus from COVID-19 depends on all of us acting with care and responsibility. To protect each other and our campus community, we are required to wear masks or face shields that cover our mouths and noses inside all campus buildings, including throughout the duration of class. We are asked to self-screen for COVID-19 symptoms, stay away from others and seek medical attention if we’re not feeling well and/or experience any symptoms such as a fever over 100.4, and to communicate and plan proactively to make up for missed learning. We will maintain physical distancing by sitting in designated areas in the classroom. In order to facilitate contact tracing, Black Hawk County requires us to sit in assigned seats, and you are asked to adhere to your assigned seat. If your assigned seat does not work well for you, please notify me immediately so that we can work together to reassign you. Failure to follow these requirements can result in students being referred to the student conduct process and faculty being referred to the Associate Provost for Faculty. We take these steps together recognizing that my mask protects you, your mask protects me, and together wearing masks protects the entire UNI community. Our collective actions will determine our ability to remain together in an in-person learning environment.