General Information
Time and Place:  MWF, 11:00-11:50, Lang 222

Class Websites:
- http://www.cs.uni.edu/~schafer/3310/ (most lesson materials)
- Blackboard (Grades and Competency Demos)

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

Student Hours:
Due to an abundance of caution, I prefer to limit my face-to-face meetings. However, I am very willing to meet with you. To accomplish this, we will use online office hours via Zoom by default. My student hours this spring will be:
- MWF 10-11 AM
- MWF 12-1 PM
- T/Th 9:30-10:30 AM

In order to meet with me during one of these time slots you should first set up an appointment using my online calendar.

Then at the appropriate time, you can log on to the following Zoom room:
- https://uni.zoom.us/j/3192732187 [The password for this room is simply the three letter acronym for our campus]

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

Course Information

Course Description
Enhances understanding of programming, addresses elements of program quality, and examines the pedagogy of programming instruction. Topics include program quality, goals of programming instruction; teacher beliefs about programming content and pedagogy; inclusive, supportive, and equitable practices; curricular alternatives; and assessment-based instructional planning.

Course Learning Outcomes
By the end of this semester students taking this course should be able to meet the following objectives:
- Identify programming fundamentals and discuss prerequisite relationships
- Analyze programming language considerations for a classroom
- Explain the program design process
- Identify aspects of quality programming
- Recognize the presence/absences of quality elements and suggest improvements
- Discuss their teaching/learning beliefs related to programming instruction
- Identify learning considerations
- Discuss supportive practices in general and in the context of a specific scenario/classroom
- Apply programming based considerations to instructional design
2011 ISTE Teaching Standards Addressed

- Demonstrate knowledge of and proficiency in data representation and abstraction; Effectively use primitive data types [1.a.i]
- Using a modern, high-level programming language, construct correctly functioning programs involving simple and structured data types; compound Boolean expressions; and sequential, conditional, and iterative control structures [1.b.i]
- Analyze algorithms by considering aesthetics, and correctness [1.b.iii]
- Select a variety of real-world computing problems and project-based methodologies that support active and authentic learning and provide opportunities for creative and innovative thinking and problem solving [2.a.i]
- Demonstrate the use of a variety of collaborative groupings in lesson plans/units and assessments [2.a.ii]
- Develop lessons and methods that engage and empower learners from diverse cultural and linguistic backgrounds [2.a.iv]
- Identify problematic concepts and constructs in computer science and appropriate strategies to address them [2.a.v]
- Design and implement developmentally appropriate learning opportunities supporting the diverse needs of all learners [2.a.vi]
- Create and implement multiple forms of assessment and use resulting data to capture student learning, provide remediation, and shape classroom instruction [2.a.vii]
- Plan for equitable and accessible classroom, lab, and online environments that support effective and engaging learning [3.a.ii]
- Identify local, state, and national content and professional standards and requirements affecting the teaching of secondary computer science [4.a.iii]

Required Materials

We will use parts of "Teaching Tech Together: How to make lessons that work and build a teaching community around them" by Greg Wilson (ISBN 978-0-367-35297-4).

Having said that, no single textbook fits our needs. Required readings and other materials will also be selected from legally available resources on the internet or from instructor produced materials.

Course Structure

The course is divided up into several "topics." Each topic will consist of some combination of the following activities

- Readings
  - These will come from either the textbook or from online resources.
- Individual Reflection
  - This activity asks you to think through your own experiences as a novice programmer and as a potential teacher. It may also ask you incorporate elements of the reading that you completed.
  - You will typically create a document where you answer several questions, make a list of ideas, reflect on some code, etc.
  - You will submit this to me as evidence that you meaningfully completed the activity.
- Small Group Reflection
  - Throughout the course you will be assigned a "small group" of students. The members of your group may change from unit to unit.
o As a group you will discuss your individual reflections for the week and use your collective 
    wisdom to come up with a small-group reflection (often times VERY similar to the individual 
    reflections but occasionally including some new material).

o Your group should clearly indicate which of the members of the group actively participated in the 
    discussion and the generation of the group report.

- Individual Responses
  o Once the small group reports are submitted, I will post these online for all to see.
  o I will ask you, as an individual, to read the small group reports from the other groups. I will ask 
    you to reflect on what other groups came up with that your group did not as well as what was 
    common across the class as a whole.
  o To wrap this all up you will submit a second reflection discussing these issues and wrapping up 
    your "final" thoughts on the topic.

It is worth noting that while Unit 4 – Designing Instruction will have some of these common elements it will also 
have your final project as part of the timeframe. Unit 4 may differ slightly from the first 3 units in its overall 
structure.

Course Grading

You will earn six grades/scores in this course. Each of these is a 5-0 score based on the idea that an A is worth 
5 points, a B is worth 4 points, a C is worth 3 points, a D is worth 2 points, and an F is worth 1 or 0. Think of this 
as the standard 4 point GPA system with one point added to everything to allow for there to be two levels of F at 
the end of the semester.

These six grades will consist of:
  - 3 Competency Demos (Units 1-3)
    o These are sort of like "mid-term" exams and largely follow the concept of Competency Demos 
      used in our prior course.
    o As in our previous course, you will have an opportunity to retake a competency demo if you are 
      unsatisfied with your grade.

  - 1 Final Project
    o This will be a course design project.
    o This will largely serve as the competency demo for Unit 4 but will almost certainly include 
      elements of units 1-3.
    o It will be officially due on Tuesday, May 10th during the final exam period. Because this is a final 
      project there will no opportunity to revise your project after that date. However, there may be 
      opportunities to submit a version earlier than this date for feedback to guide your final 
      deliverable. This will be discussed during Unit 4

  - 1 Final Competency Demo
    o This will be a wrap up of the course and offered during the university's scheduled final exam 
      period on Tuesday, May 10th. Because it is the final there is no opportunity to revise/resubmit 
      this material.
• In-Unit Deliverables and Small Group Participation
  o I firmly believe that in order to really learn in this course you need to participate in consistent and ongoing interaction with the material and with your peers. I think you rob yourself, and your peers, if you are not willing to participate in classroom discussions on a daily basis. As such, I will assign some points for this interaction and the daily work.
  o I predict that this course will have ~10 individual deliverables and ~5 small group deliverables other than the ones listed previously. Having said that, this course will evolve and it is hard for me to know for sure what I will collect/mark or not.
  ▪ In MOST cases I will not be assigning differentiated grades on these beyond 1 point each for turned in "on-time" and shows meaningful effort for completion. If I feel that people are abusing this system (that is, people are submitting documents on time but showing the bare minimum of effort) I may modify this policy to have more levels of grading [or simply become very picky about what is needed to get the 1 point of credit]
  o The five-point grade for this section of the course will be assigned based on a formula CLOSE to:

<table>
<thead>
<tr>
<th>Score</th>
<th>Percent</th>
<th>Score</th>
<th>Percent</th>
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<tbody>
<tr>
<td>5</td>
<td>&gt;90</td>
<td>2.5</td>
<td>65</td>
</tr>
<tr>
<td>4.5</td>
<td>85</td>
<td>2</td>
<td>60</td>
</tr>
<tr>
<td>4</td>
<td>80</td>
<td>1.5</td>
<td>55</td>
</tr>
<tr>
<td>3.5</td>
<td>75</td>
<td>1</td>
<td>25-50</td>
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<tr>
<td>3</td>
<td>70</td>
<td>0</td>
<td>0-25</td>
</tr>
</tbody>
</table>

At the end of the semester you will have had the opportunity to earn up to 30 points (six numerical scores from 0-5). Your overall grade will be based on the sum of these scores and cutoffs no HIGHER than the following:

<table>
<thead>
<tr>
<th>Score Cutoff</th>
<th>Grade</th>
<th>Score Cutoff</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>27.5</td>
<td>A</td>
<td>16.5</td>
<td>C</td>
</tr>
<tr>
<td>26.5</td>
<td>A-</td>
<td>15</td>
<td>C-</td>
</tr>
<tr>
<td>25.5</td>
<td>B+</td>
<td>13.5</td>
<td>D+</td>
</tr>
<tr>
<td>22.5</td>
<td>B</td>
<td>10.5</td>
<td>D</td>
</tr>
<tr>
<td>21</td>
<td>B-</td>
<td>9</td>
<td>D-</td>
</tr>
<tr>
<td>19.5</td>
<td>C+</td>
<td></td>
<td>F</td>
</tr>
</tbody>
</table>

What I mean by that is that a 27 will be at least an A- but COULD end up an A depending on the circumstances.
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 good. 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.

Absences related to COVID-19 illness, self-isolation, or quarantine.
Faculty must be prepared to have assignment alternatives for individual students who are unable to attend class due to COVID-related health issues. To utilize these alternative assignments, students must report the issue by completing the Panther Health Survey; students directed not to come to campus or who are unable to participate in class due to COVID-19 related illness, self-isolation, or quarantine should utilize the information provided in the survey to have their faculty notified of their need to be absent. These same instruction/assignment alternatives should also extend to field experiences that students may not be able to attend for the same reasons. Questions related to COVID-19 testing should be directed to the Student Health Center COVID line (319) 273-2100, Monday-Friday, 8:00 am - 4:30 pm.
Students who have concerns about an underlying health condition(s) and the risks of attending classes, living in a residence hall, or any other aspect of the educational experience due to COVID-19 should consult with their health care provider. Please connect with Student Accessibility Services as soon as possible to discuss accommodations specific to your access needs.

**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.